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An analysis of quality practices and business outcomes in Western Australian hospitals

Janis Mussett
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AN ANALYSIS OF QUALITY PRACTICES AND BUSINESS OUTCOMES IN WESTERN AUSTRALIAN HOSPITALS

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Doctor of Philosophy (Business)

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Date of submission: August 2000

ABSTRACT

This study aimed at identifying aspects of health care organisational management and activities that produce the highest level of quality care. A literature review was conducted to determine the most successful quality activities currently used in a wide variety of industries. Using the findings of this review a questionnaire and interview questions were designed to identify factors associated with successful quality activities in health care organisations.

Four Western Australian hospitals that were believed to have effective quality activities were randomly selected as a hospital from each of the following categories. A private hospital accredited by the Australian Council on Health Care Standards. A country hospital that had 100% patient satisfaction and a city hospital with above 96% patient satisfaction assessed by the State wide Government Patient Satisfaction with Care Survey. A hospital that the Health Department of Western Australia considered had best practice in Quality Activities. Each of these hospitals was matched with a control hospital.

Data was collected through direct observation, completion of a questionnaire and interviews with people in predetermined health service employment positions and the completion of one randomly selected supplier interview for each of the eight health services studied. The questionnaire was supplied to a range of staff members and interviews were conducted with these employees and with hospital goods or service suppliers. Data was analysed using qualitative evaluation, frequency distribution and a factor analysis.

Results obtained in this study identified that the most important factors required to produce the most profitable and highest quality of health care were a culture of caring, providing employees with enough time to complete their work and having effective organisation wide communication. A Quality Care Model for use in Health Services was created based on the research findings. When used this model of quality activities should provide customer satisfaction and a high standard of cost effective health care service.

DECLARATION

I certify that this thesis does not, to the best of my knowledge and belief:

- (i) incorporate without acknowledgment any material previously submitted for a degree or a diploma in any institution of higher education;
- (ii) contain any material previously published or written by another person except where due reference is made in the text; or
- (iii) contain any defamatory material.

1-8-00.

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AN ANALYSIS OF QUALITY PRACTICES & BUSINESS OUTCOMES IN WESTERN AUSTRALIAN HOSPITALS

1. INTRODUCTION

1.1 Background to the study.

In Western Australia clients who require health care have to wait 30 months or more for elective surgery at public hospitals. Up to 1,000 funded nursing care hours per fortnight have been cut in 1999 from most Western Australian public hospitals' budget. Medical practitioners are threatening to work to rules because of dissatisfaction with the current health care system. Health care treatment in private hospitals is unaffordable for many patients awaiting hospital care (Videnieks, 1999). In 1999 in Western Australia "the government had to find an extra \$70 million to bail out public hospitals who could not meet their budgets" (Pryer, 2000, p.7).

Nurses in every state and territory know only too well how tight health funding is. There just is not enough money in the system to keep the system going. Hospitals and health services are constantly over budget. Nursing and other staff are cut to the bone. Beds are closed. Services are reduced. (Iliffe, 1999)

Horan (1999) agrees with this and states that research by Britain's Office of Health Economics identified that Australia's public health system had changed over the last 37 years from being the sixth best funded public health system per capita in the world, to the fifteenth. Australia currently spends \$1.953 per person annually on public hospital service and health education (Horan, 1999). The health service provided by hospitals is not always adequate either. For example, a Western Australian State Government Hospital in May 2000 had more than 100 active legal cases against it and employed a lawyer on staff to deal with patient complaints (Ashworth, 2000, p.4).

An article published in The Australian newspaper stated that "As many as 50,000 patients are injured and 18,000 die each year due to errors in hospitals according to a

1995 study. Quality in Australian Healthcare" (Olson, 1999). The National Expert Advisory Group on Safety and Quality in Australian Health Care (1999) reported that 1.7 million bed days (8% of all hospital bed days) were used for caring for patients with potentially preventable adverse effects from the health care provided. Having effective Quality activities to ensure that work processes and patient care are provided as safe and effectively as possible is important to reduce the number of patient injuries and deaths that occur due to errors.

Private hospitals are usually run like any other private business enterprise. As well as providing health care to the patients who can afford private health care, private hospitals' business aim is to make a profit for the company shareholders or company owner. Having effective Quality based work processes can help companies to achieve this aim.

The purpose of a Public Hospital is to provide health care to the country's population who can not afford to pay directly for their health care. If health care becomes too expensive, taxation dollars must be raised to cover health care expenses. For this reason governments try to limit health care spending. Having effective quality based work systems can help to improve employee productivity and to make the most cost effective use of resources.

Government hospitals are usually not in competition with each other as they often have more customers than they can afford to care for. Many of the larger public hospitals have waiting lists of people who need to have health care, such as elective surgery or medical management of a chronic health related problem. Stay in public health care facilities is becoming increasingly shorter as customers are usually discharged as soon as possible to allow other clients to receive health care. This is increasing the workload for health care workers as their customers are now only cared for in hospital while they are acutely ill (Pryer, 1998). Having staff members who have too much work to

perform in too short a period of time affects the quality of service that employees are able to provide. Efficient work processes need to be identified.

In many of the public hospitals there is presently an "undercurrent of fear and apprehension among the whole staff: fear of losing jobs and conditions, and not knowing what the future would bring" (Webber, 1995, p.13). These emotions were common because the government was trying to find ways to privatise as many health care services as possible. Particularly employees working in "non-core activities" such as maintenance, cleaning, catering and gardening knew that their jobs were under threat of privatisation. Employees who were fearful of losing their employment position were actively looking for new jobs, instead of seeking ways to improve the quality of their present work.

This loss of employment was occurring despite the fact that many health care services were understaffed, particularly by nurses. For example North, (1995 p. 14), wrote the following.

I have had wonderful care here but now the standard has fallen unacceptably low. The staffing level is appalling. There are many good nurses who are run off their feet. When I ring the bell at night for a pan I have to wait for about an hour. In that time I am wet through because I can't wait that long. The nurse then has to change my clothes and bedding. I often have to wait a long time until I am taken for a shower.

Health care employees, such as nurses, are also often subject to dealing with overt and covert violent behaviour from patients, visitors and sometimes even other employees (Duff, 1995, Webber, 1995, Mc Millan, 1995, Ball, 1996, Farrell, 1997, Alderman, 1997, Mullen, 1997, Rayner & Hoel, 1997). In a Western Australian suburban hospital of 200 beds, 48 staff members in 1999 were assaulted while on duty (Bakker, 2000). Employees having to cope with physical and verbal assaults may be due to the fact that their external customers consider that the service provided does not meet the customers' needs. This violence may also be due to fellow employees feeling threatened and not

able to cope with all of the work that they are expected to perform. Feeling threatened by physical or verbal abuse affects the quality of health care that is provided by employees.

Many medical practitioners who work as Resident Medical Officers work long hours. They may start work on one day, be rostered through to work the night and then have to continue to work the following day (Webber, 1995). Within these hours of work the medical practitioners are expected to make competent, and often life saving, decisions related to patient care. Being over tired can affect the quality of work that Medical Practitioners provide. This in turn affects the quality of care that patients are provided with.

Private hospitals work hard, like any other successful business, to market to the general public the advantages of using their facilities and services. Successful private hospitals use their profits to expand their premises and services if required to meet customers' health care requirements. Private hospitals encourage return visits, if further health care is required by their customers. Badrick, Saunders & Preston (1996, p.285) also report that "for profit hospitals are more entrepreneurial and customer (doctor) focused".

As well as having health care staff, such as doctors, nurses and allied health professionals to work in operating theatres, clinics and wards, hospitals have a kitchen for food service activities, a laundry for material cleaning activities, gardeners, maintenance employees, transport workers and a mortuary for dead bodies. Large hospitals may also have teaching and research departments. Suppliers bring equipment and products into the hospital.

Considering the above examples a model for guiding quality activities in hospitals needs to provide strategies to allow the best possible services by these diverse range of enterprises and facilitate continual improvement in the services provided by each area.

The Australian Quality Council (1998b, p.1) states that even if organisations are performing well today they "will have to perform even better in the future in order to survive."

Hardie (1998) examined the reported findings of 43 research studies on the effects of quality activities on the business performance of an organisation. Of the 16 correlation studies reviewed he wrote that the results of the correlation between business performance and quality awards included was suspect because the quality awards included a criteria on business performance as this built a relationship between quality and performance.

Of the 13 case studies and 5 experimental studies reviewed by Hardie (1998) all had research results that indicated effective quality activities produced improved business performance in the organisations studied. For the results of the 9 opinion surveys reviewed only 50% of the managers who answered the survey perceived that the use of quality activities produced improved business performance indicating that the relationship is only positive under certain circumstances. The empirical studies examined showed that the most important factors for business success in relation to quality activities was having services and/or products that were superior to competitors and having conformance to requirements as this led to less rework, increased productivity, reduced costs, increased profits and increased market share. Hardie (1998) concluded that to produce a successful business performance the quality management program must be monitored through the causal chain and carefully selected on the basis of the program's expected outcomes.

1.2. Previous research

Success in health care management is defined as obtaining desired business results such as a lower cost of work processes, providing quality, timely service, providing a safe and high standard of patient health care, having satisfied customers. It also includes having resources used effectively with minimum wastage, having high profits (for private hospitals), ability to adapt to changes in government policy, minimum employee occupational injuries, sick leave and absenteeism, employee job satisfaction and the health service continuing to remain a viable business. There has been very little published about what factors contribute to success for quality management in hospitals so to discover information about successful quality activities it was necessary to also research published information about quality activities used in other industries.

The literature describes two main types of quality processes and systems. One is proactive. These types of quality activities are the result of putting a system of quality management strategies in place with the aim of preventing defects or mistakes occurring. They include meeting quality award criteria such as the Australian Quality Award, ISO criteria, European Foundation for Quality Management Model for Business Excellence and the Malcolm Baldrige Award. They also include using models such as Total Quality Management, the S-P Model, the Plan, Do, Check, Act cycle, or any other quality management models. Authors, such as Fountain (1998) have reviewed over 40 quality processes and systems, and found that none were the 'best' framework to use as a model for quality activities for health care organisations.

The second type of quality activity is reactive. This examines and reports on the outcomes of the business activities in relation to quality. This type of quality management detects defects after they have occurred. They are negative performance indicators. Some negative performance indicators, such as clinical indicators, are health care specific. Others, such as customer satisfaction with service or product, apply to many industries, including health care.

Putting quality processes and systems in place are useful in that these can provide a quality management path for the organisation to follow. Outcome measurements show where the organisation has been and what it has achieved. They are required to evaluate the effectiveness of the quality processes and systems used (McLeod, 1998). It was expected that the hospitals would have both outcome measurements and quality processes and systems in use.

Jayaram, Handfield & Ghosh (1997) reviewed 129 quality tools. None of these quality tools were evaluated as being the best quality management tools for health care organisations. For health care it was expected that best practice would include strategic quality management. Garvin [cited in Costin (1994, p.14-15)] found the best quality activity in the United States of America was Strategic Quality Management. For this reason, with Australian hospitals, it was expected that health services with a high standard of customer care would have a vision and a mission statement that aimed for excellence. Preston and Saunders (1994) also described Strategic Quality Management as an important part of quality activities.

Kerridge and Kerridge (1994), Scrivens (1995), Lowik (1994), Sohal and Lu (1995), Preston and Saunders (1994), Heath (1993), Wacker and Sheu (1994), de Noray (1994), Buxton (1994) and Bourke (1994) all reported that a focus on customer service factors was essential for an organisation to have a high quality of service. For this reason this was included in the expected best practice model for health care. Maintaining a high standard of research support and facilitating organisational research activities were also recorded as essential for continual improvement in customer service, work processes and products by Wacker and Sheu (1994), de Noray (1994), Garvin (1994), Buxton (1994) and Kelly (1994). Research activities were expected to be an important part of a successful quality management system.

Garvin (1994), Sohal and Lu (1995), Mussett (1994), Scrivens (1995), de Noray (1994), Stephens (1994), Lowik (1994) and Bourke (1994) all recorded the following management practices as important factors in providing employee management that enabled employees to work most effectively to be able to provide the highest standards of customer care. Management who:

- showed strong leadership in establishing and maintaining the vision:
- had effective communication with all employees:
- were team orientated:
- reinforced the structure, processes and culture of the organisation:
- provided and facilitated employee education and training to enable the professional development of individuals and the organisation:
- provided encouragement and rewards for employees and suppliers to achieve the organisational vision:
- provided adequate resources and good physical workplace conditions:
- promoted care, consideration, health and safety of employees and provided competent supervision and clear methods on how to perform tasks:
- had regular evaluation of organisational activities, provided feedback and implemented follow up action as necessary:
- were accessible to all people in the organisation.

The following employee culture and work practices were considered essential to provide a high quality of service by Garvin (1994), de Noray (1994), Scrivens (1995), Mussett (1994), Gertz (1994), Stephens (1994), Lowik (1994), Donovan (1994) and Bourke (1994). Employees who:

- were empowered, asked to be innovators and no longer feared failure when trialing new ideas:
- worked toward a common organisational vision:
- were consulted and participated in the planning.

implementation and evaluation of change:

- were educated and trained to be competent in work related tasks and were able to anticipate and adapt to changes in technology and work processes:
- used technology effectively:
- delivered cost effective service which minimised or eliminated waste:
- had a collegial and collaborative relationship between departments and with co-workers:
- had departmental goals which were in line with the organisation's vision and mission.

Deming included the suppliers of goods and services in his Total Quality Management framework because without a high quality of products and service from suppliers organisational employees were not able to provide their customers with the best service or products. Suppliers need to have a strong partnership role in an organisation's quality management activities (Sohal & Lu, 1995 and Preston & Saunders, 1994).

The above management, employee and supplier partnership factors was expected to be found as part of the quality management practices of health services with the most successful outcomes. Expected successful outcomes were considered to include resources used effectively with minimum wastage, high profits, customer satisfaction, ability to adapt to changes in government policy, minimum employee occupational injuries, sick leave and absenteeism and employee job satisfaction.

1.3 Research questions.

The purpose of this study was to identify the aspects of health care organisational management and activities that produced the highest level of quality care and combine them to form a theoretical framework that could be used by health care organisations to provide organisation wide quality patient service. Publication of findings from this research are expected to contribute to providing literature concerned with the

identification of successful quality practices for hospital managers to use and the impact of such practices on hospital performance in terms of the standard of patient care provided and customer satisfaction with care.

A review of published literature about quality activities raised the following three questions in relation to quality activities for hospitals. The first question was:

"What quality management practices are used in health care organisations to improve the quality of patient care?"

A review of literature had indicated that in Australia hospitals were using the Australian Council on Health Care Standards (Australian Council on Healthcare Standards, 1998), the Saunders-Preston Model of Total Quality Management (Badrick, Saunders and Preston, 1996) and the Australian Business Excellence Framework (Australian Quality Council, 1998). It was anticipated that by researching this question in health care organisations other, less publicised models of quality activities to promote excellence in health care could be identified. The research would also identify if the above frameworks for quality activities were used in Western Australian hospitals.

The second question generated was:

"Which quality practices produce the highest level of patient care according to clinical indicator results and patient satisfaction with care survey results?"

This question was asked to provide a link between the quality practices used and the outcomes of these practices for patient care. Heath (1993) in the Australian Council on Health Care Standards (ACHS) Accreditation Guide 12th Edition, wrote that "Clinical Indicators are integral to a health care facility's quality activities program." As the Australian Council on Health Care Standards was using Clinical Indicators to measure the effectiveness of patient care in hospitals it was anticipated that this information

would be available in all health care organisations. It would be used as a standard measure of the level of health care practice in all hospitals.

"Clinical indicators are flags which can alert to possible problems and opportunities for improvement in patient/consumer care" (Australian Council on Healthcare Standards, 1998). As such they should have been an important evaluation measurement in all hospitals' quality activities programs. When a Pilot Study for the research was conducted employees in this health care setting were found to be using Clinical Indicators of care to measure the effectiveness of patient care.

Members of the Australasian Association for Quality in Health Care, an Australasian wide organisation of practicing quality activity professional people, also recommended the use of Clinical Indicators as an outcome measure of health care provided to each organisation's patients. This Association of Quality Professionals was formed in Western Australia in 1986. It had 300 members who worked as quality activity practitioners in health care services. A focus group of 20 of the Western Australian Members was involved in providing professional advice for this research study.

Throughout the literature (Aune, 1998, Wilkinson, Redman, Snape & Marchington, 1998, Standards Australia / Standards New Zealand, 1994a, Jonker & Klaver, 1998, Evans, 1997, Terziovski, Samson & Dow, 1995, Gorst, Kanji & Wallace, 1998, Martinez-Lorente, Dewhurst & Dale, 1998, Brown & Van der Wiele, 1995, Wong, 1998, Laszlo, 1998, Jayaram, Handfield & Ghosh, 1997) many authors state the importance of customer satisfaction for the models of quality activities that they describe. There are very few quality activity models, if any, that do not look for customer satisfaction as an outcome of the use of the model. For this reason patient satisfaction with care survey results were to be used as an assessment of outcome of the health care service.

The last question to be asked by the research was:

"What are the economic and organisational benefits of having effective quality processes in place?"

Many authors describe benefits of having quality activities conducted as part of an organisation's management. Some benefits described are improved employee productivity and company profitability (Crosby, 1979, Feigenbaum, 1983, Dale & Plunkett, 1995, Gilbert, 1995, Wiarda & Luria, 1998, Carson, Carson, Eden & Roe, 1998, Wilkinson, Redman & Snape, 1998, Martinez-Lorente, Gallego-Rodriguez & Dale, 1998). Organisation survival (Shea & Howell, 1998, Jonker, 1998, Chandra, 1993, Dervitsiotis, 1998, Ford 1998, Robertson, 1998, Fountain, 1998, Kaufman, 1998, Lemaire & Jonker, 1998, Kandampully, 1998, Zantanidis & Tsiotras, 1998). Improved occupational safety and health (Tuft, 1995, Australian Council on Healthcare Standards, 1998, Ford, 1998, and Australian Quality Council, 1998, Wilkinson, Redman & Snape, 1998). Improved ability to respond to trends, events and business needs (Clayton, 1998).

Based on reviewed literature a quality vision model was developed for evaluation by this research. Following a review of literature it was anticipated that the health care benefits of using this model would be as follows. Customer satisfaction, quality, timely service and an increase in the number of customers (Kerridge & Kerridge, 1994, Scrivens, 1995, Lowik, 1994, Sohal & Lu, 1995, Preston & Saunders, 1994, Health, 1993, Wacker & Sheu, 1994, de Noray, 1994, Buxton, 1994 and Bourke, 1994, Main, 1994). Employee job satisfaction, minimal employee occupational injuries, sick leave and absenteeism (Nakha & Neves, 1994, Finn & Porter, 1994, Australian Quality Council, 1994, Goldsmith, 1994). Good organisation wide communication (Stephens, 1994, Peters, 1994, Tuft, 1995, Weller & Hartley, 1994). Resources used effectively with minimum wastage (Stephens, 1994, Wilmott, 1994, Adam, Corbet & Rho, 1994, Australian Quality Council, 1994, Horwood, 1993, Preston & Saunders, 1994, Lowik,

1994). Ability of employees to adapt to changes in government policy (Garvin, 1994, Walker, 1994). Innovations produced (Cosin, 1994, Garvin, 1994, Walker, 1994, Australian Quality Council, 1994, Ferry, 1994).

1.4 Research significance.

The Australian Health Care System can no longer rely on government handouts to keep it fully operational. To enable a high standard of health care in Australia the most effective practices in health care quality activities needed to be identified. These could then be used as powerful tools to provide ideas and guidelines for other health care organisations to use to increase customer satisfaction, achieve improvements in the quality and timeliness of service, improve productivity, provide greater employee job satisfaction, improve communications, make better use of resources, reduce errors, wastage and service costs, and to accelerate innovations.

Since the introduction of Medicare by the Australian Federal Government in the 1970's, medical expenditures had continued to rise at levels of 50% higher than the general rate of inflation. This occurred while the teaching hospital system was being forced to reduce bed numbers, close outpatient services, prolong waiting times for elective and semi-elective procedures and for patients in accident and emergency departments (Baulderstone, 1992). "Health systems are increasingly being told that there is no more money and that we must do more with less" (Lewis, 1994). Waiting lists for admission to public hospitals are unacceptably long (Herring, 1999).

Over the years it has become increasingly evident that there would never be sufficient funding to meet all the demands that were being placed on the health care system. This meant that every health care dollar needed to be used in the most efficient and effective way (Anderson, 1993). In the rapidly growing and fiercely competitive world markets of the 1990's, Australian industries were using quality activities to finance, produce, market and distribute their products and services (Australian Quality Council, 1998).

Health care should be as affordable and produce as high a standard of product and service as other profitable industries. Based on the results of companies that have won Australian Quality Awards for Business Excellence. (for example. Honeywell, PanBio, Woolongong City Council and Mercantile Mutual Funds Management), the Australian Quality Council (1998a, p.4) lists the following successes achieved by these companies due to their adoption of quality focus.

- 20% productivity increase in one year
- 247% sales increase over 2 years
- 600% increase in profit per employee in four years
- 100% profit increase over two years
- 150% increase in tenders won
- 500% increase in share price over six years
- 25% reduction in sick leave in one year
- 100% increase in employee numbers in two years
- 66% reduction in lost time injuries in 1 year
- 80% reduction in product deficit rate over two years
- Production faults reduced to 0.4% of previous levels over three years.

Wilkinson, Redman & Snape (1998) reported on a research study survey that was carried out with over 3,000 businesses in North America and Europe to identify if there was a link between quality and business results. The results showed a positive correlation between quality and profit. It was found that the higher the customer perceived quality of goods and/or services, the higher the profit and business return on investments.

Zonnenshain, Naveh & Halevy (1998) reported a survey taken in Israel of the cost to a nation's economy of not having quality. Their research identified that 2.3 million workdays annually were wasted due to nonquality and the annual national cost of not having quality in industries was \$15 billion (25% of Israel's gross national product). Health care services accounted for 30% of this cost.

On the sixth of December 1994 the Western Australian Government issued a press statement stating that the state public hospitals were costing the community \$1 billion a year and asking for help from the private sector and from researchers to identify more cost effective ways of providing health care services (Prichard, 1994). This research was undertaken to identify if the use of effective quality activities in Western Australian hospitals were able to produce improved management strategies for assisting health care facilities achieve the Western Australian Government's need.

In summing up what has been written about quality activities Aune (1998, p. 512) wrote that

Today the number of publications covering quality and quality management is growing rapidly. Most are written by consultants and practitioners explaining their ways of doing things and how their companies meet the quality challenge. There is nothing wrong with that, as practitioners usually want description of practical cases, not theory. But the quality community needs professors to develop a sound theoretical basis for efficient solutions to future practical problems.

This research aims to meet the needs described by Aune in developing a sound theoretical basis for quality activities in hospitals to help find efficient solutions to practical problems.

1.5 Research methodology.

The methodology used for the research was an exploratory case control study design with four hospitals as the case hospitals and four control hospitals. The case hospitals were randomly chosen on the criteria of one Western Australian hospital that was accredited by the Australian Council for Healthcare Standards (ACHS) Ltd. The first case hospital was called Hospital one. Hospital one was a private ACHS accredited health service. When this research was conducted forty Western Australian hospitals were accredited. Of the accredited hospitals fifteen were private health care services, eight were city government owned health services and seventeen were country government owned health services.

The second case hospital was a hospital that had 100% patient satisfaction on the Health Department of Western Australia Patient Satisfaction with Care questionnaire answers (only five country hospitals achieved this score: no city hospitals, or accredited hospitals, did). The third case hospital was a city hospital with an average score of 96% or higher patient satisfaction on this government survey. Twelve of the 81 Western Australian government hospitals (all State Government hospitals were surveyed) achieved this score.

A hospital that was considered by the Health Department to have 'Best Practice' was randomly selected as the fourth case hospital. The Health Department considered hospitals that had well-developed strategic plans in place had the best practice in health care. There were ten hospitals included in this group.

The methodology section describes the procedure for the identification and selection of study participants for each health service included in the research study. Pilot study results were used to assess the study design, methodology and feasibility of this research. The Pilot study was also used to check the reliability of the questionnaire and the availability of organisational records to evaluate the health services quality activities. Methods of data collection were observation by the researcher of the work processes, premises and documentation in relation to policies, procedures and quality activities: completion of a questionnaire by research participants and the same people who completed the questionnaire taking part in an interview with the researcher.

The statistical analysis procedures used were descriptive statistics, a Factor Analysis and Chronbach's alpha. Ethical considerations are also recorded as part of the methodology.

1.6 Research limitations.

This research examined a limited number of Western Australian hospitals. Offsetting this was the amount of information obtained from the detailed examination used to obtain knowledge about each study hospital including a cross sectional examination of the perspectives of people at a wide variety of levels in each hospital. Another limitation is that generalisations made from the findings of this study may be limited in application to Australian hospitals as other countries may have different methods of delivering health care. Health care delivery methods may also change as alterations in government policy, health care funding and management practices are made.

1.7 Summary of the thesis.

The research introduction describes the background, significance and purpose for conducting a research study to identify success factors in quality activities in hospitals. The next chapter provides a literature review of what has been published about quality activities in health care and other organisations. It traces the history of twentieth century quality activities, looks at the benefits and disadvantages of some quality tools commonly used and examines the stages of quality activities published in literature. Based on this literature a theoretical quality vision model is designed for what was expected to be found during the research as the most used factors in quality activities by health services with a high standard of care.

When describing the "Best Practice in the Health Sector" in 1994 the Health Department of Western Australia wrote the following.

There must be a medium to long term program in place or under development which contributes to the achievement of strategic goals and continuous improvement. The best practice project must form an integral part of the process:

- an outline of the organisation' vision for the future and its relationship to the achievement of best practice, the planning process and the involvement of staff at all levels in the development of the vision should be included (p. 12).

A paper from Saint Vincent's Hospital in Melbourne (1994) noted that strategic planning was an important part of the health service's best practice in quality activities program. A similar paper from Princess Alexandra Hospital in Queensland was also published in 1994. It described how strategic planning, including detailed strategies to achieve the health service vision of becoming the "best of the best" (p. 2) should be implemented.

The Federal Minister for Health, Graham Richardson, in 1994 wrote "with the constant demands of today's high-tech society, we need to consider new ways in which our health care system can best meet the challenges of the future (p.2)." Richardson envisaged the Best Practice health care organisations would have a shared vision of world class performance and a strategic business plan that had been developed in consultation with the workforce. This research aimed to meet the request.

A case control methodology was used to identify successful quality processes in hospitals and the outcomes of their use. Research results identified that all factors included in the Quality Care Model (see Figure 3) were important to use for successful Quality Management in Western Australian hospitals. In the research results discussion section the findings of this research are compared to the findings of previously published literature on quality activities. The discussion also summarises why not all aspects of the expected Quality Vision Model (see figure 2) were required for successful health care quality activities and the reasons for including new factors into the Health Care Quality Model (see figure 3) for successful quality management.

A summary of the answers to the three research questions is discussed in the conclusion section. Recommendations are made based on the research findings to enable these findings to be used to produce the highest quality of health care that is affordable for the community. The recommendations also identify areas for future research. The report is completed with the inclusion of Appendices that provide a rich amount of detail about

the business activities of each of the hospitals included in this research study. The next section describes the key concepts and terms used for the research.

1.8 Concepts and terms.

- BEST PRACTICE is the best way of doing things (Power, 1995, p.11)
- CLINICAL INDICATOR is "a measure of the management and outcome of care" (Australian Council on Healthcare Standards, 1998, p. 1.15).
- EFFECTIVENESS. "In the context of organisational behaviour, effectiveness refers to the optimal relationship among five components: production, efficiency, satisfaction, adaptiveness and development" (Gibson, Ivancevich and Donnelly, 1985, p. G5).
- EFFICIENCY. "The measures of efficiency are always in ratio terms, such as benefit/cost, cost/output, and cost/time." (Gibson, Ivancevich and Donnelly, 1985, p. G5)
- HEALTH CARE RESEARCH. This is research conducted by employees to improve health care practices.
- INJURY FREQUENCY RATE.
This is calculated using the formula:

$$\frac{\text{Number of loss time injuries per 1,000,000 hours worked}}{\text{Total hours worked for period.}}$$
- INJURY INCIDENT RATE.
This is calculated using the formula:

$$\frac{\text{Number of occurrences of injuries per 100 employees}}{\text{Number of workers exposed.}}$$

- **NEGATIVE PERFORMANCE INDICATORS** are outcome measures of the quality of activities performed in an organisation using standardised formulas. They focus on failures (McLeod. 1998. p.13).
- **POSITIVE PERFORMANCE INDICATORS** are a measure of the quality of the management systems in an organisation. They focus on the positive aspects of behaviours and activities (McLeod. 1998. p.13).
- **QUALITY ACTIVITIES** is a term "used to describe activities undertaken on a facility wide basis. used to identify problems for correction and opportunities for improvement in the delivery of health care and services." (Heath. 1993. p.241)
- **QUALITY MANAGEMENT PRACTICES.** This is the use of quality activities by employees for management practices.
- **QUALITY OF PATIENT CARE.** This is defined as the outcome of care according to clinical indicator results and patient satisfaction with care survey results.
- **QUALITY VISION** is an organisation wide strategy for everyone to work together to be innovative in achieving excellence in identifying, anticipating and meeting customer needs and expectations. It aims to attain superior performance in work processes, products and services in a cost effective manner.
- **SUCCESS FACTORS** are the organisational activities that contribute to desired business results such as a lower cost of work processes, resources used effectively with minimum wastage, high profits, customer satisfaction, ability to adapt to changes in government policy, minimum employee occupational injuries, sick leave and absenteeism and employee job satisfaction.
- **VISION** is a specific set of beliefs that are developed as a point of reference.

The next section of this report is a literature review of quality management systems and processes.

2. LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1 Introduction

The purpose of this review of literature was to provide a theoretical foundation for the research by reviewing previously published literature about quality activities. The literature review introduction notes the background and describes the reasons for conducting this research. This is followed by a review of published literature concerning twentieth century quality management practices. Total Quality Management, quality certification criteria effectiveness, the use of quality awards as a quality management tool, stages of quality activities reported in published literature and a description of quality activity tools used world wide for quality management. From this review quality practices that were reported to be effective in published literature were combined to form a theoretical framework for conceptualised effective quality management practices for Western Australian hospitals. This theoretical framework to be tested was called a Quality Vision Model (see figure 2).

The Collins English Dictionary (1985) defined Quality as "attribute (degree of) excellence"(p.173) and defined Management as "success in doing" (p.131). Having successful management practices is important for all industries that wish to continue in business. To achieve this people in industry have used many different types of Quality Management practices, some of which may be more effective than others. Some types of Quality management practices reported as used included Inspection, Statistical Quality Control, Conformance to Design, Quality Assurance, Quality Improvement and Strategic Quality Management (Wacker & Sheu, 1994, de Noray, 1994, Costin, 1994).

Ell (1994) reported on a wide variety of Quality management practices that were used in Australian Hospitals. These included Quality Assurance, Continuous Quality Improvement, Total Quality Management, Strategic Quality Management, Quality Control and a variety of other Quality management practices. The importance of using

effective Quality management practices for effective health care was first publicised by Hippocrates.

Hippocrates (460BC-359BC) taught and promoted the provision of a high quality of patient care to add years to human life, and life to human years. Throughout the centuries there have been individuals who aimed to meet Hippocrates philosophy, but it was not until the twentieth century that quality activities in health care were viewed as important for the whole organisation. Today, Australians want the best health service at the lowest cost. This can be achieved by choosing the right quality activities to enable efficient use of resources and to encourage a high standard of work practices. The aim of this research study was to identify the best ways to achieve this for Western Australian health care organisations.

What are the most successful quality activities to use in Western Australian hospitals had not been defined. This needed to be researched to enable the above outcomes for health service delivery to be obtained. Based on knowledge obtained from published literature research questions were developed to help to identify the answer to this problem. Management, employee, supplier, research practices and outcomes of effective quality management practices identified in published literature were included in a Quality Vision Model. This model was to be evaluated by research through the use of an employees answered questionnaire, employee interviews and the researcher's observation of health services' premises, work processes and organisational records. Literature reviewed on industry quality management practices that was used to develop the Quality Vision Model is included on the following pages.

An article published by Hardie (1998) reviewed 69 other articles that linked quality practices to organisational performance. Hardie identified five categories for the definition of quality. These were "conformance to requirements" [meeting set standards such as the ISO standards], "fitness for purpose" [being the correct product or action],

"meeting customer expectations", "exceeding customer expectations" and "superior to competitors" (p.68). Hardie also cited 22 case studies and 16 correlation studies that supported the link between quality activities and business profitability.

Deming (1986) stated that when there was conformance to design through the use of quality activities then there was less rework. This translated to less likelihood of a patient's readmission to hospital for the same health problem and so lowers the cost of customer care and leads to higher productivity of employees. Conformance to set standards, such as those of the Australian Council for Health Care Standards, is viewed as important by government hospitals where the amount of health care provided to patients in hospital needs to be minimised to decrease government funded costs.

Terziovski (1998, p.42) agreed with Deming (1986) and reported that there was a "growing body of international evidence that suggested improvements in quality lead to increased productivity, performance and profits." There needed to be research conducted in health care organisations to identify if, for the health care industry, there were economic and organisational benefits derived from having quality processes in place.

For example, Hardie (1998) argued two ways about the link between business profitability and quality. His first argument was that companies that were in financial trouble were likely to cancel any quality activities that cost money due to lack of finance. Companies that were profitable could spend money and time on implementing quality activities in the organisation. In this way business profitability and quality activities were linked because only profitable companies could afford the cost of implementing quality activities.

The other argument was that the achievement of profits from quality activities maybe due to indirect causation. An example that he gave was that if one company had

products that were superior to its competitors. this was likely to lead to a good reputation for the company's products. The company could then charge, and obtain, a higher price than its competitors who had a poorer reputation for similar products. This in turn increased the company's profits.

The same applied to company service. Gorst, Kanji & Wallace (1998) stated that "a satisfied customer is the least expensive way to generate revenue and profit" (p. S100). These authors wrote that if customers are satisfied with the service provided they are more likely to come back to the organisation and to bring other customers. This was important for private hospitals that needed to increase their customer numbers to increase their profit. A 5% increase in customer retention through good service can increase profitability by as much as 85% (Reichheld & Sasser, 1990; King 1995).

Conversely, Carson, Carson, Eden & Roe (1998) wrote that each dissatisfied customer is likely to complain to nine to ten other people about poor service, so many customers may be lost for each incident of poor service. King (1995) described a study by Bain and Co., a Boston consultancy company, who conducted a survey for a wide variety of industries. This study had similar findings with the average dissatisfied customer telling nine other people about their dissatisfaction and 13% of the customers who were dissatisfied telling more than 20 people about their problems with the organisation.

This was a reason for an expected outcome of quality activities having the criteria of meeting, or exceeding customer expectations. A focus on meeting customer and potential customer requirements was included in the Quality Vision Model for evaluation of occurrence in successfully managed in Western Australian hospitals. King (1995) stated that service quality was just as important as product quality. Customers judge both.

As well as describing the cost in terms of customers lost Sorqvist (1998) wrote about another cost of customers complaints for service enterprises. The service that he researched in Sweden had 35.000 customer complaints each year. The organisation had 80 full time workers employed to deal with complaints. The costs per annum for employee wages, administration costs and compensation costs to deal with the 35.000 complaints were SKr120 million. Sorqvist (1998) also provided case examples of four other companies that had 7-9% of their annual financial turnover spent on the costs of rectifying deficiencies in work processes, goods and services. He stated that not having a good quality management system decreased business profitability. Similarly health care finance may be spent on paying employees' wages to deal with complaints. With a high standard of health care, due to effective quality activities, less money should be spent this way.

Many of the Quality Awards, such as the Australian Business Excellence Award and the Malcolm Baldrige National Quality Award, include "Business Results" as an assessable part of their awards. If organisations are being assessed against the criteria of Quality Awards that include business results, the organisations that win these awards will be the ones that are profitable and "superior to competitors" in meeting the award criteria. Profitable organisations are the ones that can afford to spend the money and employee time in meeting the award criteria for quality awards. This, according to Hardie (1998) perpetuates the idea that quality management practices and successful business results are linked. Having this link is important for the organisations that present quality awards, or who accredit organisations' quality activity practices.

It can cost considerable amounts of money to meet the accreditation or award criteria. Profitable organisations are often willing to spend this money if it is considered that meeting the criteria will increase organisational profits still further, or that the organisation can use winning the award in marketing to customers to show that the organisation is superior to its competitors.

Hardie (1998) concluded that implementing any of the quality programs that he reviewed was not a guarantee of business success because many factors, besides quality, influenced business performance. However, organisations such as the Florida Hospital (Chandler, 1998), Lucent Technologies (Mc Comish, 1998) and Bridgeport Hydraulic Company (Oswald & Lang, 1998) state that they owed their business success to the quality activities that they used.

The following sections of this literature review describe the history of twentieth century quality activities. Total Quality Management. Quality certification. Quality awards. Stages of quality activities. World-wide quality activities. Quality tools commonly used and quality activities in Australian hospitals. All of this literature influenced the development of a theoretical framework for successful quality activities in healthcare that was evaluated through this research study.

2.2 The history of twentieth century quality activities

Around the year 2700BC the Egyptians had an ISO 9000 style of quality management system for the correct control of pharaoh's funerals (Jonker, 1998). Until the industrial revolution in Europe quality activities were little used world wide to provide a consistent standard of products and services. With the industrial revolution it became possible for companies to produce a high volume of goods and increased competition developed between companies to market the companies' goods and services. Quality control was identified in industry as a way to improve the standard of goods and services. Twentieth century Quality Activities were initiated at the Bell Telephone Laboratories in the 1920's by a researcher named Walter Shewhart. He applied Statistical Process Control as a scientific method to control quality and invented the "Shewhart Quality Cycle".

Kerridge and Kerridge (1994) documented that in 1925 a Ph.D. student named W. Edwards Deming gained work experience at the Hawthorne plant of the Western Electric Company. At the plant he learnt and applied Shewart's pioneering method of quality control. After completing his Ph.D. at Yale University in 1928, Deming devoted the next 65 years of his life to improving Quality Activities in industry. Deming's most famous work commenced in 1950 when he published his book "Some Theory of Sampling". In this year, at the invitation of the Japanese Union of Scientists and Engineers (J.U.S.E.), he was invited to go to Japan to deliver Quality Control lectures to top industrialists, researchers and a variety of other Japanese people who wished to rebuild their country's economy which was in ruins.

Applying Deming's Quality Control principles, competing for the Deming Prize (for outstanding research into, or publication of, Quality Control ideas) and competing for the Deming Application Prize (awarded to companies who achieved excellence by implementing quality control), Japanese industry productivity and quality rose, while organisational costs fell. Deming's Quality Control ideas for manufacturing industries have since been adapted for use world wide in many industries (Kerridge and Kerridge, 1994, p.37). There was a need to identify if Deming's total quality management principles were used in health service organisations and, if they were, how effective the outcomes were for health service management.

2.3 Total Quality Management.

"Total Quality Management" was developed for the auto industry in Japan in the 1950s by Dr W. Edwards Deming. Hurley (1994, p.42) stated that Deming in 1986 defined total quality management (TQM) as "both a management philosophy and a set of methods for improving customer value". Casalou, (1991) described Dr Deming's Total

Quality Management philosophy as having 14 key points. The points were described as follows:

- Create constancy of purpose.
- Adopt the philosophy of continuous quality improvement.
- Cease dependency on mass inspection.
- Do not award business on price tag alone.
- Improve constantly and forever the system of production and service.
- Institute training and retraining.
- Institute leadership.
- Drive out fear.
- Break down the barriers between departments.
- Eliminate slogans, exhortations and targets for the workforce.
- Eliminate numerical quotas.
- Remove barriers to pride of workmanship.
- Institute a vigorous program of education and retraining.
- Take action to accomplish the transformation.

These 14 points in his management philosophy highlighted the importance of valuing, educating, providing enough work process resources and support for employees to be able to perform their work to the best of their ability, promoting good interpersonal relationships, promoting continuous improvement in work processes, work control and employee ability, and of having effective organisational leadership.

In Deming's Total Quality Management model suppliers were considered as an important part of the organisation as the quality of the supplied goods or service affected the quality of the work processes and products of the organisation. Customers were of two types. Internal customers were the organisation's employees. External customers were the people who bought the products or to whom service was provided. An important part of Total Quality Management was to care for both internal and external customers, as if employees were not well cared for, it was considered difficult for them to provide a high standard of work. Deming's values are still promoted as being a key part of management for many organisations, including health care (Mussett, 1994, Skilleter, 1994, Taylor, Easter & Hegney, 1999).

Since the 1950's Total Quality Management has continued to evolve and to be interpreted in many ways. Taylor, Easter and Hegney (1999, p.238), described Total Quality Management very simply as being "Quality Assurance (QA) + Continuous Improvement (CI) = Total Quality Management (TQM)." Radtke (1998) wrote "TQM offers a framework that integrates the need for innovativeness, productivity improvement, conquest of markets and increased return in a holistic management system" (p.12). This is a desirable outcome for most business management systems, including health care.

Hiam (1993) and Kannan, Tan, Handfield & Ghosh (1999) stated that Total Quality Management has been adopted in industry by 75-80 percent of large companies. These authors stated that Total Quality Management had been found effective in only some of the companies for improving business profitability. Philips, Chary & Buzzell (1983) found that different industries had different requirements for their quality management practices to bring business success. Adams, Chary & Rho (1994) reported that different countries and cultures had different requirements for their quality management system to produce a successful business outcome. There was a need to evaluate if Total Quality Management was an effective tool for health service management in Western Australian hospitals.

Powell (1995) stated that empirical research studies evaluated and reported by Mathew (1992) and Fuchsberg (1993) did not show that companies that used Total Quality management practices out performed those that did not. Using on-site personal interviews with the Chief Executive Officers and Quality Management Executives in 30 firms and evaluating 36 completed survey answers (25.2% response rate) Powell (1995)

conducted an empirical study in the United States of America to evaluate if Total Quality Management gave a competitive advantage.

The results of the research by Powell (1995) showed that there was no performance correlation between the length of time that a firm had Total Quality Management practices in place and business success. The most important factors for business success identified by this research study were Executive commitment, empowered employees and being an open organisation. Being an open organisation was defined as having minimal bureaucracy, a culture of trust and empowered multi-departmental work teams. Powell (1995) summarised his findings by writing "the key to TQM performance lies not in TQM techniques, like benchmarking and process improvement, but in intangible behavioural factors like leadership, organisational skills and culture" (p.28).

Malta, Chen & Tama (1998) stated that using Total Quality Management brought quality management practices into business processes, the prevention of deficits and customer satisfaction. It promoted partnerships with suppliers rather than competition among suppliers. Total Quality Management, according to these authors, changes employees from being individuals who avoid failure and fear punishment to work process managers who are able to make meaningful contributions as individuals and as team members and to receive recognition for their work. This was anticipated to be an important part of successful health care quality management practices.

In Total Quality Management control was achieved through a shared workplace vision and beliefs, rather than through organisational rules and procedures according to Malta, Chen & Tama (1998). They also stated that with Total Quality Management leadership

provided people with the opportunity to grow and promoted employee creativity. The end result of this style of management was that customers had their needs and expectations met and exceeded. This is a desired outcome for health care organisations.

Some organisations that implement Total Quality Management fail to achieve their expected outcomes. Wong (1998) conducted research to evaluate the total quality management of 53 Sino-foreign joint venture enterprises that had implemented total quality management as the management philosophy for their organisation in China. This author's research identified that the most common reason for the failure of total quality management in the researched organisations was that many of the firms had not built the right environment for quality to grow in.

This study found that total quality management had been implemented into each company by top management. The quality program was then transferred as a responsibility to middle management. Compliance with the program was then required from first-line employees. First-line employees were required to "memorise the quality policy of the company by heart, even without understanding, so that they can recite it to the auditor in the ISO certification audits" (p.S244). This had enabled companies to gain ISO certification for their quality management system.

Employees in this study were drilled in what to say, but did not have involvement in making decisions or improvements. Customers and the suppliers of goods and services were not involved in the quality management program. Wong (1998) recommended that for total quality management to be more successful in these companies all employees should be educated and consulted about, and supported in, implementing the total quality management philosophy for their work processes and work outcomes. It

needed to be evaluated if this was occurring in health care organisations with successful quality management practices.

Martinez-Lorente, Gallego-Rodriguez & Dale (1998) agreed that employee education and consultation were important for effective quality management. The reason that they made this statement was that when conducting research in 223 companies concerning the factors that make total quality management (TQM) effective their research identified that "for TQM success employees are the key element, more so than any other company characteristics" (p.70).

Vass & Kincade (1999) conducted qualitative research in three manufacturing companies to identify barriers to effective total quality management. These researchers found that more than education and support was required for total quality management to be used successfully by a company's employees. Their research "results revealed that employees' basic needs (that is wages) should be addressed before employee training needs (that is quality training) can be met effectively" (p.60). Employees who were working as hard as they could at their job, but who perceived that they were not adequately compensated for their work, were identified by this research as feeling that they already did enough for the company and were not motivated to make Total Quality Management a successful strategy. These authors discussed the following organisational development model.

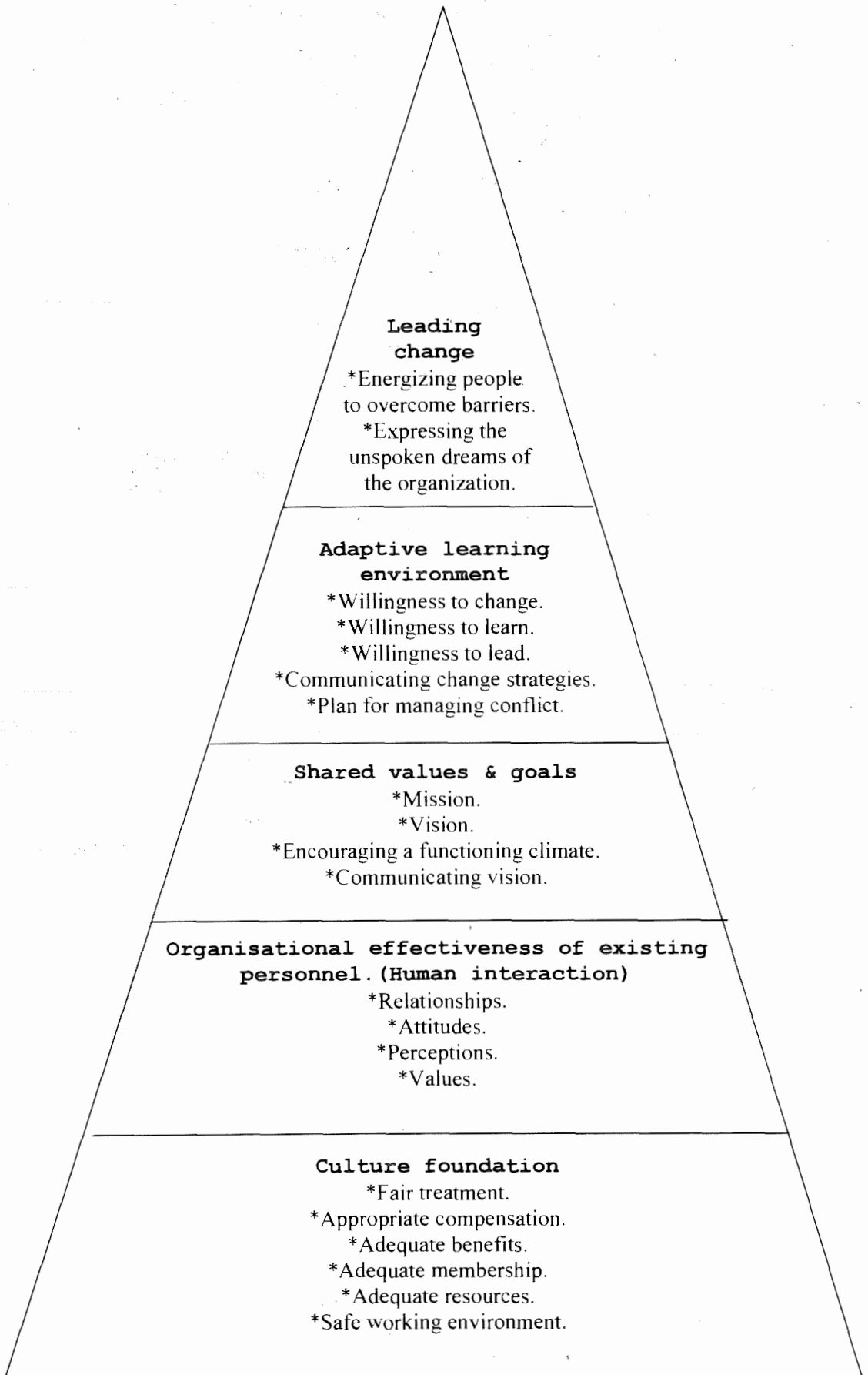


Figure 1. Organisational Development Model. (Vass & Kincade. 1999, p.64).

Vass & Kincade (1999) concluded that culture foundation elements had to be met first before total quality management could be successfully implemented. The pinnacle of their model was a work environment that fostered communication, learning and change. These factors were included in the Quality Vision Model for the evaluation of their effectiveness as part of health service quality activities.

It was expected that if these quality management principles were used effectively in health service organisations that good communication practices, educated employees who had the ability to adapt effectively to change and who provided a high standard of customer service would be some of the outcomes of these health service quality management practices.

Stratton (1998c) reported similar findings to Vass & Kincade (1999). He wrote that at the Texas Nameplate Company management eliminated the quality control department, trained all employees to be responsible for the quality of their work (so that quality was everyone's responsibility) and provided a gain-sharing plan that distributed profit bonuses equally to all employees. In the two and a quarter years that gain sharing had been in place employees received \$200,000 in bonus payment (about \$1.26 per hour for every employee). Because the cultural foundation elements of Vass and Kincade's model were met employees worked at a higher performance level, were more innovative and the company increased its profits by two million dollars per year in four years.

As many health services are non-profit organisations it may not be possible to introduce gain sharing into public health service management, although the savings of using more cost effective work processes could be passed on to the public as a reduced health care

cost. The other management strategies of providing fair treatment, appropriate financial rewards for work well done, employee involvement in deciding work practices and improvements, adequate resources and a safe work environment are practical strategies for health services to use.

Jonker & Klaver (1998) also agreed with Vass & Kincade (1999). They wrote that real Total Quality Management, as opposed to ISO accreditation, was a cultural, rather than an aspect orientated system. It required more than rote learning. Total quality management required a behaviour change by everyone in the organisation, including management, to provide a safe work environment, adequate resources to enable the provision of a high standard of work and the valuing, involvement and meeting the needs of internal and external customers.

As well as addressing the cultural and social aspects of an organisation Jonker & Klaver (1998) stated that Total Quality Management also addressed the technical aspects of promoting improved work processes, products and services. Total quality management aims for excellence at a reasonable cost. It creates value for customers, employees, stakeholders, owners and the community that the business services. This is a desired outcome for healthcare management.

Aune (1998) did not agree with all of Jonker & Klaver's recommendations. Aune considered that the "customer focus" for an organisation should be the external customers as they were the most important. External customers brought money into the system. Aune (1998) considered that the business plan of the organisation and the organisation's vision for improvement projects were the most important factors for total

quality management. This was a philosophy shared by the Health Department of Western Australia (1994).

Aune (1998) defined total quality management as "An evolving system of practices, tools and training methods being developed primarily by industry, for creating higher quality products and services for increased customer satisfaction, in a rapidly changing world" (p.56). This definition of Total Quality Management originally came from the Centre for Quality Management. Total Quality Management has not stayed static at Deming's original 14 management points. It now means many different management strategies to many different industries and organisations. Aune (1998) called Total Quality Management a "sociological organisational experiment" (p.56).

Caszlo (1998) agreed with this and wrote that Total Quality Management now covered almost all management strategies related to quality and had become a motherhood statement to cover the quality management strategies of organisations. This was much more than the original quality assurance programs that just directed efforts to the assurance of the quality of the products and services provided to a set standard. Many accreditation programs still focus on quality assurance principles. Quality assurance strategies alone were not as profitable as focusing on the continuous business improvements that total quality management could provide. For this reason the promotion of continuous improvement was included in the Quality Vision Model for an evaluation of the effectiveness of the outcome of this quality management practice.

Martinez-Lorente, Dewhurst and Dale (1998) agree with Aune (1998) and Caszlo (1998) and stated that new concepts, such as benchmarking and self-assessment, were constantly being brought into total quality management. Martinez-Lorente, Dewhurst &

Dale (1998) stated that for total quality management "almost every writer on the subject has their own definition, by and large devising it to suit their own beliefs, prejudices and business and academic experiences" (p.378). This may have been because different industries in different countries had their own culture and management practices that needed to be used to provide the most effective way to implement the best quality management practices for successful business. There was a need for research in Western Australian health care organisations to identify the best quality management practices for this industry.

Benchmarking

Martinez-Lorente, Dewhurst & Dale (1998) wrote that benchmarking is now a part of Total Quality Management. It is a quality management strategy that allows organisations to learn from the best practices of each other to improve organisational management performance. Keegan (1998) defines benchmarking as "a continuous systematic process for comparing performances of organisations, functions or processes against the best in the world" (p.44).

Wiarda & Luria (1998) agreed with this as they said that benchmarking was a way of learning from what other organisations do right, instead of reinventing the wheel. However these authors warned that no company was good at everything as "there is no such thing as **the** best practice organisation" (p.92). The use of benchmarking was promoted by the Australian Quality Council as a way to improve an organisation's (including health service organisations') business results (Searles, 1998).

Kaufman (1998) wrote that the idea of benchmarking was good in theory. Practically, however, there may be problems. Problems identified by Kaufman include the fact that

there were differences in public and in private sector management in Australia. This author stated that "in the private sector efficiency is usually rewarded and in the public sector it is usually punished [by sweeping of the saved money and/or reduction of next year's budget]" (p.50).

One of the goals of private enterprise was to make a profit while public enterprises were more likely to be judged on the measurable value added to society. Public enterprises also had a disadvantage in that they did not define the purpose of their organisation. The relevant government Minister did this. Kaufman (1998) stated that, because of the above difference in organisational values, what motivates people in one industry or organisation might not motivate the employees in private and in government health service organisations.

Another problem with benchmarking identified by Kaufman (1998) was the fact that the benchmarking partners may learn from each other to be very good at doing what should not be done at all in their business. Dahlgaard, Dahlgaard, & Edgeman (1998) agreed with this. They wrote that "because 'copying is a hazard' (Deming), we suggest adaptation and learning from the best as the best strategy to follow on the journey towards business excellence (p.555)."

Self assessment.

Martinez-Lorente, Dewhurst & Dale (1998) included self-assessment as part of total quality management. Self-assessment is an evaluation by employees in an organisation of how effective their quality management strategies are. It allows management to provide praise for work well done and to identify ways that the quality management system can be improved. Self-assessment promotes the use of Deming's fifth

management point of improving constantly and forever the system of production and service. This is an important outcome for health care quality management practices to aim for.

The use of self-assessment as a quality management evaluation tool was promoted by the Australian Quality Council, the Malcolm Baldrige National Quality Awards, the European Quality Award and other national and regional quality awards. All of the Awards promoted their particular framework for quality management as the one for organisations to compare their management practices with. Self-assessment could be used as a positive performance indicator for a health care organisation to assess if the organisation meets the desired award criteria for quality management practices.

Staffaroni & Bernstein (1998) described the use of self-assessment for their company (NCR) using the Balridge Award criteria. Strengths of using self-assessment were described by these authors as having the involvement of top management in quality assessment, allowing the development of action plans and concrete actions for improving each business unit and for improving the acquisition of skills by employees where these were needed. Other benefits were the fact that the people conducting the assessment were familiar with the business organisation being reviewed. The involvement in the assessment gave the participants a view of the company's whole organisation and the peer review sent a message to people on the shop floor that quality activities were important.

Brown & van der Wiele (1995b) stated that "quality management self-assessment is now used by companies with Total Quality Management all over the world" (p.1). In 1994 they surveyed by questionnaire 213 Australian organisations (that were Members

of the Australian Quality Council) about the organisational use of self-assessment. Of the respondents 29% had been involved in the use of self-assessment. These authors did not state if hospitals were using self-assessment as part of their quality activities, but self-assessment could be a useful quality management evaluation tool for health service managers to use.

Some of the organisations that were using self-assessment stated that the quality award criteria were modified to suit the individual's organisation requirements as award criteria were sometimes not aimed specifically at the business needs of the organisation in which self-assessment was used. Results of the research indicated that the focus of self-assessment activities in the responding organisations was mainly on management issues rather than on employee related factors. This was similar to the criteria included for quality certification by many certifying bodies.

2.4 Quality certification

The second wave of Quality Science Methodology began on 9 April 1959 with the issuing of the MIL-Q-9859 military inspection audit. Stephens (1994) traced the history of the development of current quality standards and certification to this defence document, which aimed to provide the military with equipment, which met set standards.

An International Organisation for Standards (ISO) was formed in 1979 to devise and issue standards for quality management, quality assurance and quality systems. Its most popular standard was the ISO 9000 series that was used as a commonly recognised quality standard for international trade. The standard ISO 9002:1994, Quality Systems for Production and Installation was promoted in Australia to accredit hospitals and their provision of patient services.

The first research question, 'What quality management practices are used in health care organisations to improve the quality of patient care?' was used to identify if the use of this ISO standard was one of the common quality management tool in the health services included in the research study. The second research question aimed to evaluate the effectiveness of the ISO standards as a quality management tool if these standards were used.

Gupta & Pongetti (1998) reported that ISO standards have been adopted by more than 90 countries world wide with over 150,000 companies certified by ISO. Martinez-Lorente, Gallego-Rodriguez & Dale (1998) stated that in Europe the ISO 9000 series registration had been a major quality management initiative for over ten years. An advantage of these ISO 9000 standards was that they provided a management plan, systematic procedures and processes and documentation of non-conformance that could be used by an organisation to either self assess or be audited for accreditation by an independent ISO accreditor.

Hammerschmid & Uliana (1998) wrote that advantages of having an organisation accredited to ISO standards were as follows:

- a) Accreditation showed that the company executives were using due diligence in the management of company work processes (AS/NZS ISO 9000.1:1994, AS/NZS ISO 9003: 1994, AS 3904.3-1994/NZ 59004.3:1994/ISO 9004-3:1993) and premises (ISO14001-1996).
- b) Accreditation increased public assurance and recognition that the system of work was continuously improved, updated and validated by an independent third party.
- c) Accreditation increased a company's status and made it more likely to be used as a preferred supplier of goods and/or services.
- d) Accreditation eliminated the need for customer initiated audits.

A disadvantage of the ISO 9000 standards was that they were developed for manufacturing organisations and provided standards and a practical quality management system more for the management of the production of goods rather than health care (Gupta & Pongetti, 1998). The lack of health care quality management applicability of the ISO standards to Australian hospitals may be due the fact that there are no health care representatives on the Australian/New Zealand Standards Joint Technical Committee QR/8 Quality Systems. This advisory body approves the documents that provide the guidelines for ISO accreditation standards for Australia and New Zealand (Standards Australia/Standards New Zealand, 1994b).

Terziovski, Samson & Dow (1995) conducted a research study of 1,341 Australian and New Zealand companies and found that there was no correlation between a company having ISO 9000 accreditation and customer satisfaction. Brown & Van der Wiele (1995) had similar findings when they conducted a survey of all organisations in Western Australia that had ISO certification as of July 1994. In addition to this Brown & Van der Wiele (1995a) stated:

Respondents reported that certification had not brought any significant improvements in productivity, costs, wastage rates, staff motivation and staff retention. Overall it had not helped the organisation to stay in business (p.12).

Mangelsdorf (1998) agreed with this and reported that third party audits were of reduced importance for today than in the past. This was due to the increasing complexity of business processes, the increasing efficiency of company internal audits, management reviews and the continuous quality improvement activities conducted by competent company employees. Vogel (1998) agreed with Mangelsdorf (1998) and stated that certification was used by most businesses as "a licence to do business" (p.47) instead a tool for improving business performance. Vogel also wrote that ISO certification may show that a company is "doing things right" (p.49) but it does not certify that the company is doing the right things. Mangelsdorf (1998, S165) reported

that "market requirements overshoot the ISO standard" and that being the same as accredited competitors is not a recipe for success. Companies need to differ to be successful in global competition.

When writing about ISO accreditation Vogel (1998, p.47) stated that "there has been wide spread misunderstanding that quality system certification is all that is needed to produce and guarantee a quality outcome." Brown and Van der Wiele (1995) had similar findings as they wrote that ISO accreditation only provided an assurance of a set standard of processes and systems that were consistent and reliable, not quality per se.

For example, just months before an explosion at the Moura coalmine in Queensland when eleven men were killed, the mine had received accreditation from Standards Australia for its quality assurance system (Hopkins, 1999). These workplace deaths, the destruction of the workplace and the subsequent decrease in organisational profits demonstrated that having an accredited quality of work system does not always make the work processes safer and more profitable.

Van Loon (1998) agreed with Vogel (1998). Brown & Van der Wiele (1995) and wrote "experience has shown that just focusing on the customer perception of quality (as typified by the AS/ISO9000 series of quality standards) does not ensure a business will survive" (p.63). Van Loon states that more than meeting set standards and achieving customer satisfaction is needed to ensure business's survival.

Zuckerman (1998a) agreed with Van Loon (1998) and added that many accreditation and certification organisations employed professional accreditation bureaucrats and policemen and had to make money to continue operations and to pay these employees. For this reason companies that applied for accreditation or certification had to pay substantial sums of money to earn their marks or accreditation certificates to enter world markets or to obtain particular customers. Zuckerman (1998a) also wrote that

there was a direct correlation between the accreditation and the money that the companies spend on earning the certificates. Included was the certification of health service organisations. Due to these factors accreditation to set standards alone may not be the most successful quality practice for health services. Research needed to be conducted to identify if it was.

Maurice Healy. Chairman of the British Standards Institution called ISO 9000 certification "a huge scam" (Zuckerman. 1998a. p.52). Sergio Mazza. President of the American National Institute. agreed with this and stated that huge sums of money were involved and the companies that control the standards "laugh all the way to the bank" (Zuckerman. 1998b. p.16). Accreditation does however assure customers that an organisation has met the set accreditation or certification criteria.

Many accreditation systems only examine consistency and reliability *rather than if an organisation is doing the right things to improve the quality of outcomes*. Health care accreditation of services provided started this way. Hospital Accreditation began with an initiative taken by a Medical Practitioner. Dr. Ernest Godman. in 1910. He developed an "end-result system" which enabled hospitals to track all patients treated to establish whether the treatment was effective. Scrivens (1995. p.11-12) recorded that "Accreditation systems were designed originally to protect the medical profession from the worst effects of poor environment and poor organisations."

In 1970 accreditation of hospitals in the United States of America and Canada changed from inspecting an organisation to see if it met minimum set standards. to looking for the achievement of optimum set standards. This was the birth of worldwide quality activity practices in health care (Scrivens. 1995).

In Australia accreditation was seen as a way of bringing pressure on funders to provide adequate resources. In the United Kingdom "Nursing in particular perceived

accreditation as a means to develop standards after a set of serious and damaging events in which patients were murdered or damaged by lack of appropriate professional controls on the activities of individual nurses" (Scrivens, 1995, p.31).

During 1974 the Australian Council on Health Care Standards Ltd.. (ACHS) was formed to issue a certificate of accreditation to Health Service Units who met the Standards included in the criteria for evaluation of quality activities which were set by this organisation. The areas examined included organisation and administration, staffing and direction, patient care, policies and procedures, facilities and equipment, and the organisation's quality assurance program. (Heath, 1993).

Benefits of this are similar to the ISO 9000 standard certification in that ACHS accreditation confirms that the Health Service Unit meets the ACHS set standards. However, the Australian Council on Health Care Standards aims not to be judgemental and just have an inspection role. It aims to have an educational role and to encourage health care organisations to conduct ongoing evaluation of outcomes, particularly clinical indicators (Scrivens, 1995, p.24-25).

Clinical Indicators were the basis of the original checking of standards of patient care commenced by Dr. Godman in America in 1910. Clinical Indicators are still used in 2000 as a Quality of Care measure by the ACHS. The Australian Quality Council (1998b) states that health care accreditation works at the "rules level" (if the health service meets a set of criteria it is accredited), while Quality Awards work at the "values level".

2.5 Quality awards

The Deming Application Prize contributed significantly to the development of Quality Activities in Japan. Kume (1994, p.38) describes how many of Japan's major companies used their ambition to win the prize as a way of raising their level of quality control. The national quality control standard was raised due to so many Japanese organisations competing for the prize. Kume stated that quality award or quality prize criteria provided a framework that organisations could base their quality management practices on.

Wilkins (1998) agreed with Kume (1994). He described the ISO 9000 family of standards as a "a skeleton on which the organisation structure can be draped whilst the Quality Awards criteria form an excellent framework for business planning" (p.40). Wilkins stated that meeting ISO standards, or winning a Quality Award, were ways to prove to the business owner(s), employees, customers and other stakeholders that the business methods used, and results achieved, met or excelled set criteria. The first research question aimed to identify if aiming to win a quality awards was one of the quality management tools used in the studied hospitals as part of the health service quality management strategies, and if this practice was used how effective it was.

Van der Wiele et al. (1995) agreed with using quality awards as a business framework. These authors described the Malcolm Baldrige National Quality Award and the European Quality Award as providing a framework for organisations (including health care organisations) to use for self-assessment as well as for aiming to win the award. The authors stated that the award framework could be used for management to identify opportunities for improvement, for business activity planning and as a baseline measurement to produce business excellence. The main award criteria headings recorded by Keinath & Goski. (1999) for the Deming Prize, the Baldrige Award and the European Quality Award are listed in table one.

Table 1. Award categories.

Deming Prize	Baldrige Award	European Quality Award
1. Company policy & planning	1. Leadership	1. Leadership
2. Organisation & its management	2. Strategic planning	2. Policy & strategy
3. Quality control education & its management	3. Customer & market focus	3. People management
4. Collection, transmission & utilisation of information on quality	4. Information & analysis	4. Resources
5. Analysis	5. Human resource development & management	5. Processes
6. Standardisation	6. Process management	6. Customer satisfaction
7. Control	7. Business results.	7. People satisfaction
8. Quality assurance		8. Impact on society
9. Effects		9. Business results
10. Future plans.		

As can be seen from the above table there are similarities between these three awards, but each one is targeted to the management culture of the people in the countries to which the prize or award applies. It is interesting to note that the Deming Prize includes *future plans* (looking forward) while the Baldrige and European Quality Award include *business results* (looking backward).

Keinath & Goski (1999) wrote that all of the above quality awards could contribute to bringing quality innovations to organisations. These authors also described how award criteria, such as the Baldrige Award and self-assessment, could become a framework that organisations could use as a quality management tool. Organisations that win quality awards receive, and generate, publicity as a quality award-winning organisation.

The publicity generated can be used as a successful business-marketing tool. This should help to increase the winning organisation's public profile and profits to help to repay the cost of the use of employees' time and/or consultants fees for the time spent in applying for the award. Blazey (1998) wrote that all four 1997 Baldrige Award recipients hired quality consultants to help them complete their application for the

award as the 50 page written assessment required was extremely time consuming (4,000+ hours of effort) and labour intensive.

With scarce resources available for health care in Australia, paying consultants to write a report to win an award may not be the best value for money or produce the most effective quality activities for providing a high standard of cost effective patient health care. Aiming to win quality awards may not be a common quality management practice in Western Australian health services.

Another problem that Blazey (1998) documented with applying for the Baldrige Award was the fact that because the organisation management want to win the award the narrative presented may not accurately describe the management processes and systems in the organisation. Later decisions based on this misleading or incomplete information may then be taken and result in the organisation heading in the wrong direction.

Award examiners may have problems in making the correct decision because insufficient information maybe provided about organisational problems and because only a few peoples' point of view may be represented in the narrative. A further problem documented by Blazey (1998) was that to be a Baldrige Award winner the knowledge required to write a meaningful narrative self-assessment was greater than that possessed by the employees in most organisations. The Baldrige Award was for American businesses to aim to achieve.

The Australian Quality Council promoted its "Australian Business Excellence Award" as a Quality Award for Australian businesses (including health care organisations) to aim for. This award was described by the Australian Quality Council as being non-prescriptive and similar to the European Business Excellence Award and the US Baldrige Award for Business Excellence.

The 1999 framework for the Australian Business Excellence award had seven categories. They were as follows.

	Points
1. Leadership & innovation	(180)
2. Strategy & planning processes	(100)
3. Data, information & knowledge	(100)
4. People	(160)
5. Customer & market focus	(150)
6. Process, products & services	(160)
7. Business results	(150)

(Australian Quality Council. 1998a. p.9.)

In this award the category with the highest number of points awarded was leadership and innovation. This shows the importance that this award placed on the role of effective leadership and a work environment where innovations were encouraged. The importance of leadership and innovations in quality management was evaluated by this research for Western Australian health services.

The category of leadership and innovation, as well as covering organisational management, also examined how the organisation contributed to the community beyond its core business, how the organisation's statutory environmental responsibilities were met and the positive impact that the business had on the environment. In this quality award the role of leadership was expanded beyond the organisational leadership promoted by Deming, to also include providing community benefits. Larsen & Haveisjo (1998), when discussing the criteria in the European Business Excellence Award, wrote "New strategies often develop from the bottom level of the organisation and from practical experience, while the official strategies formulated from the top are but an empty shell (S154)." These authors challenge the importance placed on leadership by top management in the Business Excellence Awards.

Larsen & Haveisjo (1998) also questioned the importance of top management providing strategic directions as they state that company goals and strategies often alter according

to fashion and changes in the thoughts of people in the organisation. They state that examining business practices is a more reliable way to assess an organisation rather than looking at strategic management.

The next highest points in the Australian Business Excellence Award were provided for the categories "People" and "Process, products and services". The category of people looked at the traditional quality management areas of employee involvement, commitment and education. It also examined the provision of a safe work environment, safe work processes, employees' health needs being met and health promotion activities.

Areas that this award did not include, that may be important, were the provision to employees of adequate rewards for their work (Vass & Kincade, 1999). In the category of people the award did not look at providing employees with adequate resources to enable them to perform their work well on a daily basis. Adequate resources include enough time and people to work safely (WorkSafe Western Australia, 1999).

The category of "process, products and services" very much followed Deming's ideas for quality management, but had the addition of benchmarking business activities with competitors. This is a common recent trend in quality management. The most points in this award for a sub-category were allocated to "Indicators of success". This category was very broad and included a sweeping statement that benefits will be provided to all stakeholders including shareholders or owners, employees, customers, suppliers and the wider community. The last sub-category was "Indicators of sustainability". This was simply evidence of business continuity planning.

Hausner (1999) conducted research to examine the link between the Australian Quality Council's Business Excellence Framework and 22 manufacturing companies' business results. Bottom line measures, such as profitability, sales, cost, productivity and financial results were examined (Vogel & Hausner, 1999). It was found that

organisations that achieved high scores on the Australian Quality Awards for Business Excellence had an average of 2% increase in improvements in their key performance indicators. Companies that entered multiple awards achieved an average of 4% improvement in their key performance indicators. This may, in part, be due to the Hawthorne effect where increased attention to employees and their work produces improvements.

Larsen & Haveisjo (1998), when discussing the European Business Excellence Award, stated that this award, which is similar to the Australian Business Excellence Award, did not take into account the difference between the way that public and private organisations were managed. Public organisation management structure was usually decreed by the relevant government Minister or parliament. This resulted in public sector managers having a lower degree of freedom than private enterprise managers in deciding organisational structure and practices. This difference allowed private enterprise organisation people to be more innovative in the management of company quality practices. This factor needed to be evaluated to identify if private health services' quality management practices were more effective than government hospitals' quality management practices. If this was so government hospitals could learn from, and adapt to their organisations, the successful quality management practices used by private enterprise health services.

Another criticism that Larsen & Haveisjo (1998) made about the European Business Excellence Award was that it expected integration of systems. These authors stated that having different systems and using competition between departments or divisions maybe more beneficial as work practices may not be the same in all areas, but this consideration was foreign to the Award model. Benson, Saraph & Schroeder (1991) had a similar finding to Larsen & Haveisjo (1998). These authors reported that it was not uncommon to find different quality practices being used in different areas of the one organisation. They also stated that quality performance could vary significantly

between different business units or departments in the same organisation. These factors are not always taken into account in award criteria.

The Australian Quality Council (1998b) stated that health services would be wise to consider using "the Australian Business Excellence Framework, the Australian Council on Healthcare Standards' (ACHS) Evaluation and Quality Improvement program (EQuIP), the Quality Improvement Council's (QIC) Community Health Accreditation and Standards Program (CHASP) and the International Standards Organisation's ISO 9000 family of quality system standards" (p.4). The Australian Quality Council recognises that meeting the Business Excellence Award criteria only may not be enough for the most successful health care quality management.

Ganley (1998) agreed with the Australian Quality Council. When trialing the use of the Australian Business Excellence Framework at the Royal North Shore Hospital it was reported by Ganley that the hospital management found it necessary to include certain elements of the EQuIP program in the health service quality management program as the Australian Business Excellence Framework was lacking in some areas, such as risk management.

Breen (1998) also agreed that the use of more than one quality management framework was required for Baronor Private Hospital. Breen reported that this health service used the ISO 9002 Quality Management System as well as the Australian Quality Council's Award for Business Excellence program as the health service managers saw the value in combining the best of both quality management systems to meet their desired business outcomes.

Perry, Wong & Bernhardt. (1995) wrote that many of the Quality Awards did not consider all of the company stakeholders. For example, they state that the Australian Quality Awards only considered the customers and suppliers, along with, at a high

level, the community and environment. The Baldrige Award criteria only considered customers and suppliers. The European model for self-appraisal considered customers, employees and society, but ignored shareholders, financiers and suppliers.

The answer to the most successful quality management system may be the combining of a variety of recommended quality management activities that promote level four quality activities. Quality practices that were considered in 1995 by industry leaders to provide the best products and services for customers are described in the following stages of quality activities as level four quality activities.

2.6 Stages of quality activities

Prior to conducting this research a review of world wide quality activities indicated that there were four major levels of quality activities in use in industry. The major levels identified were as follows.

Table 2. Stages of Quality Activities.

Level	Wacker & Sheu	de Noray	Garvin
1	Pre-quality	No quality activities	Inspection
2	Conformance to design	Quality Mastery	Statistical quality control
3	Improvement in design	Quality improvement	Quality Assurance
4	Initiating design stage	Quality anticipation	Strategic Quality management

Information on the criteria in each of these models is provided as follows. Wacker and Sheu (1994, p.44) described their four stages of quality as including:

Stage 1. "Pre-quality" where there are no quality activities in the organisation because there is no competition.

Stage 2. "Conformance to design". The organisation has quality assurance activities to reduce material and re-work costs. This allows profits to increase.

Stage 3. "Improvement in design". Products are produced that are more durable and reliable than the organisation's competitors. This causes sales to increase, but the organisation is usually reluctant to charge a higher price because business would be lost to lower cost competitors.

Stage 4. "Initiating design stage". In this stage new product features or services are constantly being introduced. A higher price can be charged for the products or services as they cannot be readily duplicated by competitors. Stage 4 organisations respond to their customers' requirement faster than their competitors. Wacker and Sheu (1994) stated that innovation in developing new product features or services that customers desired enabled an organisation to remain profitable and to compete effectively over time.

Under different headings, de Noray (1994) described four stages of quality activities.

Stage 1. No quality activities.

Stage 2. "Quality Mastery". This was developed in the 1930's in the United States of America. It was a method used to provide customers with a product or service of consistent quality that conformed to predetermined quality standards.

Stage 3. "Quality Improvement". In the 1970's there was a big increase in the cost of raw materials due to a rise in the price of oil. To stay in business, manufacturers had to reduce their costs. Jouslin de Noray wrote that quality improvement produced a "58% increase in customer satisfaction, a 56% reduction of manufacturing cycle times, and a 33% reduction in product costs" (p.49). At this stage continuous improvement and participative management were encouraged.

Stage 4. "Quality Anticipation". Today's market place is subject to accelerated change in consumer demands with no industry knowing what tomorrow would bring. To remain profitable organisations had to surprise and delight customers, exceed customers' expectations and provide new innovations in products and services by identifying customers' unconscious need and expectations. At this level of quality activities employees were empowered, asked to be innovators, no longer feared failure and worked toward a common company vision. Wacker and Sheu (1994) and de Noray (1994) agreed that a successful organisation has stages 2, 3 and 4 as part of their ongoing quality activities.

Quality activities are continually evolving in industry. Garvin [cited in Costin (1994, p.14-15)] described how the United States of America (U.S.A.) has had 4 stages of Quality Activities.

Stage 1. Quality Activities began in the U.S.A. in the early 1800's with the introduction of formal inspections in industrial processes.

Stage 2. Statistical Quality Control as a distinct management function was promoted by the publication in 1922 of G.S. Radford's book, 'The Control of Quality in Manufacturing'.

Stage 3. Quality Assurance began in the 1970's and involved 4 elements: "quantifying the cost of quality, total quality control, reliability engineering, and zero defects" p.14.

Stage 4. In the 1990's the U.S.A. has Strategic Quality Management where quality was included in the organisation's strategic planning process, was defined from a customer's point of view, linked with profitability and used as an aggressive competitive weapon.

The Western Australian Health Department promoted following the American quality management trend of using strategic quality management aim to produce a high level of customer service. The Quality Vision Model and the research questions all aimed to identify if this was occurring, and if it was, how effective strategic quality management was for Western Australian hospitals.

2.7. World wide quality activities

According to Gilbert. (1995, p.35), company managers want to know what strategies are needed to make their company a "world competitive profitable company," and how it can be guaranteed that investing employees' time and energy in particular activities is going to result in a profit. Strategies required may not be the same for successful Western Australian health service quality management as each company has its own culture and people with differing abilities. Worldwide, quality activities are performed in organisations with an aim to be profitable by meeting the needs and expectations of customers, employees, financial stakeholders and society at large. Health service organisations have these needs too.

The world's best performing organisations, according to Donovan (1994), are empowering employees to self-manage and encouraging employee multi-skilling. This maximises the abilities of all staff and enables employees to contribute to the best of their ability to providing work outcomes that produce the greatest level of cost effectiveness and profit achievable by these employees within the constraints of the employees' knowledge and the resources provided.

Kelly (1994) found that individuals and organisations who were not constantly seeking new knowledge, and new ways of applying this knowledge to new situations, were ill-equipped to cope with, let alone profit from, constantly occurring change. "Learning organisations" were becoming world leaders in business (Kelly, 1994).

The difference between Japanese and U.S.A. quality activities today, according to Costin (1994, p.15) was that U.S.A. quality activities focused on the responsibilities of front line workers, while in Japan the focus was on management responsibilities. Costin also recorded that in the U.S.A., and in Japan, the most successful organisations were 'learning organisations'. This needed to be researched to identify if it was true for effective quality management practices in Western Australian health service organisations, so being a learning organisation was a factor included in the quality vision model tested by this research.

Learning organisations, according to Garvin (1994), acquire and transfer knowledge, and modify organisational behaviour to reflect new knowledge and insights. The organisation had a shift away from continuous improvement to a commitment to learning. The five main activities of a learning organisation were:

- (1) Systematic problem solving.
- (2) Experimentation with new approaches.
- (3) Learning from the past.
- (4) Learning from the best practices of others.
- (5) Using knowledge.

Gertz (1994) conducted a survey of 1,000 of U.S.A.'s largest companies. The survey demonstrated that cost cutting by itself gave limited future value as competitors could match cost reductions. The highest profits were yielded by focusing on core business growth. This survey by Gertz found that the essentials for United States of America companies' business successes were proving to be supplying the following:

- (1) **Value.** Successful products or services were developed through innovations or exploitation of core competencies.

- (2) Good **support** for employees through the culture and structure of the organisation.
- (3) **Best-in-class** production, distribution, selling, marketing, customer service and retention.

No evidence was identified in the literature reviewed to relate business success to the length of time that an organisation had quality activities in place. However, often an improvement in business activities was evident when the effectiveness of quality management strategies were reviewed 12 months after implementation (Taylor, 1998, Stratton, 1998a). This may have been due to having better overall organisational management, or it could have been due to the Hawthorne effect that could result when new interventions were implemented (Gibson, Ivancevich & Donnelly, 1994).

Multi-national companies had helped the spread of knowledge of the benefits of using quality activities. For example, Bourke (1994) described how Hertz Car Rentals, who had company branches internationally, had become worldwide business leaders through using quality activities. The focuses of Hertz quality activities were:

- * Using global training models that were tailored to local conditions. This enabled the firm to have international consistency in delivering excellence in service and spread best practice ideas
- * Building a rapport with customers internationally and selling to their needs.
- * Conducting workplace audits and regular customer surveys to identify areas where the organisation could improve locally and internationally.
- * Communicating the results of audits and surveys to employees and rectifying any identified deficits.
- * Empowering employees.
- * Training employees for succession to management positions.

Particularly the quality management strategies of being customer focused, providing employee education, empowering employees, communicating the results of audits and surveys to employees and rectifying any identified deficits were viewed as important strategies to be implemented as part of quality management strategies for health services. As such they were included in the quality vision model for evaluation of their occurrence and effectiveness for health service quality management practices.

In 1989 the European Foundation for Quality Management (EFQM) and the European Organisation for Quality (EOQ) jointly developed a quality activities model called Business Excellence. This model was revised every two years. In 1998 the European Quality Publications Ltd. stated that this quality activities model focused on leadership, policy and strategies (which included the organisation's vision, mission and values), people and their knowledge, material resources, partnerships with suppliers, regulatory bodies and business partners, external customer focused processes, society and organisational performance. For all of these categories the fundamental principle was to promote continuous improvement.

The use of an organisation's vision and mission statement to direct quality activities in health care services seemed logical so these were included as part of the quality vision model to be evaluated for the use and effectiveness of this strategy in health service quality management.

Kanji (1998) recommended that organisations use this Business Excellence framework for self-assessment of organisational management activities. When the self-assessment results recorded that the organisation was meeting the set criteria Kanji recommended that the organisation's manager then apply for assessment for the Business Excellence Award. Self-assessment is becoming an increasingly popular quality evaluation tool (Longbottom, 1998).

Longbottom (1998) tracked the progress of 20 United Kingdom companies from 1991 to 1997 to evaluate the success of these companies' use of self-assessment as a quality management tool. Within 2-5 years of self-assessment, using the Business Excellence framework, six of the organisations were achieving a score of 200-300 out of 500 points. The remaining 14 study organisations' scores were below 200. On the positive side, Longbottom's research identified that the top six organisations had increased cost containment by 5-8% and profitability by 25-28%. On the negative side the researcher found customer complaints to the Banking and Insurance Ombudsman had reached record levels and several of the companies in the leading group were facing legal proceedings and fines for alleged over-selling. After 3-5 years of self-assessment, using the Business Excellence framework, the researcher reported that two thirds of the companies were disillusioned with the process and one quarter of the study companies had discontinued self-assessment.

One of the aims of the first research question was to identify if self assessment was one of the tools used for quality management, and if it was used, how effective this activity was in improving the quality of patient care.

One of the factors that Longbottom (1998) noted in the studied organisations was that for many of the organisations the self-assessment framework was used without any real commitment by the organisation to implementing change. Kannan, Tan, Handfield & Ghosh (1999) agreed with Longbottom (1998). They sent a survey to 1469 Quality Directors, who were members of the American Society for Quality, to identify quality activities used in the United States of America and Canada. The response rate to their survey was 21.3% (313 returned surveys). Regression and factor analysis were performed on the survey results.

These researchers reported that 24% of the respondents' companies were ISO 9000 certified. Thirty-six quality management practices were recorded. The mean response

for these was a medium of 4.42 (range 2.84-5.09) indicating that a wide variety of quality practices were used in each company. The research findings of Kannan, Tan, Handfield & Ghosh (1999) indicated that successful company performance was most influenced by developing an organisational culture that was driven by quality and focused on preventing problems rather than focusing on inspecting problems out of the organisation products and work processes once the problems had occurred.

The top two responses from Quality Directors identified by this research for quality management practices used were (1) monitoring key indicators of plant and company performance and (2) having an emphasis by top management on good occupational safety and health practices. The evaluation of organisational activities and an emphasis by top management on good occupational safety and health practices were included in the quality vision model for evaluation as they were considered as the most used quality management practices by Quality Directors. Other factors considered in the quality vision model were many of the quality tools reported as commonly used by industry.

2.8 Quality tools commonly used.

When developing the Quality Vision Model quality management tools reported in published literature were examined and included in the Quality Vision Model if they were assessed as being suitable for successful health care quality management use. Effective quality management tools identified in the reviewed published literature included:

- inspection (Greene, 1993, Carson, Carson, Eden & Roe, 1998, Herme, 1995, Cremer, 1998, Smith, 1999).
- effective organisation wide communication (Brown, Millen & Sohal, 1995, Dawson, 1995, Chandler, 1998, Dervitsiotis, 1998, Schwebel, 1998, Stratton, 1998b).

- effective leadership (Preston, Saunders, O'Sullivan, Garrigan & Rice, 1995, Dickhout, 1998, Goodrick, 1998, Shea & Howell, 1998, Edgeman & Dahlgaard, 1998).
- having effective occupational safety and health practices (Dawson, 1995, Branston, 1998, Oswald & Lang, 1998, Ford, 1998, Australian Council on Healthcare Standards, 1998, Stratton, 1998b, Kennedy, 1998, Smith, 1999, Kannan, Tan, Handfield & Ghosh, 1999).
- being a learning organisation (Heinbuck, 1993, Dobson & Tosh, 1998, Cosin, 1994, Lemaire & Jonker, 1998, Garvin, 1998, Governey, 1998).
- using team work (Robertson, 1998, Routhieaux & Gutek, 1998, Henry, 1998).
- Suppliers' involvement in quality activities (Preston & Saunders, 1994, Sohal & Lu, 1995, Skilleter, 1994, Routhieaux & Gutek, 1998, Taylor, 1998, Terziovski, 1998).
- research and innovations (Dervitsiotis, 1998, Hamel, 1998, Plsek, 1998, Provost & Langley, 1998, Dean, 1998, Oswald & Lang, 1998, European Quality Publications Ltd., 1998).
- using strategic planning (Foster, 1998, Forte, 1993, Cosin, 1994, Health Department of Western Australia, 1994, Nakhai & Neves, 1994, Saint Lawrence & Stinnett, 1994, Richardson, 1994, Perry, Wong & Bernhardt, 1995, Black & Porter, 1996, European Publications Ltd., 1998).

The following is a summary of some of the above authors' findings. The first research question, "What quality management practices are used in health care organisations to improve the quality of patient care?" considered these factors in relation to the quality management practices used in Western Australian hospitals.

2.8.1 Inspection.

Carson, Carson, Eden & Roe (1998) described how too often in quality activities managers, or others, were expected to identify problems by inspection after the production of the goods or services. Inspection was a commonly used evaluation tool

for Australian health care quality activities (Australian Council on Health Care Standards, 1998). Cremer (1998) and Herme (1995) reported similar findings to Carson, Carson, Eden & Roe (1998). These authors also stated that companies should focus attention on preventing quality related problems and eliminating potential problems before they occurred by including quality in the design stage of any workplace, product or procedure, rather than trying to inspect problems out afterwards.

Greene (1993) also concluded that a key to improving the quality of work processes and products was maintaining the integrity of processes through preventing problems occurring rather than focusing on inspection to detect problems after they have occurred. He also considered effective communication practices an important part of quality management.

2.8.2 Communication.

Brown, Millen and Sohal (1995, p.90) when writing about quality activities stated that knowing about the "World best practice" was of little use unless this information was communicated and used through out the organisation. Good communication was an important part of quality activities according to these authors.

At the Central Coast Area Health Service in New South Wales it was identified by Schwebel (1998) that many quality activity projects were conducted but the results of the projects were not communicated to the stakeholders. Often there was no record of the outcome of the activities performed to improve work practices. To over come this problem a matrix to record quality activities being undertaken was developed. This enabled the progress of projects to be monitored and feedback of outcomes to be given to stake holders. It was identified that good communication practices were a key to improving quality outcomes and sharing the information throughout the health care service.

Chandler (1998) agreed that good organisation wide communication of knowledge was important to provide a high standard of care. He wrote that a hospital in Florida improved the quality of its patient services by investing money in electronic communication equipment, such as computers with e-mail facilities, better information storage and retrieval computer programmes, Internet access facilities, fax machines, voice mail on telephones and an intracellular phone system for nurses. The quality of customer care was also improved by the purchase and use of faster, more accurate diagnostic equipment, as well as the improved communication equipment. When designing quality into an organisation this author stated that it was important to have the right equipment and work processes to be able to provide a high standard of service. Effective communication was included as a quality management tool in the Quality Vision Model.

Dawson (1995) identified poor communication and interpersonal skills as a major barrier to implementing and using quality activities by employees in their workplaces. Important factors identified by Dervitsiotis (1998) for quality management and business survival included having a flat organisational structure to improve communication, reduce response times and enable the multi-skilling of employees. This enabled organisational knowledge of how to do a job effectively to be retained when a key employee, such as a department leader, left.

2.8.3 Leadership.

According to Dickhout (1998) there was no such thing as perfect leadership, but the leaders who were most effective were those who set their expectations of employees' work practices high and facilitated these people achieving their expectations.

Goldrick (1998) agreed with Dickhout (1998). He considered that good leaders should be catalysts who infused employees with a belief that they could achieve, removed obstacles to success and provided the resources and support to enable employees to

achieve the desired outcomes. Mistakes, he stated, should be treated as growth opportunities and employees coached on how to achieve success. According to Goldrick (1998) effective leaders encouraged open communication, employee trust, employee suggestions for improvements and provided appropriate feedback about work performance to employees.

Goldrick (1998) stated that having effective organisational leadership was the key to business survival and effective leadership was a key quality management requirement. He considered that effective leaders were needed at all levels of an organisation as many organisations were becoming flatter today due to the absence of middle management. This was true for many health service organisations.

Leaders should inspire and coach employees to achieve the organisation's vision, have a high employee involvement approach and empower employees to make work related decisions where appropriate. This way Goldrick (1998) reported all employees can become true partners in achieving the organisation's quality management objectives and in finding better ways of meeting the organisation's goals. He also recorded that effective leaders built good communication networks throughout the organisation and alliances with external partners. Shea & Howell (1998) agreed with Goldrick (1998) that effective quality management leadership was necessary for business survival. They stated that top management must have visionary leadership, commitment to quality principles and encourage a quality orientation organisational culture that included links with customers and suppliers.

Preston, Saunders, O'Sullivan, Garrigan & Rice (1995) assessed leadership performance on the basis of the activities of the executive managers in hospitals. This "executive group saw leadership primarily in terms of defining and communicating a vision for others to share" (p. 69-70). Edgeman & Dahlgaard (1998) agreed with Preston, Saunders, O'Sullivan, Garrigan & Rice (1995). These authors also stated that the

Australian Quality Awards, the Malcolm Baldrige National Quality Award, the European Quality Award, the Japanese Deming Prize and the New Zealand Quality Award all assess leadership in relation to management performance. Management's leadership role in these awards was expected to be internal to the organisation, through involvement with customers, suppliers and other external organisations and by showing society leadership responsibilities.

Goldrick (1998) challenged the notion that only management personnel are leaders. He stated that "leaders can be found in all ranks throughout the organisation - identified not by title, but rather by skill and competencies" (p.45). Smart (1998) agreed with this point of view stating that organisations that are effective have developed leadership skills in employees at all levels of the organisation. He considered that this helped the organisation to respond with innovation and speed to the need to adapt to rapidly changing technology and market conditions and to remain viable into the future.

In the quality vision model management performance was researched as a key area of quality activities. In this model one of the functions of management that was evaluated was the promotion of care, consideration, health and safety of employees and customers.

2.8.4 Occupational safety and health

Ford (1998, p. 46) wrote that "Occupational health and safety should be integrated with all management, production and quality systems from planning, through to purchasing, manufacture and on to sales and delivery." The Australian Quality Council Framework 1999 included health, safety and employee well-being as part of its category four for people. The Australian Council on Healthcare Standards (1998) included achieving a high standard of occupational safety and health as part of the requirements for achieving accreditation through its organisation.

In addition to this all Western Australian health service employers and employees were legally required to meet their occupational safety and health responsibilities documented in the Occupational Safety and Health Act 1984 and the Occupational Safety and Health Regulations 1996. The benefits of focusing on occupational health and the safety of employees, according to Ford (1998) are improved employee work performance, lower compensation costs, increased business revenue, reduced sick leave costs and organisational survival.

Kennedy (1998) agreed with this. He reported that safety and environmental management are the first pillars in improving quality management of work processes, employee attitudes and employee actions in relation to providing a high quality product or service. Kennedy wrote that this was why the outcome of successful quality management practices was a 3-60% decrease in lost time employee injuries. Having less lost time injuries improved employee productivity by up to 60% a year due to less sick leave being taken by employees and having a healthier, happier work force (Kennedy, 1998).

This review of literature identified that it was an important management function to promote care, consideration, health and safety for employees and customers so this quality management tool was included in the Quality Vision Model. Krause & Hindley (1998) claimed there was a close link between quality improvement and an injury free workplace and that the occupational safety and health performance of an organisation was now regarded as a leading indicator of the overall performance of an organisation.

Part of occupational health promotion is caring for employees. Branson (1998) reported that if employees were cared for by the owner of a company, and if these people were proud of the company, this was a way that a company would become successful. He reported that employees who felt cared for by their company were more motivated to help the company be successful. Branson (1998) also stated that the best practices in

quality management included caring for employees, encouraging employee ideas, implementing these ideas as appropriate, praising good employee ideas and work practices and providing employees with enough time to complete their work to a high standard. He recommended that if there was not enough people to complete work to a high standard then the company should employ more people to do the needed work.

As part of caring for employees Branson (1998) recommended allowing employees to have unpaid leave instead of terminating employment if employees needed a break to sort out personal problems or if there was not enough work available at the company. Branson reported that when work became available again, or when personal problems were sorted out, these people came back to work for the company with renewed enthusiasm.

Dawson (1995) stated that as far back as the 1980s Peters and Waterman had identified that caring for employees and treating employees with respect and dignity was an important part of encouraging employees to have a bias for innovations and action to improve goods and services. Oswald & Lang (1998) agreed with Dawson (1995). They wrote "before a company can deliver great service to external customers, it must deliver great service to internal customers" (p.63). Delivering great service to internal customers was defined by these authors as caring for, empowering, educating and rewarding employees through company presented awards and pay rises as appropriate for excellence in customer service.

Smith (1999, p.39) recorded that "quality methods used between the 1950s and 1970s relied on building, inspecting and selling the product." Today he states it has been recognised that quality is more effectively managed by treating the employee as a customer first and as a supplier of labour second. Smith (1999) stated that employees should be cared for by their employer and asked what they require to be able to perform their work in the most cost-effective way. Workers should also be given an opportunity

to tell management about any identified problems in the work processes and given the opportunity to provide successful solutions to eliminate or minimise these problems. to identify and implement better ways of completing work processes. To be able to do the above employees should have continuing education in their field of work.

2.8.5 Learning organisation

Heinbuck (1993) states that Managers need to be educated to cope with the continual changes that are occurring in organisations. For employees in any organisation to achieve their potential in being able to provide the highest standards of work in the organisation Dobson & Tosh (1998) state that the organisation needs to be a learning organisation. As well as achieving employee competence in work related tasks being a learning organisation also facilitates employee commitment to the organisation according to these authors.

Lemaire & Jonker (1998) agreed with Dobson & Tosh (1998). They stated that to survive organisations had to become learning organisations where core competencies of individuals were developed and employees were encouraged to use their knowledge to be innovative at work. Dobson & Tosh (1998) reported that their organisation had become a centre of excellence, winning the British Training Award in 1997 by following the training guidelines included in the European Foundation for Quality Management model of Business Excellence. They stated that employee education had enabled their employees to keep abreast of the latest work related technology changes and to be innovative. This in turn had enabled the business to be profitable.

Garvin (1998) stated that there were two parts to being a learning organisation. The first requirement was for employees to create, acquire and transfer knowledge. The second part was for employees to modify their behaviour to use the knowledge that they had gained. According to Garvin (1998) the five main behaviours that characterise employees in a learning organisation are the use of:

systematic problem solving; experimenting with new approaches; learning from its own experiences and the best practices of direct competitors and world leaders in all areas; and transferring knowledge throughout the organisation (p.30).

For the learning organisation the new ideas may be created by existing employees through the use of research and education and learning from past successes and failures. acquired by bringing in people from other organisations or purchased from other people or organisations. There needed to be a continual flow of new ideas. In addition to this Garvin (1998) said that the knowledge must then be interpreted and understood (know why the activity should be done this way) by employees before it could be used effectively to improve the quality of organisational service or products. This new knowledge should then be retained in the organisation through written procedures, policies, reports, employee training and multi-skilling employees through the use of job rotation.

As being a learning organisation was reported as being very important for organisational success the provision and facilitating of employee education and training was included as a quality improvement tool for managers in the Quality Vision Model. Also included as a quality management tool in the Quality Vision Model was that employees were educated and trained in work related tasks.

Governey (1998) stated that the employees' work performance was the key to an organisation's success. This author says that the key to his organisation winning the Q-Mark National Quality Certificate and the Hygiene Mark Quality Certificate was the fact that the Conrad International Dublin Hotel was a learning organisation. Employees were encouraged to learn new ideas, new methods, use their initiative, to care for customers and fellow employees and to use teamwork.

2.8.6 Teamwork

Robertson (1998) agreed with Governey (1998) that learning should be an inherent part of daily organisational operations to enable improvements to be made. He reported that learning was a necessary part of being successful. Robertson (1998) advised having teams as learning centres for their area of work and giving teams the responsibilities for "selecting and inducting new staff and providing a resource for the continuing development of ideas and survival" (p. 57). This should result in the transfer of learning and sharing knowledge through the use of a team approach with decision making being the responsibility of everyone and the employees holding common values. Robertson believed that the results of this teamwork would be people learning from each other, helping each other and sharing their skills and ideas to benefit their organisation and to reach their full work potential.

Henry (1998, p.57) agreed with Robertson (1998) and stated that "working in teams can stimulate innovations and creativity leading to superior decisions and results." Henry also considered that team work improved communication, helped people to learn from each other so that they were able to work to their full potential and that team members share the accountability for decisions made. Sharing accountability gave everyone a stake in achieving a successful outcome and so facilitated work process improvements in the organisation.

Routhieaux & Gutek (1998) studied quality improvement strategies used at a large medical centre by 62 quality improvement team leaders. These authors agreed with Henry (1998) and wrote that teamwork was important because most organisational processes and problems were complex and so were best dealt with by people with diverse backgrounds and skills. They also stated that having more people planning and implementing change helped to gain wider employee acceptance of change.

Their research identified the following main factors that were related to quality improvement team effectiveness. The factors were the team leader's attitude towards.

and understanding of. continuous quality improvement: team leader's training in statistical process control: team members' quality improvement skills. the goal specificity and the complexity of the team. As teamwork was so important, according to published literature. managers being team orientated was included in the Quality Vision Model as a quality management tool.

Suppliers of goods or services to a health care organisation should be included as part of each organisation's quality management consultative team. This does not always occur.

2.8.7 Suppliers' involvement in quality activities.

Badrick, Preston & Saunders (1995) evaluated total quality management in 25 Australian health care organisations. In this study only eight of the organisations indicated that suppliers were involved in their quality program. These authors stated that there was more of a likelihood of a close relationship between the supplier of high technology equipment and the user, than that of the suppliers of general consumables, such as stationary, bandages and medicines. The latter were most likely to be ordered by low level clerical staff rather than the employees who handled the products.

Badrick, Preston & Saunders (1995) also identified that government hospitals included in their study were only allowed a twelve-month budget plan. This meant that all contracts must be re-negotiated annually rather than allowing health care staff to build a long-term relationship and have long term contracts with goods and service providers. Set period short-term contracts do not encourage an emphasis on business quality involvement and the making of continual improvements to meet the customer's needs (Casalou, 1991).

Routhieaux & Gutek (1998), in their study of quality activities used in a large hospital, identified that supplier involvement was important for an organisation to have effective quality practices. If there was involvement of suppliers in quality activities then prompt

and continuing supply of products of a set standard could be arranged. Products that were not supplied when needed, and that were not of the desired standard, decreased the quality of work and care provided at the hospital. Terziovski (1998, p.43) wrote, "performance was enhanced when a supplier agreement exists and performance was more efficient when suppliers were heavily involved in changing or improving the system."

Taylor (1998) agreed with Routhieaux & Gutek (1998) and Terziovski (1998). He provided case study examples that showed how the quality of goods obtained from suppliers affected the quality of goods and services provided by organisations. To save money on rectifying problems caused by deviation from a specified quality of products, Taylor recommended involving goods suppliers in the organisation's quality activities program.

Rafter (1999) had similar recommendations to Taylor (1998). He advocated that instead of the organisation having a broad supplier base and short term contracts with suppliers that partnering style arrangements with long term (five or more years) continuing contracts for goods and services should be used. According to Rafter partnering style arrangements provided opportunities and incentives for the supplier of goods or service to meet or exceed client demands by being involved in the recipient organisation's quality activities. With a long term contract there was ongoing motivation for the supplier to understand the client's business, integrate with its culture and to continually modify and improve goods or services to suit the client's needs. This helped to ensure commercial viability not only for the provider of the service, but also for the recipient. Lendrum (1995) made similar recommendations and stated that partnering arrangements were a profitable way for companies to conduct their business.

With a long term commitment by health service organisations to purchasing a supplier's goods or services, the supplier was more likely to conduct research and be innovative in

meeting, and even exceeding, the health service requirements. This was able to occur because there was a continuing income to enable this partnering involvement to be accomplished by the supplier (Rafter, 1999). The role of suppliers as being partners in the quality vision achievement was included as part of the Quality Vision Model.

2.8.8 Research and Innovations.

Dervitsiotis (1998) stated that a stable economic climate quality and high employee productivity were the keys to organisational survival. He wrote that "the average lifetime for most organisations has been estimated to be 40 years" (p.557). The reason for this was organisations' failure to address emerging needs, be innovative and to develop suitable strategic alliances to reach tomorrow's customers. Dervitsiotis (1998) stated that just making continuous small improvements within the same value chain may satisfy today's customers, but there must be innovations in products and services to have a competitive advantage and facilitate business continuity.

Hamel (1998) agreed with Dervitsiotis (1998) and considered that strategy and product life cycles were shortening and organisations must be innovative to survive. Hamel (1998, p. 24) asked the question "How often does the revolution start with the monarchy?" Hamel insists that it was important for all employees to be encouraged to use their ability to produce and use innovative ideas.

Plsek (1998) agreed with Hamel (1998). He recorded a quote from Peter Drucker that "Every organisation needs one core competence: innovation" (p. 21). Plsek (1998) described five outstanding benefits of having business innovations. These were:

- Superior long-term financial performance is associated with innovation.
- Customers are increasingly demanding innovation.
- Competitors are becoming better at copying past innovations.
- New technologies enable innovation.
- What used to work doesn't any more (p.21-22).

He stated that businesses that were successful were innovative and used current technology effectively. The use of creativity by employees enabled giant leaps in business improvements to be made.

Plsek (1998) described how creativity could be used in a health care setting by patients having a magnetic card to swipe in a machine in the hospital's car park to alert the staff to the fact that the person had arrived. The nurse could then get the patient's records, greet the patient at the door and take the patient straight to the examination room. There would then be no need for waiting areas in health care settings. This would save space and finances while exceeding the customers' expectations of having to wait for service.

Provost & Langley (1998) comment that creative thinking plays an important part in any effort to improve. They report that "to search for creative ideas that will excite customers, it is much more fruitful to study practices in other industries and adapt them" (p.33). This is because health care and other industries tend to benchmark within their own industry, copy each other, and do not look for innovative ways to provide service.

For example, Provost & Langley (1998) recommend that hospital staff looking for a way to quickly prepare a room for a new patient after the discharge of the previous patient should study work processes in a manufacturing organisation that had fast process start up times. New ideas to increase work efficiency could then be gained from adapting successful ideas to new situations.

Provost & Langley (1998) also stated that innovations could come from lateral thinking, like changing the order of work processes. An example of this was when health care staff improved patients' recovery rate so decreasing patients' stay in hospital after hip surgery by teaching patients rehabilitation before surgery instead of after surgery. This improved the effective functioning of the patients' muscles and other tissues before

surgery. The outcomes were fewer complications post surgery, less pain and faster healing. The average length of patient stay post surgery changed from nine to six days. The number of patients who had to be readmitted to hospital also decreased (Provost & Langley, 1998).

Stratton (1998a, p.42) reported that Overlook Hospital Emergency Department used innovations learnt from examining the quality activities of other industries to improve their organisation's profitability. Management "chose to use an industrial model of quality management as a way to improve a range of clinical processes" because private health care, like many other businesses, is highly competitive.

The model used by this hospital was a process improvement approach that identified work process problems, analysed these problems to identify the root causes of the problem, to develop, execute and evaluate innovative solutions for improvements. It was found that this model enabled work processes, such as patient admission, thrombolytic therapy, antibiotic administration and Xrays to be improved and completed much faster. Improved productivity improved health service profitability.

Another area that Overlook Hospital Emergency Department decided to improve was customer satisfaction. In 1996 the hospital management used the Press, Gantry system to gather information about customer satisfaction. Customer satisfaction was 77%. Staff used the same model to improve customer satisfaction as they had used to improve work processes. Staff consultation and involvement in problem solving and implementing creative solutions enabled the hospital in 1998 to have the highest Press, Gantry scores in the United States of America for customer satisfaction. A cultural revolution for quality patient care had been achieved by using a quality improvement model adapted from manufacturing industry ideas with innovative solutions to problems to improve health care and patient satisfaction with health care.

Oswald & Lang (1998) similarly used innovative solutions to improve customer satisfaction. These authors reported that using "root cause analysis" to identify the causes of quality related problems and then implementing creative, innovative solutions to meet and exceed customer expectations had enabled the Bridgeport Hydraulics Company to improve customer service and business profitability.

Since 1990 this company had saved \$1.86 million by finding innovative solutions to business problems and empowering employees to improve service. Over this period of time the company had a decrease of 81% in customer complaints. Following the implementation of these quality management strategies it had won the Connecticut Small Organisation Quality Award and 17 State Awards for innovative services or product initiatives since 1995. Conducting research to improve products and services was included as part of the Quality Vision Model.

The use of research to improve health care was considered important by Dean (1998). Russell (1999) agreed with Dean and stated that research could identify innovations that brought new ideas into the organisation's processes, products and services. Russell wrote, "the quality philosophy depends on the tension between two concepts - innovation and predicability" (p. 51). Innovations were described by this author as necessary to introduce vitality into a quality program. Innovative ideas should then be refined through continuous improvement to improve organisational outcome success.

This strategy was promoted in the European Model for Business Excellence with employees being expected to use their knowledge to develop innovative work systems and to implement innovative and creative solutions to resource use and deployment. The European Business Excellence Model also promotes the use of strategic planning as part of quality improvement management.

2.8.9 Strategic planning.

Strategic planning was considered an important part of quality activities by Foster (1998), Mangelsdorf (1998), Cosin (1994), Health Department of Western Australia (1994), Nakhai & Neves (1994), Perry, Wong & Bernhardt (1995), Saint Lawrence & Stinnett (1994), Richardson (1994), the European Foundation for Quality Management, the European Organisation for Quality, the Malcolm Baldrige National Quality Award Committee and the Australian Quality Council.

Mangelsdorf (1998, S164) reported that quality management was based on the essentials of "the need for a vision, mission, strategies and the deployment of goals and objectives." Strategic quality management has these. The use of strategic management was included as a key driver in the Quality Vision Model as it was considered by the Health Department of Western Australia to produce the highest standard of health care quality activity management. As such the use of strategic planning for quality management as a success factor for quality activities in Western Australian hospitals needed to be evaluated for effectiveness.

Foster (1998) and Nakhai & Neves, (1994), wrote that the Malcolm Baldrige National Quality Award included strategic planning as an important part of its award criteria. For successful quality management to meet the award criteria, Foster recommended using a strategic quality plan that took into account environmental considerations and organisational needs. Environmental considerations included consideration of laws and other government requirements, the technology available, market opportunities and threats and the successful strategies used by competitors. Organisational needs included achieving the organisation's mission, financial objectives, operational needs and planned future directions.

Foster (1998) considered that using strategic quality planning was a key to anticipating customer needs to being able to implement initiatives to provide customers with what was required even before the customer needs were expressed. He reported that strategic

quality management was a proactive, profitable approach that organisations should use to be successful.

Perry, Wong & Bernhardt (1995) defined quality with a little "q" as conformance to specification and Quality with a big "Q" as quality management that included strategic planning. Conformance to specification was considered as the first step in a quality management program. These authors considered that more than conformance to specifications was needed for business success. They recommended using strategic planning to provide a road map of direction for a quality management program as this could be an important factor in achieving a successful business outcome.

Sosa and Barry (1995) described two organisations that used strategic planning for their quality activities program. The first organisation based their strategic plan on the Australian Quality Awards criteria. This organisation did not obtain the results that were wanted because management did not link action plans to goals and performance reviews were not linked to wages.

The second organisation, as well as developing the strategic quality management plan for their organisation, also implemented organisation wide training for managers on leadership skills and customer-orientated teams. This helped to develop closer customer / supplier relationships and enabled the organisation to be awarded a Best Practice Demonstration grant in 1993.

Sosa and Barry (1995) report that this organisation has not continued to be successful because the company management had trouble attaining goals, and often adjusted goals without an assessment as to why the goals were not met. The authors suggest that strategic planning alone is not enough to ensure a high standard of organisational quality management and recommend the use of policy deployment. Total Quality

Management, and people empowerment as well as the strategic planning. It was anticipated that these activities would be part of Australian health care quality activities.

2.9 Australian Quality Activities.

Nettle (1995) wrote that the quality movement in Australia began in 1967 with the Australian Organisation for Quality Control (AOQC). This organisation promoted total quality control from an engineering perspective. It included the integration of engineering specifications into operating processes. It did not take into account human factors.

In 1975 Enterprise Australia (EA) was formed to promote quality from an anti-union, anti-government private enterprise point of view. This organisation was the major force behind the formation in 1987 of the Total Quality Management Institute (TQMI). The TQMI put emphasis on the role of management and cultural change in quality activities. It also introduced the position description of "Continuous Improvement Facilitator" (Nettle, 1995, p.57). This network of interests, the AOQC and the EA/TQMI, achieved Federal government involvement that promoted the idea of having an Australian Quality Council. The AOQC [which was renamed the Australian Organisation for Quality (AOQ)] was mainly focused on quality assurance and because of its ideological differences it withdrew from the Australian Quality Council.

In 1991 the Department of Industrial Relations and the Australian Manufacturing Council initiated a Best Practice Program. This idea was further developed to eventuate in an Australian Business Excellence Award (Clayton, 1999). This award promoted the use of leadership, innovation, strategic planning, collection and use of information and knowledge, and a focus on internal and external customers, market demands, work processes, products, services, supplier relationship, and business results as the basis for quality activities (King, 1998).

All of these above quality organisations and their ideas have influenced quality activity practices in the Australian health care industry, despite the strong dominance of the Australian Standards on Healthcare Standards Ltd. in providing the framework for quality activities in Australian health care organisations. In Australia there has been the development of a range of quality activities for use to improve health care management (Ell. 1994). Each quality activity is usually considered to be the best by the people who use it. The purpose of this thesis was to identify the most effective quality activities for use in Western Australian hospitals.

2.10 Quality Activities in Australian Hospitals

For Australian health care commonly used practices were quality assurance and quality improvement (Health Department of Western Australia, 1994). With Quality Assurance quality was maintained by inspection and individual correction (Nettle, 1995). With quality assurance there is auditing of the structure (work environment, equipment and products used), work processes and outcome of health care. The use of quality assurance may not provide what a customer requires, but it does produce products and service of a consistent quality.

Two Quality Improvement strategies currently in use in health care were expected to be "Best Practice" and "Benchmarking". Best Practice was defined by Forte (1993) as an approach to continuous improvement that leads to superior performance of an organisation with respect to its toughest competitor or recognised industry leaders. Best Practice was not measured simply in the cost of a product or service, but included quality, timeliness of delivery and outcomes achieved (Forte, 1993). Best Practice was also defined by Cohen (1994, p.93) as "an innovative approach or method to implementing QI that works particularly well."

Benchmarking was using data analysis to compare best practice processes in critical success areas. There were three sub-categories of benchmarking:

- (1) Internal benchmarking - benchmarking against internal operations or standards, usually in a multi-division or multi-national enterprise.
 - (2) Industry (or competitive) benchmarking - benchmarking against other companies in the same industry, whether they are direct competitors or not.
 - (3) Process (or generic) benchmarking - benchmarking generic processes against best operations or leaders in any industry.
- (Macneal and Rimmer, 1993, p.31).

The Rank Xerox Company invented benchmarking in the early 1980's as a way to enable their company to learn from their Japanese competitors (Noy, Miskimmin and Testi, 1993, p.18). Garvin (1994, p.24) described benchmarking as "creative borrowing" or SIS "steal ideas shamelessly". Benchmarking may be a way that health care organisations can share their most successful ideas.

Ell (1994) wrote that the main quality activities used in the 1990s in Australian hospitals were:

- Quality Improvement
- Quality Management
- Quality Function Deployment
- Total Productivity Maintenance
- Total Quality Management
- Strategic Quality Management
- Continuous Quality Improvement
- Management for Results
- Management by Objectives
- Quality Control
- Quality Circles
- Quality assurance
- Total Quality Service
- Quality Enhancement
- Total Quality Assurance
- Team Based Organisations (p.3).

Ell does not record which health services were using what model, or how effective in health service quality management any of the models that she reports as used were.

Many health care organisations had quality inspected into their business by the community expectation that they meet the Australian Council on Healthcare Standards

Ltd. (ACHS) Accreditation Standards. In health care the public, via government policy, demanded the best health care, at the lowest cost, before a patient service contract was allocated to the organisation (Forte, 1993).

Successful quality activities in health care must take government policies into account. Literature related to published quality activities was used to form a theoretical framework for expected successful quality activities for health care.

2.11 Theoretical framework

The following figure is a conceptual Quality Vision Model for Western Australian hospitals with the expected most effective quality activity practices for health care.

QUALITY VISION MODEL

A FOCUS on meeting CUSTOMER and POTENTIAL CUSTOMER requirements

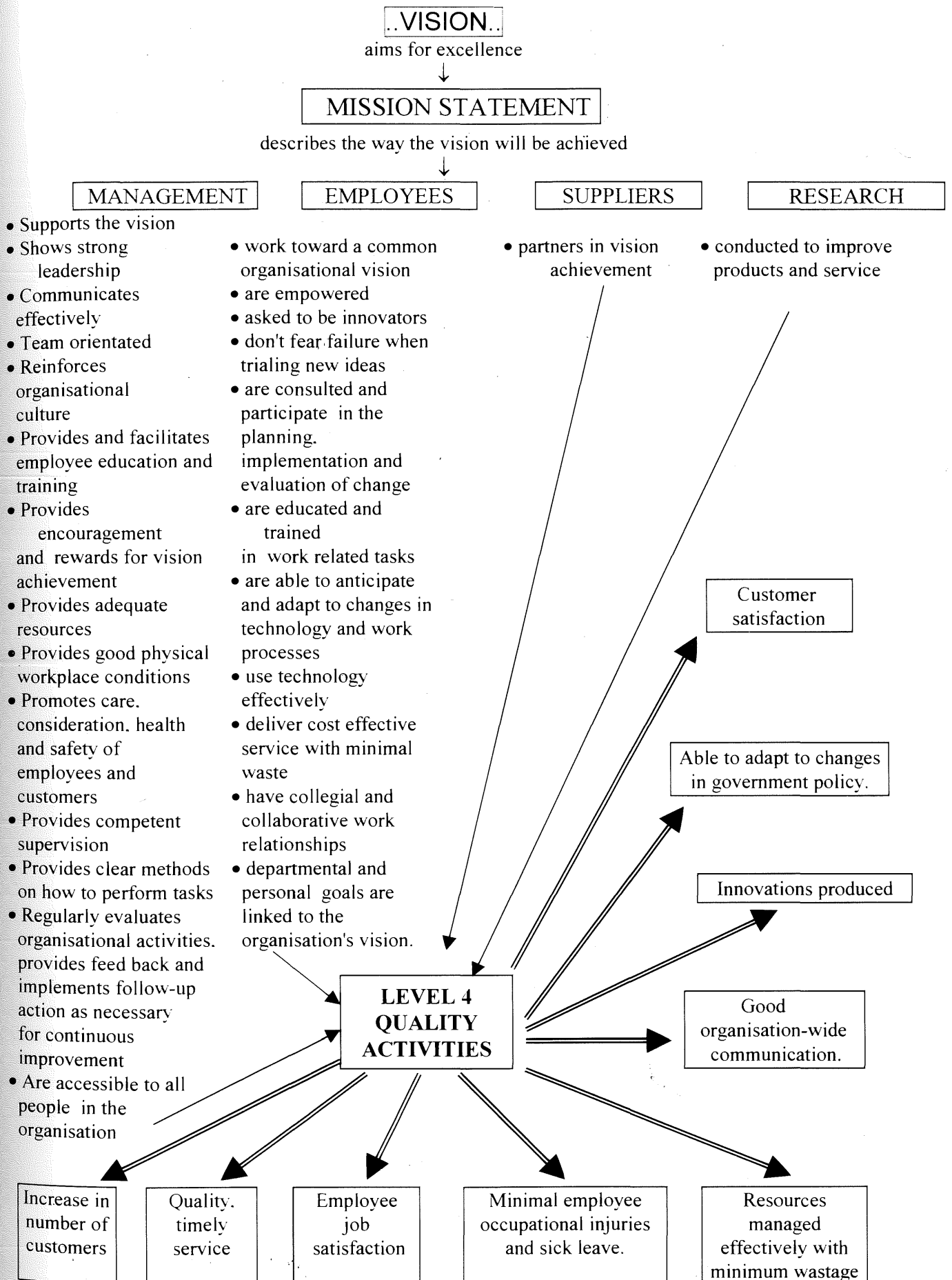


Figure 2.

QUALITY VISION MODEL

This Quality Vision Model for anticipated successful health service quality activities was developed using previously cited published literature. The model has several components namely:

- *A vision statement that aimed for excellence.*
- *A mission statement that described the way that the organisation achieved excellence in service for its customers and the community in which it was located.*

Garvin [cited in Costin (1994, p.14-15)] reported that the most effective quality activity (in terms of having a profitable company with high customer satisfaction) in the United States of America was Strategic Quality Management. For this reason, with Australian hospitals, it was expected that health services with a high standard of customer care would have a vision and a mission statement that aimed for excellence. Preston and Saunders (1994), Cosin (1994), Health Department of Western Australia (1994), Nakhai & Neves (1994), Perry, Wang & Bernardt (1995), Saint Lawrence & Sinnett (1994) and Richardson (1994) also described having a Strategic Plan as an important part of quality activities.

Kerridge and Kerridge (1994), Scrivens (1995), Lowik (1994), Sohal and Lu (1995), Preston and Saunders (1994), Heath (1993), Wacker and Sheu (1994), de Noray (1994), Buxton (1994) and Bourke (1994) all reported that a focus on the following customer service factors were essential for an organisation to have a high quality of service.

- *A focus on meeting customers', and potential customers', requirements through:*
 - *need identification;*
 - *anticipating latent needs and expectations;*
 - *creating a customer focus throughout the organisation;*
 - *providing customer satisfaction.*

From the review of literature it was anticipated that to provide effective health care customer service there were four major elements that must be included for evaluation. These elements were Health service management, Employee' knowledge and actions, Suppliers involvement in health service quality activities and the Research activities that were conducted in health services as part of quality activities. See Figure 2.

The Quality Vision Model was developed to answer the research study questions. The first two research questions asked were as follows.

1. What quality management practices are used in health care organisations to improve the quality of patient care?
2. Which quality practices produce the highest level of patient care according to clinical indicator results and patient satisfaction with survey results?

The components of the anticipated successful quality activities, based on the researched literature, were included as practices in the Quality Vision Model to be researched to identify if they were occurring in the studied hospitals.

The third research question was asked to identify the outcomes of the successful quality activities that were used in health services. The third question to be answered by this research study was as follows.

3. What are the economic and organisational benefits of having effective quality processes in place?

The expected benefits were recorded in the Quality Vision Model (see Figure 2) as the outcomes of successful health care for quality activities.

A research questionnaire to be answered by health service employees was developed to test all aspects of the Quality Vision Model. Interview questions were also developed to discuss health service quality management activities in relation to the Quality Vision

Model and to allow the people interviewed to provide additional information to the researcher to the standard information that was obtained from the research questionnaire. The organisational profile of each studied health service, and further information on each organisation's quality management strategies and their effectiveness was obtained through observation of the studied health service's premises, work processes and by checking relevant organisational records. These multiple methods of data collection enabled the Quality Vision Model to be carefully evaluated, the research questions to be answered and suggestions for improvements in the Quality Model activities and outputs for Western Australian health services to be made.

2.12 Conclusions

This review of literature has identified other studies that reported the many types of quality activities used in health care and other industries. Quality management practices are continually evolving as new industry management needs are identified. Most of the reviewed published research studies concerning quality activities had been conducted by organisations or consultants with a vested interest in promoting their product or services. Quality award winners and accredited organisations were used as promotional tools for the organisation that had assessed them. Deficits in activities undertaken were not always reported and neither were the benefits of using other models of quality activities that may have the same, or better, outcomes as the model promoted. Literature had also been published about organisations that had successfully implemented quality activities, but most of this literature was intended to promote the company and again did not always report deficits in the quality activities used.

In 1994 the Federal Minister for Health, Graham Richardson, asked Australians to "consider new ways in which our health care system can best meet the challenges of the future" (p.2). This research study was conducted to answer the Federal Minister for Health's challenge.

There have been research studies published about health care quality management practices (Anderson, 1993, Badrick, Preston & Saunders, 1996, Breen, 1998), but none of these studies have examined the wide range of quality activities that may be used in Western Australian hospitals, and evaluated the quality management practices used for the effectiveness of their outcomes. It was anticipated that by identifying success factors in quality activities in Western Australian hospitals that that successful health care quality activities could then be adopted and used by other hospitals to provide greater employee job satisfaction, employee job-related knowledge, and the best quality of patient care in a cost-effective manner.

The National Expert Advisory Group on Safety and Quality in Australian Health Care (1999) has already used the findings of this research study to make recommendations to Australian Health Ministers concerning national actions to be taken to improve quality and safety in Australian health care organisations. The findings of this research have also been published in the book "Safe Business. Good Business. A practical guide to workplace safety, health and insurance in Australiasia" as a model to use for effective occupational safety and health management practices for industry.

The research methodology used to identify and evaluate for effectiveness quality activities used in Western Australian hospitals is described on the following pages.

3. METHODOLOGY

3.1 Study design

This study was conducted as an Exploratory Multi-case Control Study. There are other research designs. Research can be of an experimental design. Experimental research "divorces a phenomenon from its context so that attention can be focused on a few variables [typically the context is controlled by the laboratory environment]" (Yin, 1984, p.23). Historical research design and archival analysis research are used to deal with "*noncontemporary events*" (Yin, 1984, p.23). "Surveys can try to deal with phenomenon and context, but their ability to investigate the context is extremely limited" (Yin, 1984, p.23).

Cases studies "describe real-life context in which an intervention has occurred" (Yin, 1984, p.25). The focus of this study met the criteria required for case study research methodology to be used rather than experimental, historical, archival analysis or a survey research design.

Brown (1994) wrote that the case study method was the best method to use to conduct research on the effectiveness of quality activities. This research study was concerned with an analysis of success factors in quality activities in Western Australian hospitals. Dale (1992, p.13) agreed with Brown (1994) and stated that for Quality Management case studies were the most "rigorous and robust" method to use for conducting research into the outcomes and other factors related to quality management. Harrison (1987, p.37) recommended that for research into "*excellence in organisational performance*" the case study method of research should be used.

Yin (1984, p.23) described a case study as an empirical inquiry that:

- investigates a contemporary phenomenon within it's real-life context, when
- the boundaries between the phenomenon and context are not clearly evident, and in which
 - multiple sources of evidence are used.

The focus of this study met these criteria as quality activities are a phenomenon and current work environments are a real life context. The boundaries between quality activities and the work environment are not always clearly evident.

Hakim (1987) described case studies as one of the most powerful research designs. Case studies "offer the strengths of experimental research within natural settings" (p.61) but "the use of multiple sources of evidence allowed case studies to present more rounded and complete accounts" (Hakim, 1987, p.63).

Multiple sources of information including direct observation, organisational records, interviews and questionnaires completed by the participants were used to gather information for this study. Yin (1984, p.20) stated that the ability to use a variety of evidence sources including documents, observations and interviews is a unique strength of case studies.

Yin (1984) wrote that this was because using multiple sources of evidence allowed the development of converging lines of inquiry to corroborate each other to make case study research findings and conclusions more convincing and accurate. It also provided construct validity for this method of study because the multiple sources of evidence provided multiple measures of the same phenomenon. This resulted in a higher quality of evidence than that obtained from a single source of information (Yin, 1984, p.97).

Using multiple methods to collect data enabled the researcher to find answers to the research questions by using a variety of perspectives. Including more than one method avoided reliance on the strengths and weaknesses of a single measure by seeking to overlap the strengths of one over the weaknesses of the other (La Gone, 1980). Using multiple sources of information improves the reliability and validity of research findings (Perry, Wong & Bernhardt, 1995).

In 1978 Denzin coined the term '*triangulation*' to describe the use of a combination of methodologies to research the same phenomenon. Creswell (1994, p.175) wrote that the purposes of using multiple methods of data collection (triangulation) in a single research study were as follows

- triangulation in the classic sense of seeking convergence of results
- complimentary, in that overlapping and different facets of a phenomenon may occur (eg., peeling the layers of an onion)
- developmentally wherein the first method is used sequentially to help inform the second method
- initiation, wherein contradictions and fresh perspectives emerge
- expansion, wherein the mixed methods add scope and breadth to a study.

Using triangulation allowed both quantitative and qualitative research data to be collected. Research findings are more credible when there is the adoption of both quantitative and qualitative information as this enables a more holistic analysis (La Grone, 1980). For example, a survey questionnaire, which is a quantitative research method, allows information to be "collected on a cross-section of people at a single point in time in order to discover the ways and degrees to which variables relate to each other" (Bryman, 1988, p.11). Polit & Hungler (1985, p.390) define *quantitative research analysis* as "the manipulation of numerical data through statistical procedures for the purpose of describing phenomena or assessing the magnitude and reliability of relationships among them."

Qualitative research, such as information provided by research participants at an interview, allows the researcher to "see through the eyes" of the people being studied (Bryman, 1988, p.61). This provides a better understanding and interpretation of events, values, outcomes, etc. of an organisation's activities as the information obtained is from the point of view of the people who are working there (Bryman, 1988, p.11). Polit & Hungler (1985, p.390) define *qualitative research analysis* as "the non numerical organisation and interpretation of observations for the purpose of discovering important underlying dimensions and patterns of relationships." Creswell (1994) agreed

with La Grone (1980) and recorded that combining quantitative and qualitative methods allowed a better understanding of the concept being explored.

Jick (1979) supported the opinions of La Grone (1980) and Creswell (1994) concerning the use of multiple methods of data collection. Jick (1979, p.602) wrote "organisational researchers can improve the accuracy of their judgements by collecting different kinds of data bearing on the same phenomenon." According to Jick using multiple sources of information allows the bias inherent in any one source or method to be neutralised when used in conjunction with other data sources and methods. This allows more accurate research findings to be obtained.

Hakim (1987) agreed with Jick (1979) and added that case studies "potentially overlap with virtually all other research designs offering their combined and complimentary strengths" (p.63). Exploratory case studies, according to Hakim (1987) "provide a strong test of prevailing explanations and ideas" (p.62). Many prevailing ideas about quality management practices were described in published literature.

For this study a review of literature had been conducted to identify the results of other studies and experts' opinions about effective quality activities. This had identified factors that the authors of published literature believed contributed to successful quality management in a wide variety of organisations.

To assist with answering the three research questions:

- What quality management practices are used in health care organisations?
- Which quality practices produce the highest level of patient care according to clinical indicator results and patient satisfaction with care survey results?
- What are the economic and organisational benefits of having effective quality processes in place?

a theoretical Quality Vision Model was developed using factors identified in the reviewed literature that were considered by the researcher to be relevant to the successful management of quality activities in Western Australian Hospitals. It was expected that these quality activities would produce the described desired Quality Vision Model outcomes and assist with answering the research questions.

To check the theory inputs and outputs documented in the model and be able to answer the research questions data was collected by the use of

- a questionnaire to check research participants opinion of the occurrence of the theory factors and their effectiveness in their organisation in a way that allowed quantitative analysis.
- interviewing study participants to identify additional information, to that included in the research questionnaire, related to theory factors occurrences and outcomes from study participants in a way that allowed qualitative analysis.
- checking of organisational records to verify quality activity occurrences, the effectiveness of these activity outcomes and to confirm the information provided by the research study participants.
- observation of the work premises and work processes to identify effective quality activities, their outcomes and to verify the information provided by research study participants and organisational records.

Direct observation was useful because the research was conducted in the natural setting, minimising artificial conditions. An outsider's observations can identify environmental and situational factors that research participants may not be aware of, or able to articulate. Unexpected findings may provide new insights for answers to the research questions (Burns and Grove, 1987).

Adams & Schvaneveldt (1991, p.230) reported the use of informal observations for research to be less structured than other methods and thereby able to provide "richly

complex and highly divergent" information. These authors stated that the use of observations is able to provide additional insights and depth for research study findings and conclusions.

Interviewing research participants enabled the researcher to probe beneath the surface for clarification or to stimulate a participant's memory of events that had occurred. Berg (1989, p.16) wrote "standardised interviews are designed to elicit information using a set of predetermined questions, which are expected to elicit subjects thoughts, opinions, and attitudes about study-related issues." The interviews included in this study were semi-standard. There were set questions to be answered but interviewees were also given freedom to digress and provide additional information related to quality activities and their effectiveness in their organisation.

Adams & Schvaneveldt (1991) stated that having semi-structured interviews allows motivation and rapport to develop between the interviewer and the interviewee and the quality of the data obtained is likely to be superior in quantity and quality to that obtained from answering a questionnaire. Converse & Schuman (1974) wrote that most people enjoyed talking and this was the real advantage of using an interview to collect research data.

Adams & Schvaneveldt (1991) agreed with Converse & Schuman (1974) and documented that some topics may be sensitive and although research participants are reluctant to record this information on paper they will discuss it with a researcher if trust has been established. Obtaining this additional information allowed a more accurate analysis of organisational activities to occur.

Using organisational records allowed objective data to be collected. Providing participants with a questionnaire to answer allowed a wide range of information to be collected economically to answer the research questions. Hakim (1987, p. 57) wrote

that questionnaires "provide an excellent sampling frame for linked case studies which examine particular situations, groups or processes."

The four above methods of collecting data provided a variety of sources of evidence so research findings were based on a convergence of information, that included both quantitative and qualitative data.

Perry and Coote (1994, pp.11-12) state that for a case study to have good empirical grounding, and allow for analytic generalisations, at least four cases should be examined, and at least forty-five interviews conducted. This study examined four case and four control hospitals and conducted 21-22 interviews at each hospital, providing a total of 174 interviews.

From the personal experience of the researcher, who had worked as a Quality Activities Co-ordinator in a Western Australian hospital, it was considered that five factors could influence the effectiveness of quality management practices. These factors were the hospital:

- being accredited by the Australian Council on Healthcare Standards Ltd. (ACHS).
- being a private or public hospital.
- having a high level of patient satisfaction with health care documented in the survey results of the Western Australian Health Department's Patient Satisfaction with Care Survey for 1995 (the year in which this research study was undertaken).
- being a country or a city hospital.
- being considered by the Health Department of Western Australia Quality Control Department employees (Quality Practitioners working for the Health Department of Western Australia) to have "best practice" in quality activities. At the time of the research study using "Strategic Quality Management" was considered by this

Health Department's Quality Control employees to be the "best practice" to use for quality management in health services.

To control for these factors and offer a contrast to the selected factors this exploratory multi-case control study included the following hospitals.

Table 3. Case control factors for study hospitals.

Factor controlled for	Case	Control
Accreditation by the ACHS.	Hospital 1 Private ACHS accredited hospital.	Hospital 5 Private non-accredited hospital.
Level of patient satisfaction with care in a country hospital.	Hospital 2 Country hospital with 100% patient satisfaction with health care.	Hospital 6 Country hospital with 90% patient satisfaction with care.
Level of patient satisfaction with care in a city hospital.	Hospital 3 City hospital with 98% patient satisfaction with health care. (Accredited by ACHS.)	Hospital 7 City hospital with 92% patient satisfaction with care. (Accredited by ACHS.)
Being considered to have "best practice" in quality activities by Health Department of Western Australia.	Hospital 4 Hospital using strategic quality management. (92% patient satisfaction with health care.)	Hospital 8 Not using strategic quality management. (Accredited by ACHS.) (92% pt. sat. with care)

As two research study hospitals were private hospitals and six study hospitals were public hospitals the research results between private and public hospitals quality activity effectiveness were compared. Four of the hospitals were accredited by the ACHS and four were not. This allowed the effects of accreditation by the ACHS to be evaluated for Western Australian hospitals.

Bailey (1997) stated that if there were variables that may influence the research study results these variables should be controlled for to ensure that the results were not due to the variable factors. This was an advantage of having control hospitals without the variable of their matched case hospital.

Bailey (1997) recommended using the multi-case study approach to achieve the following.

1. To build a theoretical construct across cases as a multi-case study approach produces a stronger outcome.
2. To build a general explanation of what is occurring so that the research results have a wider application.
3. To obtain replication logic to evaluate a theory.

The multi-case control study design allowed exploratory questions to be answered and the same phenomenon to be replicated under different conditions. It allowed the results obtained for each category of data to be compared to identify similarities and differences. This provided a robust study in which cross case conclusions were able to be drawn and theory developed (Yin, 1984, Hakim, 1987).

The procedures used for the identification and selection of case and control hospitals for this research study are further described in the following section.

3.2 Procedure for identification and selection of study hospitals

For this research study the four Western Australian case hospitals were identified through:

(1) The Australian Council on Healthcare Standards Ltd. A list of accredited hospitals was obtained from this organisation. One private hospital that was accredited by this organisation (hospital 1) was randomly selected. When this research study was conducted there were 81 public hospitals and 29 private hospitals in Western Australia. Of these Western Australian hospitals 36% (15 private hospitals and 25 public hospitals) were accredited by the Australian Council on Healthcare Standards Ltd.

(2) The Health Department of Western Australia's Patient Satisfaction with Care questionnaire answers. This questionnaire (see Appendix C). was completed by patients in all 81 state government hospitals (67 country hospitals and 14 city hospitals). Five of these hospitals scored 100% patient satisfaction with health care on survey responses completed about their health service. A country hospital which scored 100% patient satisfaction (hospital 2) was randomly selected to be part of the study. No city hospitals scored 100% patient satisfaction so, one city hospital which scored an average of 4.8 (96%) or more, on the 5 point Likert scale of patient satisfaction with care survey results, (hospital 3), was randomly chosen.

(3) From the ten Western Australian hospitals who were considered by the Health Department to have the 'Best Practice' in quality activities one hospital was randomly selected (hospital 4) to be part of the study. All Health Department of Western Australia considered 'Best Practice' hospitals were using strategic quality management principles.

This provided two case hospitals selected by professional bodies, (Australian Council on Healthcare Standards Ltd. and the Health Department of Western Australia), and two case hospitals selected through customer satisfaction questionnaire answers which were completed by customers of the West Australian government health services.

Having a high level of patient satisfaction with health care for two of the case hospitals was considered important because the second research question asked "Which quality practices produce the highest level of patient care according to clinical indicator results and *patient satisfaction with care survey results*?"

To facilitate the identification of Quality Activities that were used to produce the most effective results the Quality Activities of four other randomly chosen Western Australian hospitals, in the same classification group (see Table three hospitals 5 to 8).

as each case hospital were compared (as control hospitals) to the case hospitals in relation to service processes and results, based on collected, documented research data.

These control hospitals were classified as group 2 hospitals. Hospital 5 was a non-accredited private hospital. Hospital 6 was a country hospital that did not have 100% patient satisfaction. Hospital 7 was a city hospital that had less than 96% patient satisfaction score. Hospital 8 was one that was not on the Health Department's Best Practice in Quality Activities list.

One of the problems with selecting hospitals by random computer number was that not all hospitals selected by this means were able to be part of the study. For example one hospital agreed to be part of the study but was then sold and the new owners did not have time to allow a researcher into the organisation. Another hospital declined to be part of the study in case the hospital's trade secrets were made known to competitors. Other organisations declined to participate because it was felt that allowing a researcher into the organisation would take too much employee work time. If a hospital in the group declined to participate this hospital's number was taken out and another hospital that met the target group inclusion criteria was randomly selected.

This may have biased the results as not all hospitals approached to be part of the study agreed to be included. Top management people in all hospitals studied stated that they were interested in providing the best possible care for their customers within the constraints of the resources available. It was speculated that top management in hospitals who did not give consent for research might not have seen the value of having research conducted regarding the effectiveness of the quality activities used in their organisation.

3.3 Procedure for identification and selection of study participants

The Australasian Association for Quality in Health Care Inc. was formed in 1986 and is an Australia wide organisation of practicing quality activity professional people. At the time that this research was conducted the Australasian Association for Quality in Health Care Inc. had 300 health care quality managers as members.

This research proposal was discussed with a focus group of 20 Western Australian members of the organisation to help determine who were the best study participants in each hospital to select to enable the provision of relevant information to answer the research questions.

It was determined by focus group members that the following designations were key people in health care quality management and as such should be included in the research:

- Chief Executive Officer
- Medical Director
- Quality Activities Co-ordinator
- Occupational Health, Safety, Rehabilitation and Compensation Co-ordinator
- Researcher
- Human Resource Manager
- Staff Development Co-ordinator
- Director of Nursing.

A randomly chosen:

- Nurse Manager
- Clinical Nurse Specialist
- Registered Nurse
- Enrolled Nurse
- Orderly
- Caterer (Food service employee)

- Maintenance worker
- Clerical employee
- Gardener
- Allied Health Professional
- Supply department employee
- Hospital goods supplier.

The focus group members considered that the inclusion of these employment designations enabled opinions to be obtained concerning the use and effectiveness of organisational quality activities to be acquired from many professions and levels of employment in each studied hospital. It was considered by focus group members that sometimes direct customer service employees, support staff and management employees would see quality activities and their outcomes differently depending on the area of their employment. The wide selection of employment positions reduced professional opinion bias. It was anticipated that the variety of points of view would enable the most accurate information to be obtained to answer the research questions.

For the top nine designations there was only one person in each position, so the person in this position was automatically included in the study. In some hospitals there was sometimes no person in some of the recorded positions, so the employee whose job description closest matched the position requirements answered the questionnaire and interview questions. For example, some organisations did not have a Chief Executive Officer, but the organisation had a General Manager who performed similar, or the same, duties for the position.

For the lower 13 designations there was usually more than one person in this position. If there was more than one employee the person to answer the questionnaire and interview questions was randomly chosen by number by the Quality Activities Co-ordinator in each Health Service Unit. See Appendix D for 'Research Requests'.

The hospital goods supplier to be included as a research study participant was similarly chosen by random number by each Health Service Quality Activities Practitioner. Focus group members considered it important to include a goods supplier to be interviewed as part of the research data collection method for each studied hospital. It was anticipated that this would enable obtaining information on the role of suppliers of goods to the health services involvement in each hospital's quality activities to be obtained from a supplier's point of view.

3.4 Pilot study

To improve the validity of the questionnaire and interview questions, questionnaire reliability, to check the availability of relevant records and to assess the study's design, methodology and feasibility, a pilot study was conducted with 25 responding staff from a large Western Australian Teaching Hospital.

At least one of the following people answered the research questionnaire and took part in an interview:

- Chief Executive Officer
- Medical Director
- Director of Administrative Services
- Quality Activities Co-ordinator
- Occupational Health, Safety, Rehabilitation and Compensation Co-ordinator
- Researcher
- Human Resource Manager
- Staff Development Co-ordinator
- Director of Nursing
- Nurse Manager
- Clinical Nurse Specialist
- Registered Nurse

- Enrolled Nurse
- Orderly
- Catering (Food Service employee)
- Maintenance worker
- Clerical employee
- Cleaner
- Gardener
- Allied Health Professional
- Supply Department employee
- Hospital goods supplier (interview only).

Factors considered by the researcher in making revisions to improve the research study tools data gathering power for the questionnaire and interview questions were as follows.

- Could all respondents easily understand the language used in the questionnaire and interview questions?
- Did any of the questionnaire or interview questions need to be written in a different way to improve the clarity or usefulness of the question?
- Did the question answers produce information that was meaningful to answering the study research questions?
- Did the information provided by pilot study respondents enable the research questions to be answered?

Common suggestions made by responding personnel, and required question improvements identified by the researcher, were made to improve the clarity and usefulness of the study questionnaire and the interview questions for the research study group respondents.

For example, pilot study respondents wrote on their questionnaire that the statement "I perform my job *excellently*" should be changed to "I perform my job *professionally*" because the words *excellent*, or *to a high quality* are too open to different interpretations by people. According to pilot study respondents each profession defined exactly how members of their profession should perform their duties to achieve a high standard of work. Pilot study respondents wrote that the word *professionally* was therefore a clearer measure of a person achieving a high standard of work than the word *excellent* that was open to personal interpretation. This change in wording was made.

The pilot study questionnaire answers were analysed using Chronbach's alpha. Polit & Hungler (1985, p.383) define Cronbach's alpha (also called the coefficient alpha) as "a reliability index that estimates the internal consistency or homogeneity of a measure composed of several items or subparts."

Sluti & Maani (1995) wrote that Chronbach's alpha is a commonly used indicator for assessing the reliability of a measuring instrument that uses an interval scale, such as the Likert scale. It estimates the proportion of responses due to common factors. The alpha value is calculated through the analysis of a diagonal matrix of correlations between measurement variables.

Cronbach (1951) stated that a satisfactory alpha value supported to interpretability of the data. Nunnally (1967, p.226) wrote " a reliability [value] of 0.90 is the minimum that should be tolerated." The analysis using Chronbach's alpha for the pilot study questionnaire answers showed that the minimum reliability value was exceeded. The relatively strong Chronbach's alpha values indicated a high degree of reliability for the questionnaire (Churchill, 1979). This provided the research questionnaire with construct validity as it showed that the questions for the proposed measures related to the same construct (Churchill, 1979) which in the case of this research was quality management practices.

To check for the questionnaire's reliability Cronbach's Alpha was performed on the answers to the whole questionnaire. This showed an internal consistency of 0.98 indicating that respondents were 98% consistent regarding their answers to the questionnaire. When checking all responses on Management. (leadership style, support, education and communication) the questionnaire showed an internal consistency of 0.97 using Chronbach's Alpha. For employee activity questions (employee service, personal feelings, control, education, support, suppliers and research), Chronbach's Alpha showed an internal consistency of 0.95.

Tabladillo (1994) stated that when using Chronbach's Alpha the reliability of the questionnaire respondents' answers improved when a large number of items were included in the analysis. The management section of the questionnaire had 27 questions. The employee section had 54 questions. The total questionnaire had 81 questions that were analysed for reliability. This meant that the concept of health service quality management was examined very thoroughly (Tabladillo, 1994) as the questionnaire responses had a high reliability score.

As part of the Pilot Study the Researcher liaised with the Quality Activities Co-ordinator, the Staff Development Co-ordinator, the Director of Administrative Services, the Human Resource Manager and the Occupational Health, Safety and Rehabilitation Co-ordinator to ensure that the study information requested from the people in these positions was the best information available to use to evaluate the health care service, that this information was collected by all Western Australian health service organisations, and that it was easily available to the people working in these positions. If all the above criteria were not met, with advice from the service provider concerned, the requests for information were changed to meet the criteria of commonly available health service record information.

3.5 Validity and reliability

Construct validity.

Construct validity, as described by Yin, 1994, p.41, was provided by using multiple sources of information to establish a chain of evidence to identify the strategies necessary to provide the most effective quality activities. Key informants were asked to review the draft case study report for their health service to ensure its accuracy. Any requested changes were made by the researcher so that the reviewing health service employees were satisfied that the report on their health service was 100% accurate.

Face validity.

Face validity was obtained by including objective data supplied by the Quality Activities Co-ordinator, the Staff Development Co-ordinator, the Director of Administrative Services, the Human Resource Manager and the Occupational Health, Safety and Rehabilitation Co-ordinator.

These people, and the respondents to the questionnaire and interviews, provided useful suggestions that were implemented to ensure all-important aspects of quality management were researched in the study. This helped to provide content validity.

External validity.

External validity was provided by repeating the study in a series of four case and four control Western Australian hospitals. This allowed the findings to be generalised for Australian hospital quality activities.

Reliability.

All data was collected by one researcher using the same format for observation, questionnaire distribution, interviews and objective data collection from all of the eight hospitals studied. This provided reliability to the study as the same protocol was used to collect the research data from each organisation. A pilot study was performed in a West Australian hospital to test the reliability and validity of the research tools.

All research questionnaire answers were also checked for internal consistency regarding respondent's answers. Using Chronbach's Alpha to analyse the collected data all eight hospital staff members' response (from 167 respondents) to the questionnaire was above 0.94. This means that the questionnaire had a reliability of 94% in the studied hospitals' combined results. A score of above 0.7 indicates that the measurement tool is reliable (Cronbach 1951). Coefficients of 0.6 are also accepted in research studies (Flynn, Schroeder & Sakibara, 1994, Powell 1995). The results of performing Chronbach's alpha analysis on all study hospital questionnaire results showed that the respondents' answers met the minimum standard recommended by Cronbach (1951), Flynn, Schroeder & Sakibara (1994) and Powell (1995).

On an individual hospital basis the internal consistency for the management questions (questions a-d) was 0.93 (hospital one), 0.94 (hospital two), 0.93 (hospital three), 0.95 (hospital four), 0.96 (hospital five), 0.93 (hospital six), 0.94 (hospital seven) and 0.96 (hospital eight).

For the employee related questions the internal consistency results following analysis by the statistic Chronbach's Alpha was 0.90 (hospital one), 0.91 (hospital two), 0.91 (hospital three), 0.93 (hospital four), 0.96 (hospital five), 0.89 (hospital six), 0.91 (hospital seven) and 0.91 (hospital eight).

For the total questionnaire answers the internal consistency results following analysis by the statistic Chronbach's Alpha was 0.95 (hospital one), 0.95 (hospital two), 0.95 (hospital three), 0.95 (hospital four), 0.97 (hospital five), 0.94 (hospital six), 0.93 (hospital seven) and 0.96 (hospital eight).

An analysis was also performed on all hospital questionnaire answers combined. The reliability of all questionnaires combined was 0.96 for the total questionnaire, 0.95 for the management questions, and 0.93 for all employee related questions.

3.6 Methods of data collection

1. Permission to conduct the research of the chosen hospitals' quality activities and their outcomes was obtained from the selected hospitals Research Ethics Committee or Top Management if the hospital did not have a Research Ethics Committee.
2. The Quality Activities Co-ordinator was the key person in facilitating the data collection for all hospitals. This person did all the administrative work for the research in their hospital. This included arranging:
 - the selection of study participants
 - giving out of questionnaires to study participants
 - interview times
 - tour of the premises
 - attendance by the researcher at a Quality Activities meeting
 - access to the hospital's Policy and Procedure Manuals
 - any other help needed.

Questionnaires were self administered and completed alone. They were given to the study participants by the Quality Activities Co-ordinator one-week before the researcher conducted the research interview, and were collected by the researcher at the completion of the interview. All interviews at each hospital were usually conducted over the period of one week.

There was a 99.4% response rate, (167 answered out of 168 supplied), to the questionnaires, and a 99% response rate, (174 out of 176), to the request for an interview.

3. To enable the three research questions to be answered selected employees were asked to provide information regarding:
 - the hospital's organisational profile (eg. size, services, composition of the work force).
 - quality activities program history.
 - managements' vision strategy and style.
 - hospital's mission statement.
 - organisational structure.
 - employee consultation and participation in quality activities.
 - health, safety and employee welfare programs.
 - strategies, processes and technology used for quality activities.
 - waste management.
 - involvement of customers and suppliers in quality activities, outcomes and plans for the future. (See Appendix D for research requests.)
4. Data collection was by both quantitative and qualitative methods.

Quantitative Data

- Analysis of Clinical Indicator results:
- Analysis of human resource records including absenteeism figures, employee injury and compensation data, staff development and training;
- Analysis of number and duration of care (bed occupancy days) of patients in each health care category;
- Analysis of service costs;
- Analysis of completed questionnaire results.

Qualitative Data

- Tour of the hospital to observe the environment and work processes:
- Observation of hospital policies, procedures and documents:
- Non-participant observations included sitting in on quality activity meetings and observation of service delivery to corroborate information collected.
- Structured interviews with key personnel. Interviews focused on obtaining information on employees' knowledge of the hospital's vision and mission and how these were implemented, how the hospital met customers', and potential customers', requirements, how research findings were implemented, management practices, employees, suppliers and researchers roles in quality activities.

Twenty one to twenty two people at each site were interviewed about their role in organisational quality activities. Interviews were conducted with the Chief Executive Officer, Medical Director, Director of Administrative Services, Quality Activities Co-ordinator, Occupational Health, Safety, Rehabilitation and Compensation Officer, Human Resource Manager, Director of Nursing and a Nurse Manager on the role of Management. A staff member of the Orderly Service, Catering, Maintenance, Clerical, Cleaning Service, Gardening Service, Staff Development, Clinical Nurse Specialist, Registered Nurse, Enrolled Nurse and a laboratory worker were randomly chosen to be part of the study and interviewed on the employees' role. Also interviewed were a researcher, a member of the supply department and a hospital goods supplier about their role in the organisational quality activities. At the completion of each interview the interviewee was asked to check the researcher's written notes to ensure that these notes were an accurate record of what had been said by the person interviewed. Standard interview questions (see Appendix F) and a standard questionnaire (see Appendix E) were used.

Questionnaire

The questionnaire was developed by the researcher to check the occurrence in each studied health service of the factors included in the Quality Vision Model. The questionnaire was refined in light of pilot study results and the suggestions of the pilot study participants. The distributed questionnaire consisted of two sections organised as follows:

SECTION A asked questions about Managements':

1. Leadership style
2. Support
3. Education provided to employees, and
4. Communication to employees.

In Deming's Total Quality Management leadership style, support, communication and the training that managers provide to employees were all important ingredients in a Quality workplace culture. (Matzko 1989, Vincoli 1991, Fisher 1991). These aspects of leadership were also considered important in most Quality Awards.

Garvin (1994), Scrivens (1995), Mussett (1994), de Noray (1994), Stephens (1994), Lowik (1994) and Bourke (1994) all recorded the above management practices as important factors in providing employees with a work environment and culture that enabled them to work most effectively to provide the highest standards of care. In Japan Quality Activities focus on managements' responsibilities and activities (Costin, 1994). These four management factors were included in the Quality Vision Model to be tested by this research to enable the research study questions to be answered.

In the United States of America quality activities were the responsibility of front line workers with the most successful organisations being learning organisations (Kelly, 1994).

SECTION B asked questions about Employees:

1. Delivery of customer service
2. Feelings about work processes
3. Control over work processes
4. Work related education
5. Co-worker support
6. Relationship with suppliers, and
7. Research and development activities.

These questions on control, work processes and support checked if employees were empowered, asked to be innovators and if they worked towards a common company vision. Donovan (1994) and de Noray (1994) considered these quality activities as essential for Best Practice.

Questions on work related education, research and development activities were to identify if the organisation was a learning organisation as Costin (1994) Dobson & Tosh (1998), Heinbuck (1993), Lemaire & Jonker (1998), Governey (1998) and Garvin (1994) reported that learning organisations were the most successful and profitable. Polit & Hungler (1985, p.390) defined research as a "systematic inquiry that uses orderly scientific methods to answer questions or solve problems." For the purpose of this research study this was the definition of research. It was anticipated that if health care organisations conducted research it would enable innovative health care practices to be identified and used. This was an expected outcome of effective quality activities.

In Japan the most profitable organisations had a mutually beneficial partnership with their suppliers (Stephens, 1994). The questions on suppliers were to identify if the suppliers were involved in participating in the health services quality activities

programs, and if the suppliers were, how extensive this involvement was. These seven employee-related factors were included in the Quality Vision Model to be tested by this research to enable the research study questions to be answered.

Each question in the research study questionnaire was answered by respondents circling a number on a 5 point Likert scale. Tabladillo (1994) recommended the use of a five point Likert scale for questionnaires that were to be analysed using factor analysis. This was because the five point Likert scale provided consistent scaling and easy item comparison for a factor analysis. Questionnaire responses were analysed using the factor analysis statistic. The questionnaire was answered by 167 respondents.

Interview Questions

Strategic planning was considered an important part of quality activities by the Health Department of Western Australia, the Australian Quality Council, the European Foundation for Quality Management, the European Organisation for Quality, the Malcolm Baldrige National Quality Award Committee and a variety of authors including Cosin (1994), Nakhai & Neves (1994), Perry, Wong & Bernardt (1995), Saint Lawrence & Sinnett (1994) and Richardson (1994). The interview contained questions to determine to what extent strategic plans were used for quality activities in the organisations surveyed.

Publications concerning quality management including those of Standards Australia / Standards New Zealand (1994a), Aune (1998), Wilkinson, Redman, Snape & Marchington (1998), Jonker & Klaver (1998), Evans (1997), Terziovski, Samson & Dow (1995), Gorst, Kanji & Wallace (1998), Martinez-Lorente, Dewhurst & Dale (1998), Brown & Van der Wiele (1995), Wong (1998), Laszlo (1998), Jayaram, Handfield & Ghosh (1997) stated that the best quality activities were aimed at meeting customers' needs.

The questionnaire asked if employees knew who their customers were, and how well customer needs were met. There were also questions to identify how service improvements were identified, implemented and evaluated. These questions were asked to identify if the hospital had stage 1, 2, 3 or 4 quality activities as defined by Garvin (cited in Costin, 1994), Wacker and Sheu (1994) or de Noray (1994).

The last question for employees was about how management demonstrated their care for their internal customers, the employees. Many health care organisations focus only on meeting external customers' needs while ignoring what many quality activity practitioners consider is the organisation's most valuable resource: its employees (Vincoli, 1991).

For suppliers of service to the health care facility the last two questions were related to the supplier's contract with the organisation, and the extent of the involvement of the supplier in the organisation's quality activities. The Total Quality Management philosophy describes close links between customers and suppliers as important, because what is purchased strongly influences the quality of the product that the purchaser has (Vincoli, 1991). The interview questions were answered by 174 respondents.

3.7 Statistical analysis procedures used

In order to obtain an overall picture, frequency distributions for all questionnaire answers were obtained. These are reported in Appendix G and Tables 5-15. Chronbach's Alpha was used to check the reliability of respondents' answers to the questionnaire. The reliability of all questions combined was 0.96. This result was previously discussed in section 3.5.4.

A factor analysis identifies underlying variables or factors that explain a pattern of correlations within a set of observed variables. Tabladillo, (1994) states that factor analysis is a powerful statistical tool for the validation of

employee surveys. A varimax (orthogonal) rotation was used to obtain an interpretable factor matrix. The Bartlett test of sphericity and the Kaiser Meyer-Olkin measure of sampling adequacy were used to validate the factor analysis (Kannan, Tan, Handfield & Ghosh, 1999). The factor analysis performed on the respondents' answers in each section of the questionnaire produced the factors shown in Table Four. The 81 questions in the research questionnaire were reduced to a smaller set of 17 factors that accounted for most of the variance among the items.

Table 4. Factor analysis.

Questionnaire Section	Factors	Kaiser-Meyer-Olkin Measure	Bartlett Test of Sphericity	p value
Management Leadership Style	1 Leadership style	0.80	478	<0.00001
Management support	1 Support 2 Resources	0.89	775	<0.00001
Management education	1 Management education	0.76	361	<0.00001
Management communication	1 Management communication	0.80	464	<0.00001
Employees' work practices	1 Employee work practices	0.76	209	<0.00001
Personal feelings	1 Commitment 2 Work environment & satisfaction 3 Time	0.80	903	<0.00001
Employee control	1 Autonomy 2 Involvement	0.57	67	<0.00001
Employee education	1 Development 2 Technology	0.74	289	<0.00001
Employee support	1 Employee support	0.77	248	<0.00001
Suppliers	1 Relationship with suppliers	0.80	473	<0.00001
Research	1 Research 2 Quality activities	0.90	1406	<0.00001

Please see Appendix E for the questions in each section of the Questionnaire and Section 4.2 (Questionnaire Results) for a detailed description of the

factors in each section. Factor analysis was shown to be appropriate by the Bartlett Test of Sphericity, which in all cases was less than $p = 0.01$. The factor analysis was also satisfactory according to the Kaiser-Meyer-Olkin measure that was above 0.7 in all cases except for employee control for which the two factor solution in Table 4 is barely acceptable (Norusis, 1993). These items are therefore treated separately rather than as a factor, or factors.

The questionnaire sections *Management leadership style*, *Management education*, *Management communication*, *Employee work practices*, *Employee support*, and *Relationship with suppliers* were all composed of only one factor. This shows the items in each section were related to each other: evidence of the validity of these sections. The questionnaire sections titled *Management support*, *Personal feelings*, *Employee control*, *Employee education* and *Research* were all composed of more than one factor.

Management support was composed of two factors. Seven items, (see Results section 4.2) were related to support provided by management employees to organisation directives (vision and work processes), and to their organisations' employees. Management support also included a section on the provision of *resources*. The resources required to be allocated by managers to enable employees to provide a high standard of care included good physical workplace conditions, an adequate number of people to perform the work and enough equipment, and other resources, to enable employees to be able to carry out their work to a satisfactory standard. The allocation of adequate resources was a management support function. These two factors, and resources, appear to adequately cover the concept of support.

The Questionnaire section titled "Personal feelings" was composed of three factors. See part 4.2 in the Results section of this report for details. The first

factor. *employee commitment* related to employees' intention to meet their organisation's work related requirements. The second factor was *work environment and satisfaction*. This factor related to employees' satisfaction with doing their work. The last factor was *time*. This factor related to employees being provided with enough time to be able to do their work properly and to have scheduled meal breaks. These factors represent direct aspects of employees' personal feelings about their work.

Employee education was composed of two factors. These were *development* and *technology*. The statements that were related to the development of employees' work related skills involved being educated and trained in work related tasks, having adequate opportunities to update work related skills and being given helpful feedback on work performance. These items all described the skills acquisition part of employee education. Items related to technology involved having the information needed to be able to do the job, ability to anticipate and adapt to changes in technology required to perform work related tasks, and the ability to use technology effectively when performing work processes. These items described the outcomes of employees acquiring work-related education. Both skills development, and ability to use the knowledge, provided by work associated education, were related to employee education.

The section on research was shown to be composed of two factors. *Research* and *Quality Activities*. See Results section 4.2 for details of the statements included in each factor. The statements related to research included the ability to think critically about work related tasks, conduct research to identify better ways of performing work related tasks and to implement, evaluate and publicise the research findings as appropriate. Statements related to quality activities were using research to identify ways to improve

services, to solve work-related problems, to develop and evaluate the effectiveness of work procedures and services, and to evaluate the products used in the workplace. The first factor contained general statements about research. The second factor described research conducted as part of quality management practices.

Overall the factors shown in Table 4 can be considered to cover the range of influences on the use of quality management practices in health services and do so without conceptual overlap suggesting that the questionnaire has good content validity.

A limitation of this study was that with only four case and four control hospitals it was not possible to perform any other statistical tests of significance on the research results to identify differences between hospitals.

3.8 Ethical considerations

Informed consent to participate in the Research Study was obtained from each Hospital's Research Ethics Committee, or Hospital Management Committee, if the hospital did not have an ethics committee. (See Appendix A for Research Application form for Hospital Ethics Committee.) All research hospitals and participants were free to withdraw from the study at anytime without penalty. Any research name identifying data was shredded at the completion of the study. Research participants were not identified by name. Ethical approval to conduct the research was given by the University Ethics Committee (See Appendix B).

3.9 Summary.

This section has provided a description of the instruments used to collect and analyse data for this research study to evaluate the Quality Vision Model that was developed from published literature for testing to identify success factors for quality activities for Western Australian Hospitals. The study was conducted as an Exploratory multi-case Control Study as this methodology allowed the relevant data to be collected and analysed to answer the research study questions. Multiple sources of information including direct observation, organisational records, interviews and questionnaires completed by study participants were used to gather data for this research study.

Yin (1984) stated that the use of a variety of evidence sources was a unique strength of the case study methodology. Hakim (1987, p.63) described case studies as one of the most powerful research designs because they not only offered the strengths of experimental research within natural settings but also "the use of multiple sources of evidence allowed case studies to present more rounded complete accounts." Using this research methodology allowed sufficient data to be collected from the research study hospitals to be able to identify successful quality activity strategies for health care for Western Australian hospitals.

A method of reporting research results for multiple case studies recommended by Yin (1984) was to have no separate chapters or sections for individual cases, but to have results reported as descriptive cross-case analysis. Yin (1984) writes that this facilitates a comparison of the obtained information, produces a chain of evidence and allows a set of general characteristics associated with organisational excellence to be identified. The next section of this report describes the research study results that are reported in the format recommended by Yin (1984).

4. RESULTS

4.1 Introduction

The research findings are presented in this section. In section five of the report (the following section) the research findings presented in section four are further analysed for meaning and discussed.

From all Western Australian Hospitals eight hospitals were randomly selected to be part of this research study according to the criteria described in the Methodology section of this report. Data was collected from study participants answering a set questionnaire of 82 questions, from responses to set interview questions, organisational records and from the researcher's observations. For each hospital included in this research study a hospital goods or service supplier was randomly selected to be interviewed about the supplier's involvement in the organisation's quality activities.

Research results described include the study questionnaire results, interview results, clinical indicator results, an outline of health service quality activities using the quality vision model and a brief description of each of the eight hospital's profile. A more detailed description of each research study hospital's profile is included in Appendixes H to Q.

4.2 Questionnaire results.

The research study questionnaire was used to check research participants' opinion of the occurrence of the theory factors in the Quality Vision Model and the effectiveness of these factors in each health service in a way that allowed quantitative analysis. For each questionnaire section the Kaiser-Meyer-Olkin Measure, the Bartlett Test of Sphericity and its probability (p) value were reported in table four in the methodology section of this research report.

For questionnaire responses Hospital six had 20 respondents as one randomly selected participant (a Medical Practitioner) stated that he was too busy to complete the questionnaire. For all other research study hospitals there were the selected 21 questionnaire respondents from each health service. This provided a total of 167 responses.

The sections of the questionnaire for leadership style, management support, management education and management communication checked factors and their effectiveness in the management stream of the quality vision model. The sections of the questionnaire on work practices, personal feelings, employee control, employee education and employee support checked the factors and their effectiveness in the employee stream of the model. The questions in the supplier section of the questionnaire checked the suppliers' role in health service quality management. The questions in the section on research checked the occurrence and effectiveness of the research factor in the Quality Vision model. The implications of the findings from the questionnaire results are discussed in the research report discussion section.

4.2.1 Management Leadership style.

For management leadership style the Kaiser Normalization Varmix rotation showed that this section was composed of one factor, leadership style.

Table 5. All hospitals. Leadership style % agreement.

Leadership style	1	2	3	4	5	6	7	8	All
Promote care & consideration of customers	100*	86	95	69	90	70	90	86	85
Promote the use of improved work processes	90	72	90	85	95*	50	66	77	78
Are team orientated	95*	76	72	80	76	40	76	67	73
Allow employees to challenge work processes	91*	67	81	75	81	40	62	72	71
Implement appropriate solutions for identified problems	95*	57	67	70	81	40	81	58	69
Lead by using best workplace practices	90*	67	52	70	72	25	71	62	64
Regularly evaluate organisational activities	90*	67	52	70	71	25	71	62	64
Allow employees to exercise discretion in decision making	71	57	76	50	72	30	76*	52	60
Average agreement %	90*	69	74	67	80	39	74	66	70

As shown in Table 5 above, the highest score for the eight questions on management leadership style was for the statement that management promoted care and consideration of customers. For hospital one, 100% of employees who answered the questionnaire agreed with this statement. This hospital also had the highest agreement score for the management leadership style statements.

Hospital five had the second highest agreement score. A strength of hospital five was that its leaders promoted the use of improved work processes more than other hospital leaders were reported to. The top two hospitals were both private hospitals.

4.2.2 Management support

For management support the Kaiser Normalization Varmix rotation showed that this section was composed of two factors, support and resources. The following statements were related to support. Support the hospital's vision. Provide encouragement and rewards for vision achievement. Facilitate achievement of the hospital's mission. Provide me with competent supervision when I need it. Provide a supportive

environment for employees. Facilitate opportunities for identification of improvements. Provide an organisational structure that facilitates continuous improvement. The following statements were related to resources. Provide good physical workplace conditions. Provide adequate equipment/ resources for me to complete my work satisfactorily. Provide an adequate number of staff for my department.

Table 6. All hospitals. Management support % agreement

Management support	1	2	3	4*	5	6*	7	8	All
Support the hospital's vision	95	62	86	75	100*	70	90	76	82
Facilitate opportunities for identification of improvements	76	72	76	75	90*	55	76	71	74
Provide a supportive environment for employees	90*	72	76	60	90*	35	71	53	68
Provide good physical workplace conditions	76	76	47	70	90*	60	67	53	67
Provide me with competent supervision when I need it	90*	72	66	60	67	20	76	62	64
Provide adequate equipment/ resources for me to complete my work satisfactorily	76	81	57	40	95*	45	62	28	61
Facilitate the achievement of the hospital's mission	66	52	48	60	82*	35	76	48	59
Provide an adequate number of staff for my department	62	62	67*	50	67*	50	66	29	57
Provide an organisational structure that facilitates continuous improvement	76	52	62	30	81*	20	57	48	52
Provide encouragement and rewards for vision achievement	48	57	43	25	67*	30	47	43	45
Average agreement %	76	66	63	54	83*	42	69	51	63

Hospital four had an organisational wide vision that was clearly displayed on walls of the health service for staff, patients and visitors to read. Three departments in hospital six had a departmental vision that was included in these departments policy manual. No other hospital included in the research study had a written vision.

Although only one hospital, and three departments in another hospital, had a documented vision, managements' most recorded level of support was for the hospital's

vision. It was presumed from this result that questionnaire respondents considered an organisation's vision not to be just what was documented on paper, but to be what was spoken about by their health service management people and reinforced by the actions that management performed in relation to setting the organisational direction for the future.

Hospital five did not have a written vision but 100% of its employees reported managements' support for the hospital vision. This hospital also scored the highest overall percentage of agreement for the statements about managements' support of strategic factors and the provision of resources.

Hospital one had the second highest agreement score. The strengths of hospital one were that it provided a supportive environment for employees, and provided employees with competent supervision when they needed it, more than government hospitals' management were reported to.

4.2.3 Management education

For the three questions about management education of staff members only one factor was extracted by the Kaiser Normalization Varmix Rotation and that was management education. See Table 7.

Table 7. All hospital's. Management education % agreement

Management education	1	2	3	4	5	6	7	8	All
Provide & facilitate a learning environment	81*	43	43	50	76	25	71	62	56
Develop other employees as leaders through coaching and mentorship	72*	43	38	35	67	30	52	57	50
Coach employees to focus on underlying causes of problems. not just events and trends	76*	38	38	20	71	45	48	38	47
Average agreement %	76*	41	40	35	71	35	57	52	51

The two private hospitals, hospital one and five, both consistently had a higher percent agreement score related to management education factors than did the six government hospitals.

4.2.4 Management communication

From the six questions related to management communication only one factor was extracted by the Kaiser Normalization Varmix Rotation and that was management communication.

Table 8. All hospitals. Management communication % agreement

Communication	1	2	3	4	5	6	7	8	All
Are accessible to all people in the organisation	81	85 *	85 *	60	76	35	85 *	76	74
Provide clear policies for my work	90*	67	81	75	81	40	81	62	72
Communicate with me effectively	72	77	81 *	45	76	40	81 *	62	67
Provides me with feedback of evaluation of organisational activities	77*	67	66	50	67	40	76	62	63
Provides documented procedures for my workplace tasks	90*	57	62	50	71	25	62	62	60
Consult me when considering changes in my workplace	71	57	66	50	72 *	30	57	43	58
Average agreement %	80*	68	74	55	74	35	74	61	66

The strongest agreement for communication was reported as management being accessible to all people in the organisation. Hospital one met the Quality Vision Model outcome measure of having good organisational wide communication the most successfully. It was recorded by respondents as having the best management communication practices with employees. Although all organisations did have documented policies and procedures, it was in hospital one that these appeared to be known and used most to guide employee work practices.

4.2.5 Employees' work practices

In the section of the questionnaire related to employee work practices only one factor was extracted by the Kaiser Normalization Varmix Rotation and that was employee work practices.

Table 9. All hospitals. Work practices % agreement.

Work practices	1	2	3	4	5	6	7	8	All
Are involved in ensuring their own health and safety at work	95*	90	71	52	95*	70	90	62	79
Deliver cost effective service with minimal wastage	85*	81	81	43	71	30	81	57	66
Work towards achieving a common organisational vision	85*	66	57	48	76	35	57	19	56
Are asked to be innovators	71*	57	43	48	67	45	43	57	54
Are all leaders. recognised as modeling organisational values and fostering a learning environment	67*	43	29	14	57	5	28	34	35
Average agreement %	81*	67	56	41	73	37	60	46	58

Hospital one was reported by respondents as having the best employee work practices. It was noted that in management education employees in hospital one were reported as being developed as leaders more than in the other hospitals. In work practices, employees in this hospital were reported by the highest number of respondents as being leaders and fostering a learning environment. These employees also reported themselves as delivering the most cost-effective service that was an outcome measure of effective quality activities in the Quality Vision Model.

The responses also indicated that employees in the private hospitals (Hospital one and five) had employees who took the most responsibility for being involved in ensuring their own health and safety at work.

4.2.6 Personal feelings

Scores for personal feeling items are shown in Table 10. For personal feelings the Kaiser Normalization Varmix rotation showed that personal feelings were composed of three factors, commitment, work environment and satisfaction, and time.

The statements related to employee commitment were as follows. As an employee I have departmental goals which are related to the organisation's vision. Have personal goals that are linked to the organisation's vision. Contribute to continuous improvement through my personal commitment. Go out of my way to apply newly gained knowledge through involvement in improvement activities. Use my knowledge and skills to improve the way we do things. Perform my job professionally.

Statements related to employee work environment and satisfaction were as follows. As an employee I don't fear failure when trialing new ideas. Have a job that provides challenging work. Have a clearly defined career path. Look forward to coming to work. Receive sufficient financial reward for the work I perform. Have in the past two months had times when I planned to change my job. Find my department is not able to adapt easily to changes in government policy.

Statements relating to time were as follows. I have enough time to do my job properly. I take full meal and tea breaks each shift.

Table 10. All hospitals. Personal feelings % agreement

Personal feelings	1	2	3	4*	5	6*	7	8	All
As an employee I:	100*	95	100*	95	86	95	100*	89	95
Perform my job professionally									
Use my knowledge & skills to improve the way we do things	100*	95	90	100*	91	85	95	90	94
Contribute to continuous improvement through my personal commitment	100*	95	90	95	95	80	95	95	93
Go out of my way to apply newly gained knowledge through involvement in improvement activities	95*	91	81	95*	81	55	86	81	83
Don't fear failure when trialing new ideas	81	85	72	81	76	75	90*	67	79
Have a job which provides challenging work	81	57	81	90*	81	75	90*	72	78
Have personal goals which are linked to the organisation's vision	96*	76	76	71	91	70	90	57	78
Look forward to coming to work	86	71	71	81	86	50	90*	67	75
Have departmental goals which are linked to the organisation's vision	91	57	72	62	72	60	95*	67	72
Have a clearly defined career path	42	34	47	52	57*	40	57*	38	46
Receive sufficient financial reward for the work I perform	53	72*	24	43	67	50	19	43	46
Did not at any time in the past 2 months plan to change my job	48	38	58	52	76*	70	47	33	46
Have enough time to do my job properly	43	85*	57	28	53	30	28	24	44
Find my department is able to adapt easily to changes in government policy	57	29	47	38	47	45	62*	43	43
Take full meal and tea breaks each shift	48	72*	33	19	29	35	28	33	37
Average agreement %	75*	70	67	61	73	61	71	51	67

It was most commonly agreed that employees performed their work in a professional way. One hundred percent of employees in hospitals one, three and seven agreed with this statement. There was also a consistent high score for employees reporting to contribute to continuous improvement through their personal commitment and to use their knowledge and skills to improve work practices and service. For the factor of commitment hospital one had the highest average score. Hospital one employees also had the highest percent agreement score for personal feelings.

For factors related to work environment and satisfaction hospital seven generally scored the highest. Employees in health service seven reported themselves as being the least afraid of failure when trialing new ideas. They stated that they found it the easiest of all hospital employees to adapt to changes in government policies. Both employee job satisfaction and ability to adapt to changes in government policy were outcome measures of the Quality Vision Model. Of all of the government study hospitals, Hospital seven respondents scored the highest in the questionnaire average agreement score. Employees in this health service were the most likely to report having a job which provided challenging work, to look forward to coming to work and to have a clearly defined career path. These employees also reported the most dissatisfaction with their level of pay.

For the factors related to time, hospital two scored the highest. This hospital scored 100% satisfaction with care from patients in the Health Department Patient Satisfaction with Care Questionnaire. Apart from at Hospital two, employees answering the questionnaire were most likely to report not having enough time to do their job properly and not being able to take full meal and tea breaks. Employees in health service two were also the employees most satisfied with their employment pay.

Employees in hospital five reported themselves as the least likely to want to change their job indicating that the Quality Vision Model out-come measure of employee job satisfaction was highest for the respondents at this health service.

4.2.7 Employee control

For employee control the Factor Analysis showed only barely acceptable evidence of underlying factors, and therefore the results are presented for each statement.

Table 11. All hospitals. Employee control % agreement.

Employee control	1	2	3	4	5	6	7	8	All
I am aware that I can contribute to doing things better	81	76	91 *	76	81	65	90	90	82
I have a strong influence over my workplace decisions	66	53	66	76	77	45	81 *	62	66
I have enough authority to carry out my workplace responsibilities	86*	53	67	67	72	45	67	67	65
I am able to change work practices when appropriate	62*	57	52	14	43	50	28	43	41
Average agreement %	74*	60	69	58	68	51	67	66	63

Hospital three employees reported the most awareness of being able to contribute to doing things better. Top management in this hospital aimed to have the Best Practice in Health Care at their health service. Hospital seven employees reported having the most influence over their workplace decisions. For the items related to autonomy hospital one employees reported the highest percent agreement. They were the most able to change work practices when appropriate and were most likely to have enough authority to carry out their workplace responsibilities.

4.2.8 Employee education

For employee education the Kaiser Normalization Varmix rotation showed that employee education was composed of two factor. development and technology. Statements related to development were I get helpful feedback on my work performance. I have adequate opportunity to update my skills. I am educated and trained in work related tasks. Statements related to technology were I am able to anticipate and adapt to changes in technology and work processes. I use technology effectively. I have the information I need in order to do my job in the most effective and efficient manner.

Table 12. All hospitals. Employee education % agreement.

Employee education	1	2	3	4	5	6	7	8	All
As an employee I:	95*	57	86	81	90	60	85	76	79
Am aware of current trends in my area of work									
Am able to anticipate and adapt to changes in technology & work processes	85*	81	62	71	81	70	81	72	75
Have the information I need in order to do my job in the most effective & efficient manner	100*	76	67	48	72	50	71	62	68
Use technology effectively	90*	52	62	71	62	75	71	57	67
I am educated & trained in work related tasks	67	57	57	67	76*	20	62	66	62
Get helpful feedback on my work performance	77*	67	62	43	57	25	48	43	53
Have adequate opportunity to up date my skills	67*	53	52	38	66	20	52	29	47
Average agreement %	83*	63	64	60	72	46	67	58	64

The two private hospitals had the highest score for factors related to employee education. Employees in hospital one reported the highest levels of education with 100% agreement that they had the information they needed in order to do their job in the most effective and efficient manner. Resources, including human resources, used effectively was an outcome measure of the Quality Vision Model. Hospital five had the highest agreement score for employees being educated and trained in work related tasks.

In addition to assessing respondents opinions about their work related education information was obtained about employee work related support.

4.2.9 Employee support

For employee support only one factor was extracted by the Kaiser Normalization Varmix Rotation from the six questions and that was employee support.

Table 13. All hospitals. Employee support % agreement.

Employee support	1	2	3	4	5	6	7	8	All
As an employee I:	100*	85	90	100*	77	60	90	81	88
Feel comfortable asking for assistance from colleagues when I need it									
Have full confidence in the skills of my peers	86*	81	67	67	81	45	72	72	71
Feel valued by my colleagues	86*	72	62	71	76	45	67	86*	71
Find that my immediate supervisor is supportive	86*	57	71	67	67	65	71	76	70
Observe that when the going gets busy everyone gets in and works as a team	100*	86	57	67	71	45	81	57	70
Find that the communication climate in this hospital is usually good	85*	72	76	33	43	30	76	34	56
Average agreement %	91*	76	71	67	69	50	76	68	71

Hospital one employees had the highest percentage agreement related to employee support. One hundred percent of these employees felt comfortable asking for assistance from their colleagues when they needed it and observed that when there was a heavy work load employees helped each other.

Hospital four employees also scored 100% for employees feeling comfortable asking for assistance from colleagues when they needed it. The agreement score for this statement was generally high in all hospitals except hospital six. Hospital six also had the lowest score for all other statements in this section.

In addition to assessing employees' work related support for each other the questionnaire asked respondents about their relationship with hospital goods and service suppliers.

4.2.10 Suppliers

For supplier related statements only one factor was identified by the Kaiser Normalization Varmix Rotation from the six questions and this was relationship with suppliers.

Table 14. All hospitals. Suppliers % agreement.

Suppliers	1	2	3	4	5	6	7	8	All
In this hospital we:	62	48	48	43	76*	60	52	29	52
Communicate with our suppliers and they are aware of our needs and expectations									
Choose suppliers based on the value of the products & service, not price tag alone	43	48	43	33	66*	55	38	38	46
Have a strong partnership with our suppliers which improves our ability to meet customers' expectations	53	43	48	24	66*	40	47	24	43
Have long-term mutually beneficial relationships in place with preferred suppliers	53 *	43	43	19	52	40	52	33	42
Have processes established to measure the performance of suppliers	43 *	29	38	24	29	30	24	14	29
Have a review system in place to minimise the number of suppliers necessary	48 *	24	29	14	19	45	24	19	27
Average agreement %	50	39	42	26	51*	45	39	26	40

The partnership between the hospital employees and their goods and service suppliers was generally not strong. The most common answer to the statements in this section was "Don't know." The average agreement score for statements in this section was 40%. The two private hospitals (Hospital one and five) scored the highest for a relationship with suppliers. For all respondents the strongest agreement was that their

health service communicated with suppliers to let the suppliers know what they wanted. The least agreement was that they had a review system in place to minimise the number of suppliers necessary.

As well as obtaining information about respondents relationship with hospital goods and service providers the questionnaire asked for information about research conducted at health services to find ways to improve the quality of customer service.

4.2.11 Research

For the statements related to research the Kaiser Normalization Varmix rotation showed that research was composed of two factor. research and quality activities. Statements related to research were I continually question the way we do things the way we do. and look for better ways of doing them. I am involved in conducting research based quality improvement activities. I evaluate research findings and implement them at work as appropriate. Research results are publicised within my organisation. I go out of my way to evaluate research based quality improvement findings.

Statements related to quality activities were research is conducted in my department to solve work-related problems. Identify ways to improve services. Develop services. Evaluate the effectiveness of services. Develop and evaluate work procedures. Evaluate products used.

For research the highest agreement score was that research was conducted in the employees' department to identify ways to improve services. The lowest agreement score was that the research results were publicised within the organisation. Hospital one had the highest overall agreement score and the highest score for every statement indicating that it was most likely to meet the Quality Vision Model outcome of innovations produced. This result confirmed the result in table nine where employees in Hospital one reported the highest agreement score for being asked to be innovators.

The statements on research conducted in health services to improve the quality of service completed the questionnaire. The following section documents the average agreement total score to the questionnaire statements for the respondents for each health service included in this research.

4.2.12 Average agreement score.

The average percent agreement score for the answer to the total questionnaire for all health services was **61%**. In order of ranking the average percent agreement scores for the individual health services was:

- **Hospital 1, 78%**
- **Hospital 5, 71%**

- **Hospital 7, 64%**
- **Hospital 2, 63%**
- **Hospital 3, 62%**

- **Hospital 4, 55%**
- **Hospital 8, 53%**
- **Hospital 6, 45%**

Hospital one was a private ACHS accredited hospital. Hospital five was a private non-accredited hospital. Hospital seven was a government ACHS accredited hospital with 92% patient satisfaction with care on the state government 1995 patient satisfaction with care survey. Hospital two was a country government non-accredited hospital with 100% patient satisfaction with care. Hospital three was a city government ACHS accredited hospital with 98% patient satisfaction with care.

Hospital four was a government non-accredited hospital with 92% patient satisfaction considered by the Health Department of Western Australia to have 'best practice' in quality activities. Hospital eight was a government ACHS accredited. 'non best practice'

hospital with 92% patient satisfaction with care. Hospital six was a country non-accredited hospital with 90% patient satisfaction with care.

4.2.13 Factors controlled for.

Public or Private Hospital.

The highest score for respondents' answers to the research questionnaire was obtained by an accredited private hospital. The second highest score was obtained by the control hospital, a non-accredited private hospital. The average agreement score for the private hospitals was **75%**. For government hospitals it was **57%**. Private hospitals scored an average of **18% more** than government health services.

Accreditation by the Australian Council on Healthcare Standards (ACHS).

Health Services one, three, seven and eight were accredited by the Australian Council on Health Standards. The remaining Health Services were not. The average agreement score for all ACHS accredited hospitals was **64%**. For non-accredited health services it was **59%**. ACHS accredited hospitals scored **5% more** than non-accredited health services.

Patient satisfaction with care.

It was only possible to compare this factor for the government hospitals as the two private hospitals were not included in the State Government 1995 patient satisfaction with care patient survey. With the exception of the result for hospital seven the order of the hospitals' scores reflected the order of patient satisfaction with care survey results.

• Hosp. 7.	score = 64%	patient satisfaction = 92%
• Hosp. 2.	63%	100%
• Hosp. 3.	62%	98%
• Hosp. 4.	55%	92%
• Hosp. 8.	53%	92%
• Hosp. 6.	45%	90%

The country hospital with 100% patient satisfaction with care recorded on the Health Department State wide Patient Satisfaction with Care Survey was ranked fourth. Its control hospital was ranked eighth (18% lower research questionnaire average agreement score).

Hospital three, which was a city hospital with above 96% patient satisfaction with care recorded on the same survey was ranked fifth. Its control hospital was ranked third but there was only a 2% lower average agreement score for respondents answers on the research questionnaire score.

City or Country Hospital.

The average agreement score for government city hospitals (hospitals 3,4,7,8) was **59%**. For country government hospitals (hospitals 2,6) it was **54%**. City government hospitals scored **5% more** than country hospitals.

Being a Health Department of Western Australia 'Best Practice' Hospital.

Hospitals that were not included in the Health Department of Western Australia's 'best practice in quality activities list' achieved an average agreement score of **62%**. The 'best practice hospital' achieved a score of **55%**. This 'best practice hospital' was ranked 6th overall in the questionnaire average agreement score. Its control hospital ranked 7th with a 2% lower average agreement score for respondents' answers on the questionnaires.

Summary

Of all of the factors being controlled for the most substantial difference was between the questionnaire answer scores of private and government hospitals (an average of 18% more). Other factors, including accreditation by the Australian Council on Health Care Standards, patient satisfaction with health care, being a city or a country hospital, did

make a difference, but were not as strong an influence on quality activities used in health services.

Using Strategic Quality Management was considered by the Western Australian Health Department, and the Australian Government of the day, to be part of the "best practice" for quality activities (Health department of Western Australia, 1994, Richardson, 1994). It was determined from research respondents' questionnaire answers that the use of an organisation strategic plan was not the most successful way to manage quality activity practices in Western Australian hospitals.

4.3 Interview results

All health service study participants who had answered the research study questionnaire (with the exception of a Medical Practitioner from Hospital five) and a supplier of goods or service for each health service were interviewed. These people were interviewed to obtain additional information to the standard information included in the research questionnaire and to allow the researcher to check some of the important questionnaire factors for additional information to be able to answer the research study questions.

The information obtained from research study participants' interview question answers was related to theory factors occurrences, particularly the health service vision and mission. Participants were also asked how the health service customers were identified, the type of research that was conducted and how the findings were implemented, how service improvements were identified, implemented and evaluated in the organisation. Interview question answers established outcomes of service including customer satisfaction.

Health service employees only were asked a question on how occupational safety and health was maintained in their organisation. This question was asked to identify

practices that resulted in minimal employee occupational injuries and illnesses. This was an expected outcome of successful health service quality management practices.

Suppliers of goods or services only were asked if they had a long term contract with the health service and about their involvement in the health service quality improvement program. The answers to this question allowed the role of suppliers in health service quality activities to be explored from a supplier's point of view.

Information obtained in the interviews allowed a rich variety of answers to be obtained from study participants. For some questions employees provided more than one answer to the question. Question replies were grouped to show the pattern of replies and the frequency of each answer.

Of the 176 people chosen for interview (168 health service employees and 8 suppliers of products or services) only two declined to be interviewed (99%) response rate [174 interviews]. The reason provided by both [the Medical Practitioner from Hospital six who had not answered the research study questionnaire, and a Medical Practitioner from Hospital five] for declining to be interviewed was a lack of time available to answer the research questions.

These two hospitals (5+6) had 20 employees, and a supplier of goods or services to the hospital, answer the research interview questions. All other hospitals had 21 employees and a service or goods supplier answer the interview questions. The following section describes the responses provided by research participants to the set interview questions.

4.3.1 What is your organisation's vision?

Health Service four had an organisation wide vision. Three departments in Health Service six had a departmental vision even though the organisation and other

departments did not have a vision. All other Health Services did not have a documented vision.

Table 16. Vision.

Response	S	1	2	3	4*	5	6*	7	8	HT	H%
The organisation does not have a vision, but the respondent states what he/she thinks the vision is		8	10	18		15	12	18	11	92	55.4
Does not know		8	10		2	3	6		4	33	19.8
States the organisation has no vision	5	5	1	3	1	3		3	5	21	12.7
Respondent guesses what the vision is					12					12	7.3
Knows where to find a copy of the vision					5					5	3.0
Knows vision	3				1		2			3	1.8
Total	8	21	21	21	21	21	20	21	20	166	100

Although most health services did not have a written vision employees enthusiastically guessed what their organisation's vision might be. Knowing the organisation's vision statement was defined by the researcher as the respondent being able to state the organisation's vision, or the general ideas expressed by the vision. For each health service there was a wide variety of answers on what the organisation's vision was. For example 11 employees in Hospital 8 guessed that the organisation had a vision of "cost cutting".

Three supplier organisations had an organisational vision while five did not. For the suppliers, if their organisation had a vision, the employee was able to state the organisation's vision accurately. Health Service four had a vision, but only one of the 21 employees asked knew it. Three departments in health service six had a vision. Two employees knew their department's vision. These employees had been involved in deciding their departmental vision.

Findings for the answers to the interview question about research study participants' knowledge of their organisation's mission were similar to their knowledge about the vision with many of the employees guessing what their organisation's mission was.

4.3.2 What is the organisation's mission?

All health services had a documented mission statement, however only 4.2% of employees (7) knew their organisation's mission statement. Knowing the organisation's mission statement was defined by the researcher as the respondent being able to state the organisation's mission, or the general ideas expressed by the mission.

Table 17. Mission.

Response	S	1	2	3	4	5	6	7	8	HT	H%
Respondent guesses what the mission is		13	7	9	8	6	2	14	9	68	41.0
Does not know		7	14	8	8	7	13	5	3	65	39.2
Knows where to find a copy of the mission				4	2	5	3	2	8	24	14.5
Knows mission	2	1			1	3	2			7	4.2
States that the organisation has no mission	6				2					2	1.1
Total	8	21	21	21	21	21	20	21	20	166	100

Hospital five had the highest number of respondents (3) who knew their organisation's mission. The interview answers indicated that the words and actions of management influenced employees' perception of what each organisation's mission was more than the organisation's documented mission influenced their ideas.

Two suppliers organisation had a documented mission statement while six did not. All suppliers whose organisation had a mission statement knew it. The organisation of one of the suppliers who did not have a documented vision or a mission statement had a Credo, which was similar to a mission statement. The organisation's credo was as follows.

We believe our first responsibility is to the doctors, nurses and patients, to mothers and fathers and all others who use our products and services. In meeting their needs everything we do must be of high quality. We must constantly strive to reduce our costs in order to maintain reasonable prices. Customer orders must be serviced promptly and accurately. Our suppliers and distributors must have an opportunity to make a fair profit.

We are responsible to our employees, the men and women who work with us throughout the world. Everyone must be considered as an individual. We must respect their dignity and recognise their merit. They must have a sense of security in their jobs. Compensation must be fair and adequate, and working conditions clean, orderly and safe. We must be mindful of ways to help our employees fulfil their family responsibilities. Employees must feel free to make suggestions and complaints. There must be equal opportunity for employment, development and advancement for those qualified. We must provide competent management and their actions must be just and ethical.

We are responsible to the communities, in which we live and work, and to the world community as well. We must be good citizens - support good works and charities and bear our fair share of taxes. We must encourage civic improvement and better health and education. We must maintain in good order the property we are privileged to use, protecting the environment and natural resources.

Our final responsibility is to our stockholders. Business must make a sound profit. We must experiment with new ideas. Research must be carried on, innovative programs developed and mistakes paid for. New equipment must be purchased, new facilities provided and new products launched. Reserves must be created to provide for adverse times. When we operate according to these principles, the stockholders should realise a fair return.

This credo was similar to the research study suppliers' mission, but provided additional information about what should be accomplished by an organisation's employees in a "perfect" world. It also recorded that the organisation aimed at making a profit for stockholders. Making a profit was not included in any of the research study health services' mission statement. This credo can be compared to the shorter health care mission statements that are included in Appendix N. It provides an example of a difference between hospitals' and some other businesses' mission statement.

4.3.3 How are the organisation's vision and mission statement communicated to all employees?

The answers to the question about what the organisation's vision and mission statement was led to the question about how the organisation's vision and mission were communicated to employees. Organisation one communicated its mission at employment interview. All organisations communicated their mission and / or vision at orientation lectures and through meetings. For health services the most common way to communicate the organisation's mission and / or vision was to have it recorded in manuals.

Table 18. Vision & mission communicated.

Response	S	1	2	3	4	5	6	7	8	HT	H%
Not communicated	4	5	14	10	3	1	9		4	46	18.7
In manuals	1	9		3	4	2	2	10	9	39	15.9
Orientation / lectures	3	4	4	3	3	6	1	8	6	35	14.2
Meetings	1	4	2	2	4	9	5	2	2	30	12.2
Verbal communication	1	2	4	2	1	5	4	3		21	8.6
In writing		4		3	3	4	3	4		21	8.6
Displayed		1		2	5		2	1	10	21	8.5
Brochures/ bookmark		1			2	6				9	3.7
By example		1				4			2	7	2.8
Employment interview		3								3	1.2
In Newsletter				1	2					3	1.2
Annual report			1		1			1		3	1.2
Through workshops					2					2	0.8
Through open forums					2					2	0.8
Handouts								2		2	0.8
Through the Head of each Department					1					1	0.4
In Business Plan								1		1	0.4
Total	10	34	25	26	33	37	26	33	33	246	100

As well as identifying how the vision and mission statements were communicated to employees it was essential to evaluating the importance of the organisation's vision and mission statement in the Quality Vision Model to identify how the mission was implemented in each organisation.

4.3.4 How is the mission implemented?

Table 19. Mission implemented.

Response	S	1	2	3	4	5	6	7	8	HT	H%
Staff work	1	2	5	7	8	11	3	9	6	51	22.6
Don't know		7	13	7	4	1	8	1	5	46	20.4
Through good service to customers	2	4	3	2	1	5	3	3	2	23	10.2
Through meetings		6	1	4	6	2		3		22	9.8
Through quality activities		4		5	3	1		2	3	18	8.0
Through management encouragement		3			1		1	6	2	13	5.8
Education		2				6	2	1		11	4.9
Through policies, procedures or documented standards		1	1	1			3	3	1	10	4.5
Through the Strategic Plan					1		2		3	6	2.7
Told what to do by the Health Department					1		2		2	5	2.2
Through an organisational customer focused culture	2	2	1			2				5	2.2
By recruitment of customer focused staff		1		1		1			1	4	1.8
Through good service to staff		1						2		3	1.3
Provision of appropriate resources						1			1	2	0.9
Through working with the community								1	1	2	0.9
By keeping work related knowledge current		1			1					2	0.9
Through needs analysis							1			1	0.5
Not implemented	3								1	1	0.5
No documented mission	5										
Total	10	35	24	27	26	30	25	30	28	225	100

The most common way for the organisation's mission to be implemented was stated as through staff work. The next most common way described was through good service to

customers. After identifying how the organisation's mission was implemented the next question asked how achieving the organisation's mission was evaluated.

4.3.5 How is the mission achievement evaluated?

Table 20. Mission achievement evaluated.

Response	S	1	2	3	4	5	6	7	8	HT	H%
Customer feedback/ surveys	4	8	6	7	7	10	7	9	5	59	26.3
Don't know		2	15	6	3	5	9	3	6	49	21.9
Quality activities		10		3	4	5	3	9	9	43	19.2
Staff performance evaluation		1	2	6	1	4	3	4	3	24	10.8
Not evaluated	3	5		2	5	1			1	14	6.3
Statistical data related to contract achievement		1	2		3		3	1	3	13	5.7
Committee discussions		2	1	1		1		6	1	12	5.4
Budget expenditure	1	1	1	1		2				5	2.2
Staff feedback	1							3	1	4	1.8
Annual report									1	1	0.4
No documented mission	5										
Monthly report	2										
Increase in customer numbers	3										
Increase in profit	2										
Customers continue to use service/ products	1										
Total	17	30	27	26	23	28	25	35	30	221	100

The evaluation of mission achievement was most commonly reported to be through customer feedback / surveys. For health services quality activities were widely used to check that the mission was achieved. For suppliers an increase in customer numbers showed that their mission was achieved.

4.3.6 How are your department's customers and potential customers identified?

Table 21. Customers identified.

Response	S	1	2	3	4	5	6	7	8	HT	H%
Everyone who comes on the premises		13	6	7	2	8	2	3	4	45	17.7
Referred by medical practitioners		4	4	8	3	3	6	5	8	41	16.2
Local population		3	8	7	4	4	8	2	2	38	15.0
Staff employed at the hospital		1		3	9	5	3	5	5	31	12.2
Self referred		1	8	1	2		4		4	20	7.9
All patients		5				2	2	4	2	15	5.9
Referred by other health care organisations			1	4	3		3	1	2	14	5.5
Referred from community sources		1	3	3	5					12	4.7
Referred by hospital staff		1		1	2	3			2	9	3.5
Requisitions				1			2	2	2	7	2.7
Through replies to marketing of services	2			1			2	2		5	1.9
Set by contract					2		2		1	5	1.9
Don't know			3			1				4	1.5
Through committee meetings						3				3	1.1
Medical practitioners						1		1	1	3	1.1
Through facilitation sessions				1						1	0.3
Board Members						1				1	0.3
Through menus					1					1	0.3
By switchboard								1		1	0.3
Allocated by the Health Department	1										
Through the work of Sales Reps.	6										
Market research	2										
Total	11	31	42	37	31	31	35	26	33	253	100

Hospital one was most likely to identify customers as everyone who comes on the premises. This was also the overall most common answer for health service employees

to provide. For health services the second most common answer was that customers were referred by medical practitioners, third was the local population and fourth was staff employed at the hospital.

For suppliers their sales representatives most commonly identified customers. None of the suppliers reported their staff as customers. No health service employees reported using market research to identify customers and potential customers. This demonstrated a difference between the ways that some general business employees identified customers and how the research study health service employees identified their customers.

4.3.7 Are customers advocates of your department?

For the customers identified the research study participants were asked how satisfied they thought their customers were with the service provided by their department. Customer satisfaction was an anticipated outcome of the research Quality Vision Model.

Table 22. Customer response.

Response	S	1	2	3	4	5	6	7	8	HT	H%
Yes	8	21	18	18	13	19	18	18	16	141	83.9
Don't know			3	1	2	1	2	1	3	13	7.7
Some are				2	6	1		1	1	11	6.5
No								1		1	0.6
Total	8	21	21	21	21	21	20	21	20	166	100

All suppliers and staff at hospital one answered yes to the question "Are customers advocates of your department?" Only one of the interviewed respondents answered no. Research participants were then asked to provide as many examples as possible of customer satisfaction with their service or goods.

Give an example.

For suppliers the most common example was repeat business. For health service employees it was verbal praise. This provided an example of the difference in expected outcomes of quality activities and customer satisfaction for the research study suppliers and the respondents at the researched hospitals.

Table 23. Customer example

Response	S	1	2	3	4	5	6	7	8	HT	H%
Verbal praise	1	10	17	17	14	14	13	13	10	108	44.6
Written praise			5	5	8	3	9	7	5	42	17.4
No example		14	5	1	3	2	2	1	3	31	12.8
Survey responses		4	1	4	3	3	5	5	6	31	12.8
Financial reward		2		4	4	4	4	5	4	27	11.2
Award for excellence		1						1		2	0.8
Patients Relatives offered to help with care if strike action taken by staff								1		1	0.4
No complaints	1										
New business	2										
Repeat business	5										
Total	11	26	28	31	32	26	33	34	28	242	100

4.3.8 What research has been completed by your department over the last two years?

This question, and the following question, was asked to check the answers to the questionnaire responses about the occurrence and the types of research activities occurring in the researched organisations. The Quality Vision Model anticipated that research would be conducted in health services to improve products and services.

Table 24. Research conducted.

Response	S	1	2	3	4	5	6	7	8	HT	H%
No research	5	10	17	10	15	7	14	5	15	93	56.0
Quality projects only		10	2	8	1	9	1	6		37	22.3
Research	3	1	2	3	5	5	5	10	5	36	21.7
Total	8	21	21	21	21	21	20	21	20	166	100

The most common answer for both health services and suppliers was that no research had been completed in their department over the last two years. Three suppliers reported conducting research, but none reported having quality activity projects. The research reported by suppliers was as follows:

- Three suppliers reported using questionnaires to identify services and products that customers would like or could use.
- Three suppliers used questionnaires to evaluate customer satisfaction with services and products provided and ways that these could be improved.
- If a tender for purchasing their products was not successful two suppliers researched why they were unsuccessful and ways to be successful the next time.

Table 25. Research activity type.

Response	1	2	3	4	5	6	7	8	HT
Research in health service by an outside organisation	1	1	2	5		4	1	2	16
Research by health care staff		1	1	6	5	16	10	8	47
Quality activity projects	17		70	1	9		3+	4	104+

In health services research was generally related to improving customer care. Respondents reported hospital three as being the most focused on conducting quality activity projects. Hospital four had the most research conducted by outside organisations. Hospital six was the most focused on staff conducting their own research. Hospitals four and eight had their own research centre.

Health service seven reported three quality activity projects but respondents also stated that numerous audits, customer satisfaction surveys and evaluation of services and staff work practices were performed as part of quality activities. Examples of respondents' answers about the research and quality activity projects conducted in their organisation are included in Appendix H.

Some service improvements were identified through research and quality activity projects. The following interview questions asked for additional ways that opportunities for improvements were identified, implemented and evaluated.

4.3.9 How are areas for service improvements identified?

Table 26. Improvements identified.

Response	S	1	2	3	4	5	6	7	8	HT	H%
By staff	4	7	4	8	3	9	13	7	4	55	18.3
Quality activities		9	2	3	6	4	5	12	9	50	16.5
By observation		8	9	6	5	6	2	7	4	47	15.5
By customers	4	7	6	9	1	8	5	2	2	40	13.3
Through discussion		2	4	4	2	3		1	4	20	6.6
By management		5	2	1	1	3	3	1	2	18	6.0
Through meetings	2	2	2	3	2	3		1	3	16	5.3
Verbal reports		1	1	3	3		2	1	1	12	4.0
Through complaints			1		3	1	5	1		11	3.7
Don't know			2		1	3	1		1	8	2.7
Through evaluation	1			1	1			1	2	5	1.7
By examining & analysing data					1		3		1	5	1.7
Through reading research based literature	1	1	1	1	1					4	1.3
Through peer review					1			1	1	3	1.0
By reviewing workplace practices				1						1	0.3
By attending information handovers					1					1	0.3
By Members of Parliament					1					1	0.3
Budget analysis				1						1	0.3
By cost						1				1	0.3
By research									1	1	0.3
Through consultants								1		1	0.3
Through education								1		1	0.3
Through networking with peers								1		1	0.3
Use initiative	1										
Total	13	42	34	41	33	41	39	37	35	303	100

For suppliers areas for service improvements were most likely to be identified by staff and customers. For health services the top answer for the identification of service improvements was by staff, followed by quality activities, observation and then by customers.

4.3.10 How are service improvements implemented?

Table 27. Improvements implemented.

Response	S	1	2	3	4	5	6	7	8	HT	H%
Through discussion with staff	1	5	8		3	7	5	7	4	39	17.4
Through meetings		6	2	7	2	5	1	5	4	32	14.0
Through a planned program	2	6	2	4	2	3	7	2	4	30	13.2
Just do it	2	3	2	5	5	4	3	1	4	27	11.8
Through the Department Head		3	4	1	4	1	4		4	21	9.3
Through trialing	2	1	3	1	2	3	3	1		14	6.1
Don't know			3		1	1	1	2	3	11	4.9
Through the General Manager	2	2		2	1	4	1			10	4.5
Through education		1		1	4	1	1	1		9	3.9
Through changes to work processes		2			1	1	1	2	1	8	3.5
Through staff work			1				1	1	2	5	2.2
Through Central Office Policies & Directives								3	1	4	1.8
With difficulty		1		1	2					4	1.8
By employing more staff					3					3	1.3
Outsourcing to experts					1			1		2	0.9
Through working with the community			2							2	0.9
Through quality activities									2	2	0.9
Through the Health Service Board				1						1	0.4
They are not								1		1	0.4
By spending money on what is needed	1										
Memo instructions	1										
Use initiative	1										
Total	12	30	27	24	31	30	28	27	30	225	100

For health service staff the most common way that improvements were implemented was through discussion with staff, followed by meetings, a planned program and just implementing the improvements. Suppliers answers did not highlight any particular way that improvements were commonly implemented.

4.3.11 How is the achievement of improvements evaluated?

Table 28. Improvements evaluated.

Response	S	1	2	3	4	5	6	7	8	HT	H%
Verbal feedback		4	12	9	5	8	8	2	2	50	21.6
Quality activities (+ surveys)	3	8	2	11	4	4	3	6	8	46	19.9
Observation		6	4	5	6	6	2	6	4	39	16.8
Don't know			1			3	1	4	2	11	4.7
Through an evaluation tool				1	4	1	2	1	2	11	4.7
Service requirements met		2	3		1			1	3	10	4.3
Increased customer satisfaction		2	2		2		2	1	1	10	4.3
Written feedback		2			2		3			7	3.0
Reassess later		1		1	1		1	3		7	3.0
Decrease in cost					1	3	1	1		6	2.6
No evaluation		1	1	1	2				1	6	2.6
Meetings	2		1	1	2				1	5	2.2
Ask staff		1	1		1	1	1			5	2.2
Increased staff satisfaction			2				1	1	1	5	2.2
Lack of recurring problems		1					2		2	5	2.2
Through staff performance appraisal							2	1		3	1.3
No evaluation							1	1		2	0.9
Less staff required					1		1			2	0.9
Legal requirements met							1			1	0.4
Increase in customer numbers	2										
Increase in sales	2										
Provide all customers with a complaint/ problem sheet to record any product/service difficulties experienced	1										
Total	9	26	27	29	26	26	32	28	27	231	100

Once expected achievements had been implemented these practices then needed to be evaluated for effectiveness. For health services the most common method of evaluation for service improvements was verbal feedback, followed by quality activities including surveys and observation. As well as using customer surveys to evaluate the achievement of improvements suppliers also used service expansion as a confirmation that the strategies used were successful.

4.3.12 How do management demonstrate their care for the health, safety and welfare of employees?

In the Quality Vision Model a role of management was to "promote care, consideration, health and safety of employees." The interview question regarding how management demonstrated their care for employee health, safety and welfare was asked to allow for a diversity of information to be provided by research study participants to identify the ways that management achieved this.

All health services reported having an occupational safety and health committee, occupational safety and health representatives and encouraging management involvement in occupational safety and health.

Only health services two and five encouraged staff involvement in risk assessment. All other health services' employees reported being reactive to occupational safety and health matters rather than proactive. State government occupational safety and health legislation required proactive occupational health and safety management. Health service two had the most ways identified by respondents for providing occupational safety and health.

Table 29 Safety and Health.

Response	1	2	3	4	5	6	7	8	T	%
Have occupational safety & health committee meetings	4	4	11	5	3	6	6	8	47	12.0
Education	7		8	4	6	4	7	8	44	11.3
Have Safety & Health Reps.	6	5	8	3	1	6	5	6	40	10.3
Encourage management involvement in health & safety	5	4	4	5	2	3	3	2	28	7.2
Communicate		6	2	3	1	3	5		20	5.1
Maintain premises & equipment	2	2	1	3	7	4			19	4.9
They don't	2		2	2		5	1	4	16	4.1
Provide staff with what they need	2	4	1	1	3	2	2		15	3.8
Have safety audits	1	3	4	2		1		3	14	3.5
Meet legal requirements				2	1	2	4	1	10	2.6
Encourage staff involvement in risk assessment		5			5				10	2.6
Have safe equipment	1	2			3	2		2	10	2.5
Responsive to requests	1	3	1	2		1	1		9	2.3
Encourage staff to help each other	1	2		2	2		2		9	2.3
Provision of protective clothing			3		1	1	1	1	7	1.8
Implement appropriate action		3				1	2		6	1.5
Don't know		5			1				6	1.5
Spend money	2			1	1		1		5	1.3
Have an occupational safety & health manual				2	2			1	5	1.3
Allocate employees time to dealt with health and safety issues		2	2	1					5	1.3
Provide rehabilitation to injured employees			2	1				2	5	1.2
Have safety & health written into workplace procedures	1	2	1						4	1.0
Investigate issues	1	1	1		1				4	1.0
Rectify hazards					1	2	1		4	1.0
Encourage hazard reporting		2				1		1	4	1.0
Have safety & health written into workplace policies			1	1	1				3	0.7
Praise desired behaviour			1	1				1	3	0.8
Investigate accidents				1			1	1	3	0.8

Use Material Safety Data Sheets	1						1	1	3	0.8
Having a Safety & Health Co-ordinator		2						1	3	0.8
Open door policy				1	2				3	0.8
Provide workers' compensation to injured employees				1			1		2	0.5
Contract out occupational safety & health services			2						2	0.5
Display standards				2					2	0.5
Have safety signs				2					2	0.5
Have planned preventative maintenance				1	1				2	0.5
Provide security				1		1			2	0.5
By reading about safety & health in literature & implementing appropriate actions		2							2	0.5
Encouraging employee involvement in safety & health		2							2	0.5
Provide enough staff for the work to be done safely		2							2	0.5
Listen to complaints						1		1	2	0.5
Only take action after an accident					1				1	0.3
Provide safety & health information				1					1	0.3
Make people feel welcome			1						1	0.2
Encouraging community involvement in safety & health		1							1	0.2
Provide supervision & performance appraisal								1	1	0.2
Provide appropriate first aid								1	1	0.2
Have an Employee Assistance Program							1		1	0.2
Provide social activities							1		1	0.2
Total	46	64	46	51	46	46	46	46	391	100

4.3.13 Do you have a long term contract with the hospital?

This and the following interview question to suppliers were included to check and add to the information supplied by the health service research study participants about the role of goods and service suppliers in health service quality activities. These questions

allowed the suppliers to state their points of view to assist with the quality management model evaluation and to provide additional information to answer the research study questions.

Suppliers to hospitals two, five and six answered yes to the question "Do you have a long term contract with the hospital?" The supplier to hospital two had been a supplier for 20 years. The supplier to hospital five had been a supplier for six years, while the supplier to hospital six had been a supplier for two years. The suppliers interviewed for hospitals one, three, four, seven and eight did not have a contract with the hospital for the supply of their goods and/or services. The suppliers interviewed for these health services said that they were just contacted if their product or service was required.

4.3.14 Suppliers involvement in quality activities.

Does the hospital involve you in its quality activities program?

Suppliers to hospitals one, three, four, seven and eight said "no". Suppliers to hospitals two, five and six said "yes". The supplier to hospital two provided information and advice on the company's products use. This goods supplier also made suggestions on what the hospital could include in its quality activities audits and suggestions on how to improve documentation of service given. Regular replenishing of stock was provided to ensure that the hospital always had sufficient supplies of the company products. The supplier to hospital five reported providing in service education to hospital staff to educate them on the most effective and efficient ways to use the company products.

The supplier interviewed at hospital six said that a material safety data sheet was supplied for all products sold to the hospital. Education was provided to staff on the correct way to use the products bought. Regular servicing was provided for supplies to ensure that the hospital always had sufficient supplies. The supplier encouraged hospital employees to trial new products and evaluate them before purchase so that the

best product for the task was chosen. Appendix I contains further information on each health service's supplier customer relationship.

4.4 Organisational records.

As part of the data gathering for this research study organisational records were examined to verify the results of anticipated Quality Vision Model outcomes and to confirm the information provided by the research study participants. A limitation of this method of data gathering was that not all health services kept record of the required information so sometimes either verbal reports only, or no information, was obtained in relation to the requested records.

To assist with answering part of the second research study question ["Which quality practices produce the highest level of care according to clinical indicator results?"] organisational clinical indicator results were examined.

4.4.1 Clinical Indicator results.

The information on clinical indicator results was requested from each research study health service as a way of having an objective measure of the outcome of patients' health service care. Clinical indicators are standard measurements that allow the comparison of the success of health care to be evaluated across all Australian hospitals that keep clinical indicator records.

The five key Clinical Indicator results kept by Western Australian Hospitals were as follows.

1. Percent of unplanned re-admission to hospital of patients within 28 days of discharge. Threshold for 50-99 beds hospital = 2.60-3.80%. Australian Hospitals' Average = 2.17%.

2. Unplanned return to operating room during the same admission. Threshold for 50-99 beds hospital = 0.20-0.40%. Australian Hospitals' Average = 0.60%
3. Wound infection on or after the fifth day post operatively following clean surgery. Threshold for 50-99 beds hospital = 1.40-2.60%. Australian Hospitals' Average = 1.42%
4. Wound infection on or after the fifth day post operatively following contaminated surgery. Threshold for 50-99 beds hospital = 1.40-3.8%. Australian Hospitals' Average = 2.45%
5. Patients developing hospital acquired bacteraemia. Threshold for 50-99 beds hospital = 0.0-0.30%. Australian Hospitals' Average = 0.34%

Table 30. Patient Clinical Indicator Results.

Ind.	H1	H2*	H3	H4	H5	H6	H7	H8
1	0	0	?	?	0.45	?	0.74	0.67
2	0	0	?	?	0.38	?	0.17	0.64
3	0	0	?	?	2.50	?	0.64	0.50
4	0	0	?	?	0	?	1.60	2.00
5	0	0	?	?	0	?	0	0

*Hospital two's results were a verbal report as the written report was kept at the Regional Health Centre and was not available to the researcher upon request. All other clinical indicator reports in the above table were written records. Not all hospitals had clinical indicator data available.

Hospitals three, four and six did not keep clinical indicator results. From the information that was available clinical indicator results identified that hospitals one and two had a perfect record while the results showed that hospitals five, seven and eight provided a high standard of patient clinical care. Hospitals one, two, five and seven

were the top four health services based on the average agreement score for the research study questionnaire.

To assist with answering the third research question ["What are the economic and organisational benefits of having effective quality processes in place?"] and in evaluating the Quality Vision Model the following records were examined:

- Patient numbers, length of stay and service costs.
- Waste management.
- Occupational health, safety and compensation records.
- Employee sick leave statistics.
- Employee length of service.
- Staff education provided by each health service.
- Publications.

4.4.2 Patient numbers, length of stay and service costs.

This information was obtained to evaluate if an increase in the number of customers, and if resources managed effectively with minimum wastage, were desired health service business outcomes. This information is reported in the following two tables and in Appendix J.

Table 31. Patient numbers.

	In patients		Out patients		Waiting list
	1993/4	1994/5	1993/4	1994/5	
H1	?	?	?	?	No
H2	279 (2705days)	242 (2314days)	1.413	1.786	No
H3	4.540	5.177	8.956	8.387	Ante Natal classes. Physiotherapy.
H4	7.245	7.645	56.935	56.961	Yes
H5	5.858	5.502	372	394	No
H6	7.500	7.519	Out pts.31.582 A&E.24.254 Home care etc. 26.964	Out pts. 29.059 A&E. 23.926 Home care etc. 31.100	No
H7	7.698	7.923	Out pts.48.320 Home care 6.432	Out pts. 50.672 Home care 6.666	No
H8	5.484	6.053	32.145	38.319	Yes.832 urgent cases had to wait longer than 30 days for admission. 1.102 on waiting list.

Table 32. Average length of stay (in days) & service costs.

	Length of stay		Service costs	
	1993/4	1994/5	1993/4	1994/5
H1	?	?	?	?
H2	9.5	6.3	914.620	837.802
H3	?	?	Cost per in patient 1.460.44 Per out patient 22.73	Cost per in patient 1.384.27 Per out patient 26.24
H4	4.36	4.23	Cost per patient 2.004.33	Cost per patient 1.986.55
H5	?	Surgical 2.5 Medical 5.0	7.769.864	8.431.002
H6	?	3.5	15.549.284 Cost per in patient = 1.784	16.005.948 Per in patient = 1.725
H7	?	?	?	?
H8	?	3.12	16.333.011	16,292.895

Information on patient numbers and service costs were not made available by all health services. For example, Hospital one did not have this information available for the researcher, but employees stated that the hospital was very profitable. When the Western Australian Health Department was considering selling Hospital four in the year following the collection of this research information, the owners of Hospital one put in a tender to buy Hospital four. Research study hospital finance managers stated that the cost of service was more influenced by the type of patients cared for and their medical or surgical treatment than by the cost effectiveness of employees' work practices.

4.4.3 Waste management.

Information on the management of waste was requested from each health service to evaluate how cost effective each hospital was in its waste management. This helped to provide information to evaluate the effectiveness of the expected Quality Vision Model out come of resources managed effectively.

All hospitals were kept clean with no rubbish visible in inappropriate places. Rubbish bins at each health service were emptied at least daily. All health services paid their local authority for the organisation's waste removal and disposal. Some organisations minimised their waste removal costs by recycling some of the organisation's rubbish. Hospitals one, two and five did not have a recycling and selling of waste program.

Hospitals three, six and eight collected waste paper and sold this to Aust Tissues. No other waste was recycled at these three health services. Hospital four recycled as much waste as possible and sold 17 tons of rubbish annually. As well as providing a profit from selling recyclable materials this reduced rubbish disposal costs.

Hospital seven employees were leaders in recycling and innovative waste management practices. An employee of this hospital was the President of HEAL (Hospital

Environmental Awareness Link). Through this organisation employees of Hospital seven went to other health services and taught employees at other health services innovative and cost-effective waste minimisation and recycling practices. Internationally attended seminars were also organised through the HEAL group at least annually for staff from this hospital to share their waste management ideas and educated employees from other health services about recycling and profitable waste management practices. This also assisted employees in Hospital seven to keep up to date with international best practices in waste management.

See Appendix K for more information on each hospital's waste management practices. Health service records were also examined to identify effective occupational health, safety and workers' compensation practices.

4.4.4 Occupational health, safety and workers' compensation.

An expected outcome of the Quality Vision Model was minimal occupational injuries and sick leave. To evaluate if this was an outcome of effective quality management practices information was requested from each of the eight hospitals' management employees on the health service employees' amount of sick leave taken, the occupational injury occurrences and costs. Information obtained is displayed in the following table.

Table 33. Injuries and absenteeism.

	Rate	H1		H2		H3	
		Y1	Y2	Y1	Y2	Y1	Y2
1	Number of work days lost due to injuries	?	?	0	7	?	?
2	Injury frequency rate per million hours worked	22	45	?	?	190	189
3	Incident rate	2.8	5.7	0	?	1.57	?
4	Cost per \$100 of wage roll	35c	33c	0	?	?	\$1.66
5	% Rehabilitation success rate	100	100	*	*	?	100
6	% sick leave for total hours worked	3.8	2.8	?	?	?	2.8

	H4		H5		H6		H7		H8	
	Y1	Y2	Y1	Y2	Y1	Y2	Y1	Y2	Y1	Y2
1	2728	813	?	?	341	141	?	?	?	422
2	42.02	28.6 9	24.60	49.27	?	40.62	28.67	38.87	55.11	38.32
3	15	10	3.4	7	?	6.55	5.67	7.87	10.14	7.54
4	\$1.23	\$4.3 4	71c	\$1.04	?	?	?	?	?	?
5	?	21.4	100	*	?	*	?	?	?	?
6	?	?	2.8	2.4	?	2.74	?	?	2.24	2.88

Y = year. ? = Unknown. * = No rehabilitation required.

The information obtained from organisational records and employee verbal reports for the years 1993/4 and 1994/5 showed that hospital two had the lowest injury and sick leave costs. See Appendix I for more details of each health service's occupational health and safety management practices and employee sick leave details. This information was obtained from organisational records, observations and employees verbal reports. Another record examined was employees' average length of service.

4.4.5 Employee length of service.

Information about employee length of service was requested as it was anticipated that this would be a measure of job satisfaction that was an expected outcome of effective quality management practices. Information on employee length of service was not kept by Hospital one.

For Hospital two this information was kept at the Regional Health Care Center. The regional center staff refused to provide this information to the researcher. The Director of Nursing verbally reported that people who lived in the town and worked at the hospital tended to have long lengths of service, but it was difficult to staff the hospital with qualified registered nurses as there were not enough living in the town. For Hospital three it was also reported by employees that most lived in the health service district.

For hospitals with a written record of employees' average length of service Hospital three employees had the longest average length of service (10 years) followed by Hospital seven (7.5 years). Hospital four (7 years). Hospital six (6.4 years) and Hospital five (3.5 years [1993/4]. 4.15 years [1994/5]). For Hospital eight information on length of service was not available but turnover for staff employed in 1994/95 was 12%.

Discussions with employees revealed that length of service related more to employment opportunities in the district than to job satisfaction and commitment.

4.4.6 Staff education.

Information was requested about health service employee educational opportunities to provide data to identify how aspects of education reported by questionnaire respondents were implemented in each organisation. The information assisted with evaluating the role of management provided education in the Quality Vision Model and if employees were educated and trained in work related tasks.

All hospitals had orientation lectures for new employees, lectures on work practices and employee occupational safety and health responsibilities and practices. Hospitals one, four, five and seven also provided employee education on quality management skills. Hospitals one, five and seven were the top three hospitals in the average agreement score for the research study questionnaire answers.

Hospitals one, three, four, five, six and eight conducted formal employee training needs assessments. Hospitals one, two, five and seven provided education on employee requested work-related topics. In Hospitals two, five and seven employees, who were not the Staff Development Co-ordinator, also presented educational sessions to provide work practice improvement information to their peers while in the remaining hospitals the lectures were all presented by the Staff development Co-ordinator.

Hospitals two and seven invited consultants into their organisation to provide work related educational sessions to their employees. Hospitals two and six paid for their employees to attend outside educational opportunities, including time and payment to attend conferences and seminars, on work related topics. Employees at Hospital three were encouraged to attend educational conferences and to share the knowledge that they gained with other employees at their health service.

Hospital two was the only health service where employees reported using books and journals to keep up to date with the latest knowledge for their area of work. This information was discussed by employees, trialed, evaluated and implemented as appropriate. This was the only hospital in the study with 100% patient satisfaction with care.

In addition to providing education to their employees Hospitals one, six, seven and eight also provided community health care education. See Appendix M for more details of each health service's education practices. All study hospitals also had publications that were used to provide educational information to employees and other people.

4.4.7 Publications.

To assess if there was good organisational communication in written form health service publications were viewed. This allowed the researcher to evaluate one of the ways that management and other employees used for the communication of organisational information. One anticipated outcome of effective quality activity practices in the Quality Vision Model was good organisation wide communication.

All hospitals had written Policy and Procedure Manuals to guide employees work related actions. In addition to this information Hospitals one, two, three, five and seven also had easily available to staff job descriptions and duty statements. The remaining research study hospitals did not. Hospitals one, two, three, five and seven were the top five hospitals in the average agreement score for the research study questionnaire answers.

The two private hospitals both had glossy promotional leaflets or booklets to entice people to come to their hospital for health care. None of the public hospitals marketed their health service through written publications.

Hospitals three, four, six and seven had a Customer Service Charter that was displayed in the hospital. Hospitals one, two, three, four, five and six had patient information booklets that were given to in patients when they were first admitted to hospital for care. Hospitals two, three, seven and eight had health promotion leaflets that were kept on display stands and available for patients, staff and visitors to take.

Hospitals three, four, five, six, seven and eight had a health service newsletter to keep employees and other people informed about what had, or was, happening in the health service. See Appendix N for more details on each hospital's publications.

As well as examining organisational records the researcher also observed each study hospital's premises, work processes, people and quality activities.

4.5 Observations.

Observation of the work premises, work processes, people and quality practices was used to identify effective quality activities, their outcomes, to verify the information provided by research study participants in questionnaire and interview answers and to verify information obtained from organisational records.

4.5.1 Quality activities.

Information on health service quality activities was obtained to be able to answer the first research question "What quality management practices are used in health care organisations to improve the quality of patient care?"

Observation of quality management practices identified that all hospitals' management staff advocated continuous improvement of services. Employees in Hospitals four, six and eight also reported that despite management stating that they expected employees to improve work practices most of the employees did not have enough time to complete their required duties without working unpaid overtime, let alone take on more unpaid work to improve services. These three hospitals had the lowest average agreement score for the research questionnaire answers.

Hospitals one, three, seven and eight were accredited by the Australian Council on Healthcare Standards (ACHS). Hospitals seven and eight followed the ACHS guidelines and used these as the basis of their quality activities program. Hospitals one, four, five and six had all developed their own quality activities program to suit their own organisation's needs.

For Hospital one the quality activities program included the action steps of PLAN, DO, CHECK, ACT and DOCUMENT. This hospital also provided a trophy that was presented three-monthly to the person, or team, who had done the most to improve the

work that they performed for the health service. Hospital one was the only hospital in the study group to do this. They were also the only hospital to have a documented and implemented purchasing and maintenance plan as part of their quality of service improvement activities.

Hospital five had the following steps as its quality activities plan.

- Step (1) The team should define its role, its customers, suppliers and service delivery processes.
- Step (2) Identify problems associated with the processes, prioritise them and select those problems they wish to address.
- Step (3) Analyse root causes of the problem.
- Step (4) Generate possible solutions.
- Step (5) Select a solution and plan for the change.
- Step (6) Implement the solution and oversee performance through performance indicators and reporting mechanisms.
- Step (7) Evaluate and secure the gains.

These steps had been developed with the facilitation of the Australian Quality Council. Hospital five also had the slogan "**YOU make the difference**" and all employees were encouraged to work to as high a standard as possible. This hospital was also the only hospital to use prayer as a quality improvement strategy.

Hospital three had also engaged the assistance of the Australian Quality Council to assist employees to develop a matrix for their health service quality management. The matrix had the following headings for action.

- Leadership and commitment.
- Policy and planning.
- Information and analysis.
- Involvement of people.
- Customer focus.
- Quality process, products and services, and

- Organisational performance.

Hospitals four and six both advocated the use of Business Plans for driving each department's quality activities. For some departments this was effective and well used to provide a high standard of excellence, but in most areas employees were too busy with their daily work to bother with quality improvement activities. This method of quality management produced "pockets of excellence" rather than organisation wide excellence.

Inspections and audit results were used as part of quality management in hospitals one, two, five, six and seven. At Hospital two this was the only formal quality activity. Hospital two audit results were presented to the Hospital Board Members at their monthly meeting. If an audit did not produce a result of 100% compliance the Board Members resourced any needed improvements so that future audits had as high a compliance score as possible. Employees of Hospital two were well educated for their work practices and encouraged and financed to take all available opportunities to keep their knowledge up to date. The hospital premise was well maintained. All hospital equipment was the best and often the latest available. See Appendix O for more details of each health service's quality management practices.

4.5.2 Premises, work processes and people.

Premise.

Observation of each hospital's premises identified if management provided good physical work place conditions. This was considered a necessary management function in the Quality Vision Model.

Hospitals one, two, three, five and six appeared to have well maintained premises. Hospitals one, two and five were the only hospitals with a ***planned maintenance program***. Hospitals three and six had repairs made as required. Hospitals four, seven

and eight did not have enough money available for all of the health service necessary repairs.

Hospitals one, two, three, five, six and seven had *adequate equipment* for patient care. In hospital four there was adequate equipment in some areas but not for other areas. At Hospital eight there was insufficient money to upgrade equipment as this was needed. These observations were similar to the questionnaire respondents' answers about management supplying adequate equipment for employees to complete their work satisfactorily. Hospitals one and five only were like five star hotels with extra luxuries available to make patients' stay as pleasant as possible. These were the top two hospitals in the questionnaire answers' average agreement scores.

Apart from Hospital eight all hospitals had adequate storage *space* for patient care equipment. With the exception of some areas in Hospital four there was enough space in all hospitals for employees to work safely.

All hospitals had appropriate *signposting* for health and safety including sign posting of emergency exits and where dangerous goods were stored. Hospital two was the only hospital that had its emergency plans, for a wide range of disasters, clearly displayed on the hospital walls in places where patients, visitors and employees would see them on a daily basis.

In Hospitals three, four and eight there were potholes (that needed filling) in the roadways and paths of the hospital *grounds*. In the other hospitals the roads and pathways appeared safe. The grounds of Hospital six were grass, gravel or bitumen covered. Hospital four grounds had grassed areas with large bare patches and the remaining out door areas were covered in bitumen or native bush. Hospitals one, two, three, five, seven and eight had attractive, well-maintained, flower gardens in the hospital grounds.

Work processes.

Observation of the work processes of the employees was performed to add to the information provided by the employees in the research questionnaire answers about their work processes.

It was observed that *teamwork* was used by employees in Hospitals one, two, three, five and in some areas of Hospital seven. In the questionnaire answers it was noted that employees in Hospitals six and eight were the least likely to have responded that their hospital management employees were team orientated.

New employees were *buddied with experienced employees* in Hospitals one, two and three. Hospital two employees were the only ones to be seen to *prepare for future work* when their current work was completed. It was also noted that these employees were the most likely to answer on the questionnaire that they had enough time to do their job properly.

Job safety analysis had been performed and documented in the hospital work procedure manuals for employees in hospitals one, two, three and five. It was observed that employees in these four hospitals used the safest work practices.

Catering staff members in hospitals one, two and five personalised meals to all patients' preferences. The catering employees in the other hospitals did not have the time or the resources to do this. It was also observed that in these three hospitals employees had subsidised meals and often purchased hospital provided meals to eat in the staff room for their lunch or evening meal.

In Hospitals one and two catering staff also provided, free of charge, morning tea, afternoon tea and supper to hospital visitors as well as to the patients and staff. In

Hospital one this was done as a marketing strategy and visitors were heard to say that if ever they needed hospital care they would come to this hospital because the food was so good. The visitors also said that they would recommend the hospital to their friends and relatives for health care.

In Hospital two morning tea, afternoon tea and supper was supplied to visitors mainly because these people lived in the district and it was their financial support for the hospital that enabled it to have a well maintained premises and up to date health care equipment. These work processes enabled everyone who visited hospital one or two's premises to feel welcome and cared for.

People.

Observation of people was performed to add more information about the activities of management and other employees to that provided on the questionnaire answers and to identify if there were other people related factors that should be included in the Quality Vision Model. These observations assisted with providing additional information to be able to answer the research questions.

In the Quality Vision Model the expected role of management was documented. In each health service the **key person** was identified by observation, and by listening to what employees had to say about the leadership in their health service.

For Hospitals one, two and seven there were two key people. In Hospital one it was the Company Chairperson and the Director of Nursing. In Hospitals two and seven it was the Hospital Administrator and the Director of Nursing. For Hospitals three, four and six the key person was the General Manager. Hospital five was a Christian hospital and the Hospital Chaplain seemed to be the key person. Hospital eight was focused on meeting Health Department requirements and following government policies. There was no clear leader at this hospital.

In Hospitals one and two there was a philosophy of *caring* for everyone who entered the premises. This included management caring about other employees. In Hospital one, for their birthday, every employee received a birthday card and either flowers or a basket of goods as a birthday present from management. All employees were also given a ham each year as a Christmas present from management. In Hospital three the General Manager knew all employees by name and listened to their advice.

In Hospital five the Hospital Chaplain, General Manager and the Director of Nursing not only knew all employees by name, but these three people also visited all of the hospital wards every day and knew most of the patients by name. In Hospital five employees were provided with what ever they needed to work effectively.

Employees in Hospital five were given by management a card for their birthday, if they were away sick, for congratulations on success, marriage etc. Management were always willing to support and help employees if they had a crisis. The hospital had a fund for buying presents for employees if they were leaving or had a crisis. Employees were also given presents as a reward for work well done.

Prior to this research being conducted employees had just been given an 8% pay rise. Employees at Hospital five also had seven weeks annual leave (instead of the normal four weeks) and an accrued day off each month. In return employees in this hospital had signed a workplace agreement contract to provide as high a standard of patient care as possible. This health service had an excellent reputation in the community for employees' work practices.

In Hospital six the General Manager was new to the job. He was very enthusiastic about his work. Employees in this hospital varied from enjoying their work, to other employees feeling over worked, to some employees feeling that their jobs were

threatened by the Health Department planning to outsource their work to private industry so that they would be unemployed.

In Hospital seven staff in some areas reported that management staff members cared about them, but not in all areas. Some employees in Hospital seven felt threatened by the outsourcing being planned for services. This included employees in the catering, cleaning, gardening and orderly services.

In Hospital eight working within budgetary constraints took precedence over everything else. In Hospital four most employees stated that they had never met the General Manager to know if she cared about them or not, even though she had been working there for several years.

Employees in Hospital one were the only people to report ***setting their own work-related goals*** to be achieved each year. Employees in this health service were also very ***committed to their employer***. These employees reported working over time and extra shifts when needed. They also cut the number of hours per day that they worked, or the number of days per week that they worked, when needed so that no employee lost their job if the health service did not have enough customers. Employees of this hospital were the only ones to report doing this.

Hospital seven employees reported coming in during their days off to attend quality activity meetings. Hospital three employees also came in on their days off for staff development lectures and reported working unpaid over time to complete their health service work.

Employees in Hospital three, who felt that their jobs were being privatised by the Health Department, believed strongly that they provided better, more cost effective service than anyone else could offer. If their jobs were outsourced employees working

in this hospital planned to form their own company and tender to do the work that they were currently doing.

Employees, and the **community** that Hospital three served, had three years ago fought, and won the fight, through community members' lobbying, to stop the Health Department closing this hospital. Hospital three had a Hospital Board that had strong community representation on it. At the time of the research Board Members were examining a proposal to establish a trust fund for members of the local community to purchase shares for part ownership of hospital three.

Community members on Hospital two's Board had a strong input into the hospital quality activities and to resourcing any needed health service improvements through community raised funds.

Hospital four had community sponsorship of the hospital patient orientation book. Staff members of this hospital provided health promotion information to members of their local community. Some employees in Hospital seven were community orientated. For example, the Gardener provided disabled members of the local community with work experience to help them to be able to obtain employment in the gardening industry.

Employees of Hospital one were encouraged to be community orientated. Employees of this hospital collected any unneeded clothes and gave them to charity. Children from the local Primary School were invited to visit hospital one, (under the supervision of their class teacher) to learn how health care was provided. This helped children to understand about hospital care and for these children, and their friends and relatives, to choose this hospital when they required hospital admission for health care.

Employees of Hospital eight were also community orientated. They provided community health care education, conducted community health care research and bought locally made goods and services.

Apart from Hospital one all research study hospital had **voluntary workers** from the local community. In Hospitals eight, seven, six, four and three voluntary workers, usually called Hospital Axillary Workers, worked in the hospital kiosk selling food, drinks, craft items, etc to people who came on to the hospital premises. Any profits from the kiosk were then given to the hospital employees to purchase needed equipment or to make needed improvements to the hospital premises.

Community volunteers at Hospital eight also provided patient care assistance in therapy departments, arranged and changed the water daily for patients' flowers in the wards and transported patients as requested by employees.

For Hospitals two and three community groups such as the Lion and Lioness's Clubs, Rotary Club and other local groups raised money to give these hospitals' employees money to purchase needed healthcare equipment. At Hospital two local businesses also donated money to the hospital for service improvements to be made. Members of the local community were also encouraged to be hospital patient visitors and to perform voluntary work to assist the health care staff at the hospital.

For Hospital two the local community members had also had a big input into disaster management for the hospital. Hospital disaster plans had been organised by the local fire brigade who had trained not only the hospital employees in emergency management, but had also run mock disaster exercises that involve as many town members as possible in managing any predicted emergencies which could occur at the hospital. Mock disaster exercises involving the town's people were held at least

annually to ensure that town people remained familiar with the hospital premises and what they were required to do in the event of an emergency.

Hospital five was unique in the management of its volunteers. It was the only hospital in which voluntary workers were specifically educated in a seven-week course to be able to do their work. This course was taught by the Hospital Chaplain. It educated voluntary workers on how to listen well and how to be an effective voluntary hospital worker. Graduates of this course earned the title of "Friends of the Hospital". These volunteers were also trained in disaster management and able to organise and lead an effective evacuation from the hospital in the event of a disaster occurring.

Many of the voluntary workers at Hospital five were ex-employees who had retired and who enjoyed returning to their workplace. They performed a variety of tasks. These varied from managing the hospital employees' library and the patients' mobile library, to taking a trolley of food, drinks, toilet items, etc around to the patient areas each day so that purchases could be made without customers having to visit a shop, to helping patients and employees as requested by hospital staff members, to being patient visitors and listening for ways that they could help people.

See Appendix P for more details on the observations of each health service's premises, work processes and people. The following section contains a summary of the activities performed in each health service in relation to the research information collected.

4.6 Summary of each health service.

Throughout the results section information on health service activities has been presented to enable the comparison of a variety of factors to assess all eight research study hospitals to enable the evaluation of the Quality Vision Model and to provide information to be able to answer the research study questions. The following section

summarises the main points about each health service's quality management practices and outcomes to assist with answering the three research study questions.

4.6.1 Hospital 1

This health service's mission, *to provide good quality care in a home like environment*, was lived by management and other staff. Everyone who came on the premises, staff patients and visitors, was welcomed and treated as family.

The health service did not use strategic quality management but had a quality action plan that was followed to provide a quality patient care service. Surveys were used to identify where service could be improved. Audits were used to check the outcome of employees' work.

Management encouraged teamwork, staff responsibility for actions and trust in staff. One hundred percent of staff surveyed reported the following. Performing their job professionally. Using their knowledge and skills to improve work practices. Contributing to continual improvement of service through personal commitment. Having the information needed to perform their job in the most effective and efficient manner. Feeling comfortable asking for assistance from colleagues when it was needed. Observing that when there is a high workload everyone gets in and works as a team.

The hospital management was very proud of working in a hospital that was accredited by the Australian Council on Health Care Standards. The organisation also expected contractors who were employed by them to have accreditation and documented quality activities as they wanted the best service possible for their customers. As well as providing medical care the hospital treated patients to "5 star" hotel service with excellent facilities, food and service.

The health service had all the desired level four quality activity outputs. Hospital management provided a supportive learning environment in which staff members were given the autonomy to change work practices as needed to improve them. Staff members at this hospital had the highest score related to achieving the expected level four standards for quality activities for health services.

4.6.2 Hospital two

Staff at this hospital did not use strategic planning well. The hospital was not accredited by the Australian Council on Health Standards, or any other quality accreditation organisation. The hospital did not have a customer service charter.

Apart from audits there were minimal formal quality activities. The last quality meeting had been held 10 months prior to the research. The hospital had a written quality plan to satisfy the demands of the Regional Health Centre but the plan was not used by the hospital staff members.

What staff at this hospital did have was 100% patient satisfaction with care when evaluated in a State wide Patient Satisfaction with Care Survey conducted by the Health Department of Western Australia. Inspection and audit results documented high compliance with documented standards. Staff generally reported having enough time to do their work properly, taking their full meal and tea breaks, having adequate equipment for their work and well maintained premises.

Funds for premises improvements and equipment purchase had generally been raised by staff or the local community (hospital's customers). Community members had input into the running of the hospital through their work on the Hospital Board and as voluntary workers at the hospital. Hospital staff members worked in the community providing home health care and meals on wheels to appropriate people.

Experts, such as the local Fire Brigade Members and Safety Consultants, were involved in the organisation's occupational safety and health program. Staff employed at the hospital only had one occupational injury reported over the last 2 years. This result was confirmed by checking with the Health Department of Western Australia records. Staff members were considered customers as well as patients. A staff satisfaction survey, which included all employees, showed that staff members were 90% satisfied with work.

The organisation only had 2 regular meetings. One was a weekly staff hospital meeting to which all staff were invited. Staff members were encouraged to express their opinions on hospital management, clinical issues, safety issues, service improvements, etc. Suggestions made at these meetings were acted upon as appropriate. The other regular meeting was the monthly Hospital Board meeting where members of the community worked with hospital staff to review hospital activities and facilitate health care services. Recommendations from this committee were resourced and implemented.

Staff employed at this hospital conducted very little research. Instead staff read widely to keep up to date with the latest knowledge and trends in their area of work. It was noted that the machines to record patients' temperature, blood pressure and other health care equipment was the best currently available in Australian. Work practices in all areas were also up to date and of a high standard. Ninety one percent of staff reported going out of their way to apply newly gained knowledge through involvement in quality improvement activities. Ninety five percent of staff agreed that they contributed to continuous improvement in service through their personal commitment.

Observation showed that employees in this health service used good teamwork to complete work processes. There was a culture of caring for everyone who entered the premises, including all staff members. Employees, when their current work was

completed. were proactive in preparing for future health service work. There were clearly documented and used methods on how to perform work processes. regular evaluation of. and communication about work related activities.

In relation to the Quality Vision Model this hospital's results highlighted the importance of staff taking their meal breaks and having enough time. education and resources to complete their work safely. This had resulted in the desired outcomes of minimal employee occupational injuries. sick leave and absenteeism and the highest staff satisfaction with their pay of all health services researched.

Health service two had a very high level of community involvement in supplying needed resources to enable a high level of customer care to be given. Having community involvement in the health service. and having enough time and resources for work. had resulted in a high level of customer satisfaction (100%). This was a desired outcome of level four quality activities.

The health care service costs were less in the second researched year than the previous year. This result was partly due to the fact that patients' length of hospital stay was decreased and more patients were being cared for by health service staff at the patients' homes. With the exception of innovations produced. this health service had all the other desired outcomes for level four government hospitals' quality activities.

4.6.3 Hospital three

The Health Service General Manager was very supportive of staff. of being cost effective and of providing quality health service care which would be recognised as "Best Practice" internationally. To assist with achieving the last aim the Australian Organisation for Quality was facilitating the Quality Activity Committee Members to develop a Quality Matrix to guide the health service staffs' provision of top quality

health care. The organisation had also completed, or was currently completing, 70 quality projects over the period of twelve months prior to this research.

The organisational chart had the Minister for Health at the top, the Board of Management next, then the General Manager. All of these had a powerful influence on the health service. The General Manager facilitated the day to day running of the organisation. The Board of Management provided local community input and had set business management skills.

The Minister for Health, via the Health Department provided most of the funds and policies for the operation of the health service. Management staff at the health service reported that it was difficult to have a workable five-year strategic plan as the Health Department kept changing its ways of funding health services and Health Department management practices.

Three years prior to this research project the Health Department had decided to close this health service. Local community members did not accept the decision. Through lobbying and other method they forced the government to reconsider its decision. Instead of closing the health service, public opinion made the government keep this health service and expand its work.

Most staff members lived in the local communities and were involved in local community activities. Local community members, as well as being on the Health Service Board, were also members of the Hospital Axillary (who managed the hospital kiosk) and local service organisations who raised money to buy new equipment for the hospital and to improve its services. Many local community members had also enjoyed being provided with health care by this organisation's staff.

Staff at this health service seemed to enjoy their work. sometimes worked unpaid over time when the work load was high. and nursing staff reported coming in during their off duty times for staff development lectures. Employees were willing to work unpaid hours to achieve a high standard of customer service because they felt cared about by the General Manager and other staff

In many government health services. when there was talk of employees' jobs being contracted out. employees either looked for work elsewhere. stayed on to get a good redundancy pay out. or tried to get the most out of the organisation before they were told that they had to leave. In this organisation. employees who were threatened with loosing their jobs to contractors continued to be optimistic and to provide a high standard of service. These employees believed that no one could do their work better. or more cost effectively than they could. If their work was to be contracted out they planned to form their own company and apply for their own jobs. They did not want to work anywhere else.

In relation to the Quality Vision Model. this organisation had the desired level four outcome of customer satisfaction. As with hospital two (that also had a high level of customer satisfaction) it was noted that there was a high level of community involvement in maintaining continuing services at this health care centre. It also had the desired level four quality activity outcomes of delivering cost-effective services and of having employees who enjoyed working at this health service.

4.6.4 Hospital 4

This Health Service was considered as having Best Practice in Quality Activities by the Health Department because the Quality Activities Co-ordinator was aware of. and had implemented. the latest trends in Quality Activities. This was Strategic Quality Management.

The organisation had a well documented, and displayed, Strategic Plan, although only one person interviewed at this Health Service knew what the Organisation's Vision and Mission was. People throughout the organisation were becoming aware of the importance of providing quality service to external customers and were looking for ways to identify improvements that could be made to services. The Quality Activities Co-ordinator summed up the organisation as being in the quality awakening stage with pockets of excellence in facilities, services and research.

The development of Quality Improvement Teams and a Quality Activities Business Plan for each department was being facilitated by the Quality Activities Co-ordinator. At the time of the research some departments had already developed these while other departments had not yet made time for this work. Suppliers of services were not yet included in the organisation's quality improvement activities.

Staff were well aware that they were supposed to continuously improve services, but this health service had the lowest agreement score that staff had enough time to complete their work properly and that staff were able to change work practices when appropriate.

The Health Service promoted the involvement of its staff in community services, particularly health promotion. In turn the local community supported the organisation by supplying finances for a Health Service publication and donations of money to buy equipment, particularly for the Extended Care Department. Patient relatives were also encouraged to buy medical supplies for staff to use for patients in this department so that the best care could be provided to the clients as the hospital budget was insufficient to afford some medical supplies such as patient pressure area protection dressings.

In other areas, like maintenance, the need for improvements had been identified, but could not be implemented due to lack of available finance.

Unlike businesses that need to market their services to survive, this health service had the problem that it had more customers than it was funded for. The hospital management closed operating theatres at the times when its allocated funds were spent and refuse admission to non-urgent cases in the diagnostic groups whose allocated quota had been met.

The hospital had a waiting list for surgery but funding was not provided past the allocated quota for each diagnostic group. For example, the health service was funded for 300 total hip replacements per annum and they had performed 320. The hospital made a loss on the 20 extra hip replacements performed. Administration staff said that they tried hard to predict the number of cases of each disease or accident that the health service would have to provide health care for, but the population did not always get a disease or injury at a set rate each year.

Health Service patient numbers had increased, but the length of their stay, cost of their treatment and number of staff employed to provide their care had decreased. A staff opinion survey had identified that the Health Service personnel had higher levels of work fatigue and burnout than did compared public servants. For this Health Service it was noted that the cost per \$100 of wage roll for workers' compensation payments had increased by 360% over the last 12 months.

Many staff members in this organisation came to work because they needed to have an income to live. There was generally a culture of trying to survive, rather than employees caring for each other.

Top Management reported being the most over worked and stated that the cause was being delegated an increasing amount of work by the Health Department. The Health Department was decreasing the number of staff that it employed and expecting staff who had been made redundant to have their work now completed by other personnel employed in the Health Services. For example, at the time of the research the Health Commissioner axed 120 Health Department employee jobs. The number of Health Department staff had been slashed by 45% in the prior 18 months (Mc Kimmie, 1995, p.8). The amount of paper work that staff members were expected to complete for the Health Department had also increased.

This health service had a very strong level of strategic planning that was expected to facilitate the achievement of level four quality activities. A problem with the strategic planning was that it was all words that looked good on paper. Most of the staff members did not use the strategic plan to guide their daily work activities. Having a documented, clearly displayed strategic plan did not contribute substantially to achieving level four quality activities as many staff members did not have enough time or resources to follow the strategic plan.

There were pockets of excellence in which the expected level four quality inputs and outputs were achieved, but organisation wide, with the exception of strategic planning, few of the level four inputs and expected outcomes were achieved.

The biggest problem for this organisation was having an increase in the number of customers, without an increase in the resources provided. Outcomes of quality activities for this organisation was an inability to adapt to changes in government policy, a high level of occupationally related injuries and compensation payments and many employees not satisfied with their employment conditions.

4.6.5 Hospital 5

In this hospital quality was defined as "what the customer says it is." Customers were most commonly identified by research respondents as "everyone who comes on to the premises."

The organisational chart for the hospital had customers at the top. The next level below was the staff who provided direct services to the hospital's external customers. Below these staff were the management who supported them. The Board of Management was placed at the bottom of the hierarchy as it was the Board's role to provide support for all staff members who were the internal customers, and to the people at the top of the hierarchy who were the external customers. Adequate resources were supplied to staff to enable them to perform their work to a high standard.

Employees' actions were seen as the key to delivering quality service to each other and to the external customers. Staff members were well educated to enable them to provide a high standard of service. Suppliers of goods and services were included in the organisation's quality improvement program. Patients were involved in deciding what questions were to be included in their satisfaction with service questionnaire. The Australian Quality Council was used to provide outside ideas and training to facilitate the achievement of Best Practice in Health Care by organisational staff.

Staff members were taught that they were both the supplier of services and a customer of the organisation. Part of each staff member's workplace agreement for employment

was that the person would be committed to improving the quality of service and maintaining these improvements. This workplace agreement was reflected in the organisation's culture of continuous improvement that aimed to provide the highest standards of service possible.

This organisation did not have a documented vision, but, like health service one, it did have a mission and a culture of caring. In relation to the achievement of level four quality activities in this health service management provided the most supportive environment for employees. Caring for all customers, including staff, resulted in a high level of employee job satisfaction, external customer satisfaction and continual improvements in organisational activities.

4.6.6 Hospital 6

This organisation had "pockets of excellence" with some of the staff highly motivated to provide the best service possible to their customers. Excellence was particularly demonstrated by the quality and quantity of research conducted by some of the staff members employed by this organisation.

The most common definition of customers was "people living in the local community". In addition to hospital care this organisation provided many community health services and promoted good health care practices amongst residents of the district. Questionnaire and interview results indicated that management generally seemed more focused on providing local community members with service than in providing care for the staff employed by the hospital. In many areas staff complained that their workload had increased, while staff numbers available to perform the work had decreased. These staff reported feeling overloaded and at times "stressed out."

Frequent changes in Health Department requirements, and recent changes in management staff, had made it difficult for employees in some areas to be motivated

towards performing quality activities, particularly when they felt that there was a shortage of staff in their area to achieve daily customer service requirements.

Three areas in this health service had commenced using strategic planning for their service. These departments had each developed a Business Plan that included a vision, mission, goals and a description of the department's customers. Each business plan described how the objectives of the department were to be achieved, the date that these objectives would be achieved by and how their achievement would be evaluated. Having well documented business plans did not achieve the expected level four quality vision outcomes.

Staff generally said that although they had many good ideas for improving service to customers they did not have the time to implement their ideas. Results from this health service indicated that to have a high quality of service there must be enough work time allocated to provide it.

4.6.7 Hospital 7

Management had a customer focused leadership style. Both patients and staff were considered to be customers. Management employees were generally easily accessible to their customers and regularly consulted patients and staff about their requirements.

It was noted that only 19% of staff surveyed reported that they received sufficient financial reward for the work that they performed, and 28% recorded that they had enough time to do their job properly. With insufficient time available staff were expected to produce improvements in work practices, and many did. Research and quality activities were the main methods used to identify and evaluate improvement opportunities.

Staff at this health service considered it very important to have obtained three-year accreditation twice from the Australian Council on Health Care Standards. Documentation and quality activities were based on the accreditation requirements of the Australian Council on Health Care Standards. The Quality Activities Co-ordinator kept up to date with all the Australian Council on Health Care Standards information by attending their lectures and workshops. This information was then passed onto appropriate health service staff.

There was also an element of uncertainty and worry evident in health service staff who feared losing their employment position due to the cost cutting measures of the Health Department.

Employees at this health service provided researched based evidence that the Government's present method of funding health services was not a fair or effective method. Health Department funding for patient care did not take into account the fact that many of the customers of this health service were elderly, or were people with multiple medical problems and who had a low socio-economic status. These patients required longer periods of health care than did fit young people. For example, if a 90 year old man with circulatory disease and diabetes broke his femur he would require a longer stay in hospital than a fit 18 year old sportsman who had the same break in his femur.

Through the publication of research findings staff at this hospital were not only able to adapt to changes in government policy (which was a desired outcome of level four quality activities), but were able to work with other health services to change Government Policy that was not achieving the desired purpose.

The main barriers to staff members at this health service achieving more level four quality activity outcomes were lack of staff work time and the fact that employees who

did not have secure employment felt threatened with the loss of their job. These employees, rather than looking for and implementing ways to improve meeting customer and health service needs, were actively looking for a permanent employment position elsewhere.

4.6.8 Hospital 8

Employees working at this Health Care Service were caught in between a desire to provide excellent service, cuts in health care funding and an increase in the number of patients to be cared for.

Over the last financial year hospital beds in some areas had been closed as a cost cutting measure, even though the hospital had a waiting list of 1,102 people needing health care. During this period of time the health service had exceeded caring for the number of patients it had been funded to care for by 191 acute in patient cases, and 6,335 out patients.

Many staff found it difficult to complete their daily work, which, in many cases, had increased due to staff cuts or because of Health Department reorganisation of work. Due to the pressure of staff work the researcher had to visit this health service many times to try to obtain the research information needed. Not all information could be obtained and not all research subjects could be interviewed.

Respondents who felt over worked reported difficulty in attending educational sessions to keep up to date with work related knowledge, and having difficulty in finding time to identify ways to improve services. Some respondents knew that their position would soon be made redundant and were actively looking for new employment.

The organisational chart had the Minister for Health, then the Commissioner of Health at the top. It was generally these people's orders that were seen as controlling staff employment and the provision of customer services.

The Health Service was very much focused on meeting Australian Council on Health Care Standards accreditation guidelines and quality activities were seen as a key to identifying and evaluating improvements in customer services.

In relation to the quality vision model results from this hospital identified that it was important for employees to have enough resources, including time, to be able to complete their work to achieve a high standard of care.

Employees who did not feel cared about or who did not have security of employment could see no reason to aim to achieve a high standard of work for their present employer. The undesirable outcomes of increased sick leave, increased number of occupational injuries and increased number of days work lost due to occupational injuries were noted at this health service.

See Appendix Q for more details of each health service's profile, services provided, composition of the health service workforce, health service strategic planning documentation and organisational management structure. The following section describes the research findings from each of the eight health services in relation to the expected Quality Vision Model achievement.

4.7 Quality Vision Model Achievement

The model inputs enabled the first two research study questions to be answered. The research findings of the eight studied hospitals produced the following results in relation to the expected inputs for level four quality activities for health services.

4.7.1 Model Inputs.

Focus on meeting customer and potential customer requirements.

Management employees of all health services included in this research aimed to meet external customers' needs. The most successful organisations also cared about the staff members and aimed to meet their needs too. When employees were well cared about they were able to produce a higher level of external customer service.

Health service five had an organisational management structure with the Hospital Board at the bottom and external customers at the top. This produced a very supportive environment for all customers and excellence in service to external customers.

Having a Customer Service Charter, completing numerous quality activities and promoting continuous improvement were not as effective in producing 100% patient satisfaction as allowing staff enough time to do their job properly. Staff members who reported enough time to complete their work properly, and who were able to take their scheduled meal and tea breaks, were also more likely to report that they received sufficient financial reward for the work that they performed.

Vision and Mission statement.

Most respondents did not know their organisation's vision and / or mission statement unless they had been involved in its formation. Organisations with a vision statement, business plans and extensive strategic planning did not produce higher levels of profit or customer service. What did produce these outcomes were a mission and a culture of caring. This showed that employees were more affected by the actions of management

and their co-workers than the documented organisation vision and mission which was usually not known or used by employees to guide their actions at work.

The most successful hospitals included caring for everyone, not just patients, as the focus of their organisation's reason for existence. For the top hospital it was treating everyone, patients, staff, visitors and welcoming community members as family. For the second top hospital it was sharing God's love with everyone.

Management.

Research results identified that the most important management factors needed to produce level four quality activities were:

- Strong leadership in promoting care, consideration, health and safety of employees, customers and potential customers.
- Provision of adequate human and material resources and good workplace conditions.
- Being team orientated.
- Providing and facilitating employee education and training.
- Planning, setting and implementing standards, then providing clear methods on how to perform tasks.
- Regularly evaluating organisational activities, providing feedback to the relevant people and implementing follow up action as necessary, and
- Communicating effectively.

Health service one management demonstrated all of these qualities. Employees at this hospital in return had the highest self-reported standard of work practices. Particularly important in enabling management and employees to achieve level four quality activities was the use of good organisation wide communication so that everyone knew what to aim for, what had been achieved and had clear guidelines for their work practices.

Employees.

The most important factors in relation to employee work practices and the achievement of level four quality activities were identified as:

- Having a culture of caring for everyone who enters the employee's workplace.
- Being provided with enough time to complete work tasks.
- Team work.
- Being educated and trained in work related tasks.
- Being empowered to make cost effective changes needed to improve customer services.
- Being consulted and participating in the planning, implementation and evaluation of services and change.
- Having the security of continuing employment. and
- Communicating effectively.

Employees at health service one used these work practices to produce level four quality activity outcomes. Part of the culture of caring was identified as employees having security of continuing employment. Without this there was less motivation to produce level four quality activity outcomes.

Health service two results highlighted the need for employees to have enough time to complete work to a high standard. In most of the researched government health services employees were motivated to want to achieve continuous improvements in services but they were not provided with enough time or autonomy to do this.

Health services one and two had the most employee team work. Working as a team enabled more work, of a higher standard, to be performed by employees.

Suppliers.

Health Services two, five and six had suppliers involved in their quality activities. This was more effective in producing a high level of customer service than was having suppliers as partners in the organisation's vision achievement.

Research.

Hospital six had the most research projects conducted by health service staff. Hospital three had the most quality activity projects. These did not produce the greatest success in the achievement of level four quality activity outcomes. What was most effective was to publicise and use the research findings. Health service one did this.

Health service seven highlighted the importance of using research-based data to effectively demonstrate to the government that the health service funding policy was not working. Following the presentation of these research findings the government health service funding method was changed.

As well as Quality Vision Model inputs the research evaluated the outputs of successful health care quality management practices. This enable the third research question. "What are the economic and organisational benefits of having effective quality processes in place?" to be answered.

4.7.2 Outcomes.

Customer satisfaction.

Health service two had the highest level of external customer satisfaction for all government hospitals included in the research project. Employees in this health service reported having the highest agreement questionnaire answer score for having enough time to complete their work.

All employees interviewed at health service one said that customers were advocates of their department. Employees at this health service had the highest agreement score for answers to the whole questionnaire.

For the outcome of employee job satisfaction employees in health service five reported themselves as being the least likely to want to change their present place of employment. Many of Hospital five employees, when they retired, came back to the hospital to work as voluntary hospital workers. These employees also reported the highest level of management support.

More important than employee job satisfaction was employee commitment. Employees in Hospital one generally had the highest degree of commitment to their work, employer and to each other. This produced employees who gave a very high standard of care to external customers. It was cost effective for the employer because these employees willingly increased or decreased their work hours according to service requirements. It was beneficial to employees as everyone knew that they had continuing employment and were not having to deal with the threat of job loss.

External customer numbers.

In some hospitals there was an increase in the number of in-patients (hospitals 3, 4, 6, 7 and 8) and out-patients (hospitals 2, 4, 6, and 8). Hospitals 4 and 8 had waiting lists for patient admissions as they did not have enough operating theatres and beds to meet all the residents in their areas health care needs.

Patient numbers had no relationship to the quality of health care. There was a stronger relationship to the socio-economic status of people in the district with people from the

lower socio- economic districts requiring more health care and being less likely to be able to afford private hospital care.

For government hospitals an increase in the number of customers often produced an increase in staff members' stress levels. Increased stress occurred when hospital staff members were expected to care for more customers with no increase in the provision of resources. If government health services had too many customers areas of service had to be closed as the health service's annual budget allocation to care for a set diagnostic related group of customers was spent in less than the twelve months.

Closing services produced waiting lists of people who required the discontinued service. This often meant that instead of people receiving health care when their medical condition required it, increased disablement and medical complications occurred during the waiting period. These people were then more seriously ill, and took longer to recover, when admitted to hospital for the required health care. In the long term having waiting lists for health care increased community health care costs. This practice of withholding health care also decreased community members' work productivity if people were unable to work effectively due to ill-health while waiting for hospital admission.

Having an increase in the number of customers was only a desirable outcome for private hospitals as for these organisations an increase in the number of customers meant an increase in profits.

Government policies.

There were two government policies that affected the providers of health care. One was the government's policy on encouraging people to take out private health care insurance to cover the cost of their health care. At the time of the research all Australians were covered by government Medicare funding and as such could receive health care through

medical practitioners and hospitals bulk billing the government to pay for the required health care. Due to this government policy not all Australians paid for private health care insurance. Australians without private health care insurance could not always afford to pay to have their health care provided at a private hospital.

This resulted in a decrease in the pool of customers available for the private health care organisations to market services to. For the private hospitals included in the research service facilities and standards were aimed at being, and resourced by management to be, the best possible to attract people to become customers. Private hospitals also marketed their health care service to the general public to attract more customers. This was something that government health services did not do.

The other government policy related to health care affected state government hospitals. This government policy dictated how all health services would receive the finance to provide health care services. At the time of this research health service managers had to predict, based on the previous years figures, how many people they would need to provide health care for each disease and how many people would require each operation for the next 12 months.

Each government health service was then funded according to these predictions. Unfortunately people did not get illnesses and require a particular type of surgery in each district at a set rate during each 12 months. This meant that health services had money unspent to care for people with some types of medical conditions or requiring some types of operations, but not enough money to pay for other needed health care. This resulted in waiting lists for services from some of the government hospitals.

The government also paid each health service a standard amount for each person with a particular illness or who required a particular type of surgery. Unfortunately due to

other factors such as age, multiple medical conditions, socio-economic status, etc. not all patients recovered at the same rate or cost.

Health service seven was reported by questionnaire respondents as being the most able to adapt to changes in government policies. When government policies were considered unreasonable by the employees at this health service they involved similar health services' employees and conducted research related to the effectiveness of the health services' funding policy. The results of this research are recorded in Appendix H.

Results were used to provide documented research based evidence to the Health Department demonstrating that the government policy was not effective, or reasonable, and needed to be changed. Changes were made to Health Department funding policy following the provision of the research results.

Innovations produced.

Innovations in health care practices were not valued. What was appreciated more was continual improvement of services, work practices and management practices. All health services management employees included in the research had an aim of continuous improvement for their health service or department. Health service employees were more comfortable with frequent small changes rather than having to adapt to new innovations.

Communication.

Employees at health service one had the highest agreement scores for communication. This included management providing employees with clearly communicated work policies and procedures, the information that they needed to perform their work in the most effective and efficient manner, helpful feedback on their work performance, a

good communication climate, feedback on evaluation of organisational activities and publication of research results. This health service also had the highest agreement score for all questionnaire factors.

As well as communicating better management in the two private hospitals were reported by respondents to consult employees more when considering changes in the workplace than government hospital management employees did.

The lowest communication scores were at hospital six where management restructuring had recently occurred. This health service also had the lowest average percent agreement score for all questionnaire factors.

Resources managed effectively.

All health service employees appeared to work hard to deliver cost effective service, however employees at health service one reported the most cost effective use of resources. This was an outcome of effective quality management practices. At most government health services decreasing employee numbers was viewed by the Health Department as the way to decrease costs. Patients were allowed a shorter hospital stay to recover their health and consequently were more likely to use out patient and community nursing services.

Minimal employee occupational injuries, sick leave and absenteeism.

Hospital two had the lowest number of occupational injuries, sick leave and workers' compensation costs. Health service four had the highest number of occupational injuries and compensation costs. Sick leave statistics were not available from all health services, but were at a quite low level for organisations that this information was available from. Minimal employee occupational injuries, sick leave and absenteeism

was an outcome of management caring for staff members. Caring for people was a part of effective quality activity practices.

Learning environment.

Hospital one had the highest percent agreement score for providing a learning environment, management education and employee education. The next highest agreement scores for these factors were from hospital five and then hospital seven employees. The final average agreement scores for all questionnaire factors rated these three health services as the top three in the same order as their learning environment agreement scores.

Hospital six management were the least reported as providing a learning environment, had the lowest agreement percent score for management and employee education and the lowest overall agreement score for all questionnaire factors. Providing a learning environment was an important part of successful quality activities.

4.8 Summary of results.

At the commencement of this research it was expected that strategic quality management, with a documented vision aiming for excellence, and a mission statement that described the way that the vision statement was to be achieved, would provide guidance for the most effective health service quality activities. This did not prove so.

Instead these results identified that the most important factor in producing level four quality activities was caring for everyone who enters the premises and this included the staff working at the health service. Another important factor was to provide staff with enough time and other resources to be able to complete work to a high standard to provide the best outcomes in health care. The following section answers the three research study questions and discusses the research results.

5 DISCUSSION

5.1 Introduction

This discussion centers on answering the research questions and in evaluating the research results against the theoretical quality vision model. This research aimed to contribute to the development of a better understanding of the quality management approaches used in Western Australian hospitals and the relationship of the results of these practices to the quality of patient care provided. Publication of findings from this research are expected to contribute to providing literature concerned with the identification of successful quality practices for hospital managers to use and the impact of such practices on hospital performance in terms of the standard of patient care provided and customer satisfaction with care.

The research study endeavoured to identify the aspects of quality activities that produced the highest level of patient care. According to Giraud & Jolly (1992) quality activities are important to Health Services. They stated that this was because while all industries may use quality activities for cost containment and marketing purposes. Health Services also use quality activities to ensure that health care practices are sound and do not cause unnecessary deterioration of a patient's medical condition.

5.2 Evaluation of quality activities used in health care.

This research addressed three research questions. The first of these questions was as follows.

5.2.1 Which quality activities produce the highest level of patient care according to clinical indicator results and patient satisfaction with care survey results?

A problem with answering this question was that not all health services included in this research study kept a record of clinical indicator results. See Table 30 for each hospital's clinical indicator results.

Of the hospitals that did keep clinical indicator results Hospital one had a score of 100%. Hospital one was the hospital with the top research study participants' questionnaire score. The only other hospital to have a score of 100% was Hospital two. This hospital was the only hospital included in this research study to have 100% patient satisfaction with health care on the State Government Patient Satisfaction with Health Care Survey. Hospital two's results indicated that the highest results for patient satisfaction with health care were obtained when employees had enough time to do their work properly. Having enough time to complete work to a high standard was an important part of health care quality activities. Both Hospitals one and two had a philosophy of caring for everyone who entered their health care premises. This was an important part of health care quality activity success as employees stated that when they were well cared for they were motivated to provide a high standard of care for their patients.

The answer to this question is further discussed under the following headings of *Clinical Indicator results* and *Patient satisfaction with care survey results*, with more details on the quality activities used in each health service included in the answer to question two.

5.2.1.1 Clinical Indicator results.

Scrivens (1995) and Giraud and Jolly (1992) reported that an important part of quality activities in health care was examining the outcome of patient care in hospitals. Clinical Indicator results obtained in this study demonstrated that all hospitals that kept this information had a very high standard of health care.

Clinical indicator one recorded all readmissions to hospital within 28 days. Respondents at hospital one said that many of their clients who were readmitted within 28 days of discharge were readmitted for surgery that was unrelated to the patients' first admission.

The second admission to the same hospital may have been because the health service was the only one in the district, or as a result of the person experiencing excellence in health care during the first admission. For this reason only patients who were readmitted for the same condition within 28 days of discharge from the hospital were included in the hospitals' report for their clinical indicator records.

Clinical indicator two was described as unfair by the respondents who described diagnostic related group funding as unfair. Employees in Hospital seven had conducted research to show that low socio-economic elderly patients with multiple medical conditions were the most likely to have an unplanned return to the operating room during the same admission. These research findings had been presented to the Health Department of Western Australia as many of Hospital seven's patients were elderly with multiple medical conditions and had a low socio-economic status.

The top four hospitals all had clinical indicator results available but clinical indicator results were not available from three of the hospitals and the reported results from hospital two were only verbal. Lack of available results from all health services made clinical indicators an unsatisfactory measure of comparison.

5.2.1.2 Patient satisfaction with care survey results.

Aune (1998). Wilkinson. Redman. Snape & Marchington (1998). Standards Australia / Standards New Zealand (1994a). Jonker & Klaver (1998). Evans (1997). Terziovski. Samson & Dow (1995). Gorst. Kanji & Wallace (1998). Martinez-Lorente. Dewhurst & Dale (1998). Brown & Van der Wiele (1995). Wong (1998). Laszlo (1998) and Jayaram. Handfield & Ghosh (1997) all described the importance of customer satisfaction for continuance of successful business activities. Customer satisfaction with health care was used as an outcome measure of successful quality activities for this research.

All hospitals conducted regular patient satisfaction with care surveys that returned results that indicated patients were generally very satisfied with their care. The Health Department of Western Australia annually conducted a state-wide patient satisfaction with care survey which allowed all state government hospitals to be compared from a patient's perspective. See AppendixC for the Western Australian government patient satisfaction with health care survey results for 1995 for the government hospitals included in this research study.

All research study hospitals scored 90% or above, but only one research study hospital, (Hospital two), had 100% patient satisfaction. Hospital six, the hospital with the lowest patient satisfaction score, also had the lowest research participants' agreement score (for the factors included in the questionnaire) of all the health services included in this research study.

Hospital two, (which was the only research study hospital with 100% patient satisfaction with health care), was different to all other hospitals included in this study in one significant factor, and that was time. This hospital had a 28% higher respondent agreement score to any other hospital to the statement that respondents had *enough time to do their job properly*.

Giraud and Jolly (1992) wrote that in health care an understanding of the importance of focusing on continually improving was well developed but the ability to improve was not always translated into actual improvements due to lack of time. This study had the same findings.

To patients the time that staff had to attend to their health care was important. When enough time was provided staff could admit a patient and obtain a comprehensive relevant medical history. This information could then be used to plan and implement a high standard of patient care.

From Hospital two's Questionnaire results (see Table 10) staff having enough time to do their job properly produced a high standard of care according to clinical indicator results (see Table 30). Documented work related audit results for Hospital two recorded a high standard of staff work (see Appendix O).

With enough time staff were able to provide health care education to patients and involve patients and their carers in planning the patient's discharge effectively. Once their treatment was stabilised this often enabled patients to be cared for at home, instead of in hospital. This was cost effective.

Staff in hospital two had a 72% agreement that they received sufficient financial reward for the work that they performed. The agreement score for this statement from the staff in other health services was between 53% (health service one) to 19% (health service seven). There was a strong correlation between staff having enough time to complete their work and being satisfied with their level of pay.

This again was cost effective as in other hospitals it was reported that "Nurses have imposed bed closures across the state and organised the cancellation of non-emergency elective surgery in Perth's major hospitals as part of a long running campaign for improved wages and conditions" (Reeves, 1998, p.5)

Management staff members in the hospital with "Best Practice" according to the Health Department were spending excessive hours on documentation. Having everything documented, including a strategic plan, did not always improve patient care. The need for excessive documentation required by the Health Department had only increased the hours that management staff worked and decreased the time available to perform other more effective management functions. In health care documentation requirements are continually increasing.

To cope with the increased need for documentation more and more administrative staff members were employed by the Health Department of Western Australia. Bower. (1998. p.28) reported that between 1995-96 and 1996-97 there was an increase of 516 administrative staff employed by the Health Department of Western Australia. Over the same period of time the Health Department of Western Australia eliminated 297 full time nursing positions and 205 full time medical practitioner positions despite the number of patients treated in public hospitals increasing by 20,000 for the year. Nurses are expected to do more and more tasks. "and all to the ever eternal cry *there is not enough time*" (Underwood. 1998. p.4).

Health care staff members reported continually being told to work smarter. With not enough staff to provide direct patient care, call bells were not always answered quickly. Patients who fell out of bed were reported as being left lying undetected for unspecified periods of time. Staff time to talk to patients to learn about their needs and educate them in relation to their health care was not often available.

The Nursing Times (1998) described a letter written by nurses which listed many errors made and a poor standard of patient care provided by nurses who said that they each had to care for between 20-30 high dependency patients during their 12 hour work shifts. Bower (1998. p.28) wrote that "Tired, frustrated, overworked nurses were more prone to mistakes and were forced to provide care that was inferior to what was offered 10 years ago."

Staff at hospital two had the highest agreement score (24% higher than any other health service included in the study) that they were able to take their full meal and tea breaks each shift. Grandjean (1988. p.207) when conducting research in manufacturing industries identified that employees' work production increased significantly after a ten to fifteen minute rest period because excessive fatigue was avoided by having an

interval of relaxation. Research study participants at Hospital two were most likely to report that they had enough time to complete their work properly. (See Table 10.)

Morning, afternoon tea and supper, as well as being provided to the patients and staff was also provided by the catering staff to all hospital visitors present in hospital two when the tea trolley was brought around. Members of the community were made to feel welcome at this hospital. Over the years many appreciative comments had been written in Hospital two's Visitors' Comment Book located in the hospital reception area.

As well as producing a high level of patient satisfaction hospital two had gained a very high level of town, farming and mining community financial support. The hospital had a well-maintained premise and the latest patient care equipment needed, most of which had been purchased through community financial donations. Equipment, such as patient beds, had a gold coloured plaque engraved with the donor's name fixed to donated equipment.

Through observation it was noted that work practices were more efficient in hospital two than in the other hospitals surveyed. More teamwork was used for patient care. Inexperienced staff members were buddied to work with experienced employees. As soon as their immediate tasks were completed employees at Hospital two were proactive in preparing for future work activities.

Hospitals one and five were privately owned and run hospitals not administered by the government Health Department so they were not included in the Health Department Patient Satisfaction with Health Care survey. However, the only hospital in which all staff interviewed stated "yes" to the question "Are customers advocates of your department?" was hospital one. Staff members at this hospital were the most likely to identify their customers, and potential customers, as everyone who enters the premises and to treat all with curtesy and consideration.

Hospital one had the highest agreement score for the questionnaire answers for:

- leadership style.
- management education.
- management communication.
- work practices (including the highest number of positive responses to delivering cost effective care with minimal wastage).
- employee personal feelings.
- employee control, employee education, employee support, and
- research.

Hospital one's success indicated that all the above factors were important for an organisation to obtain a high level of customer satisfaction. Staff members interview results indicated that not only were patients satisfied with care, but staff, visitors and everyone who came onto the premises was. Having everyone, including employees, cared for helped to increase patient satisfaction with care. The provision of care to employees, patients and everyone who entered the hospital premises was a successful quality management practice. The next research question for this study focused on identifying what quality management practices were used in health care organisations to improve the quality of customer care.

5.2.2 What quality management practices are used in health care organisations to improve the quality of customer care?

The surveyed organisations used a variety of approaches to improve the quality of customer care. All hospitals used inspections, surveys, audits, research, continuous improvement strategies and had a documented mission.

Other approaches used included the following. Accreditation (Hospitals 1, 3, 7, 8). Aim to achieve "Best Practice" (Hospitals 3, 4, 5). Customer surveys only (4 suppliers). Benchmarking (Hospital 5). Business Plans (Hospitals 4, 6). Consultants (At hospital 3

the Australian Quality Council was assisting staff to develop an action orientated quality matrix. At hospital 5 the Australian Quality Council was assisting staff to develop organisational quality activity strategies). Customer Council (Hospitals 7, 8). Customer focused groups (Hospital 3). Customer needs research (Hospitals 1, 3, 5, 7). Customer Service Charter (Hospitals 3, 4, 7). Customer service in-house education (Hospitals 1, 3, 4, 5). Plan, do, check, act, document management model (Hospital 1). Learning organisation (Hospital 1). Mission of caring (Hospital 1 staff treated everyone as family. Hospital 5 (staff shared God's love for all)). Positive performance indicators (Hospitals 4, 5). Prayer (Hospital 5). Quality activity meetings (Hospitals 1, 2, 3, 4, 5, 7, 8). Quality activity projects (Hospitals 1, 3, 4, 5, 7, 8). Quality improvement teams (Hospital 4). Strategic Planning (Hospitals 4, 6). Written quality plan (Hospitals 1, 2 [plan unused], 3, 4, 5, 7). See Appendix O for more details of each research study hospital's quality activities.

Most health services were in the "Improvement in design stage" described by Wacker and Sheu (1994), but instead of having just one method to provide a high standard of customer service all health services used a variety of methods. The effectiveness of the methods used for quality activities in Western Australian hospitals is discussed below.

Frost and Jones (1994), Burns (1994) and Conti (1994) reported that throughout Europe the main quality activity was *Accreditation*. This study identified that accreditation gave hospitals seven and eight a framework to base their quality activities around. On its own accreditation did not produce the highest standard of service, although all accredited hospital results combined had a 5% higher average agreement score than all non accredited hospitals. This was a smaller difference than the 18% difference between private and public hospitals' average questionnaire agreement score.

Brown and Van der Wiele (1995) when discussing the benefits to business that certification to the ISO 9000 quality standards provided had similar findings. They documented that:

Respondents reported that certification had not brought any significant improvements in productivity, costs, wastage rates, staff motivation and staff retention. Overall it had not helped an organisation's ability to stay in business. (Brown & Van der Wiele, 1995, p.12)

Of the top two hospitals (Hospitals one and five), according to questionnaire respondent's answers, one hospital was accredited while the other was not. However, these two hospitals were similar in the fact that they were the only two research study hospitals to have caring for everyone included in their mission statement. In hospital one, everyone who entered the premises was to be treated as family. Top Management lived by this philosophy. They met staff, patient and visitors needs. Staff lived by this philosophy and cared for each other as well as the patients and all visitors who entered the premises. There was also a strong involvement by employees in local community activities.

Staff caring for each other in hospital one produced cost effective work practices and ensured that no one lost their job. If there was an excessive workload employees worked extra hours to cope with it so that the organisation did not have to call in agency staff to do the work and patients received continuity of care from the staff who knew them well. If the organisation had a decrease in the number of patients employees worked less days or hours per week so that no one lost their job.

Gertz (1994) conducted a survey of 1,000 of the United States of America's largest companies. One of the findings of this survey was that an essential component for company success, and profitability, was providing good support for employees through the culture and structure of the organisation. This was provided to a high degree for staff in hospitals one, two and five.

Reporting on a two year study of quality activities in American hospitals Cohen (1994) wrote that the study identified that hospitals with a culture of collaboration, empowerment, risk taking, information sharing and a supportive environment were the most successful. Hospital one style of management best met this description. In Cohen's (1994) study hospitals emphasising hierarchy of management control and bureaucracy were the least successful. Most government hospitals included in this research study met this description.

In 1995 staff in hospital one had developed their own model of quality activities to improve service based on the plan, do, check, act, document management model. The model had been adapted to suit this organisation's customer needs as employees reported that there was no previously developed quality management model that met this health service's needs. As staff had been involved in the development of the model they had ownership of using it. All staff interviewed knew and used the model to improve customer care.

Hospital five had also reviewed a variety of quality activity models and used parts of many of the models to develop their own quality improvement strategies to meet their customers' needs as their employees also were unable to find a previously developed quality management model that met this health service's requirements. The focus of hospital five's model was "**YOU** make the difference".

Marshall (1994) reported that employees creatively building their own quality system to meet their own customers' needs was a more successful strategy than having quality inspected into the organisation by a third party, such as for accreditation or an award.

Other quality activity strategies used by hospital one included accreditation, audits, inspections and surveys, continuous improvement strategies, customer needs research.

quality activity meetings, quality activity projects, research, collection of clinical indicator data, written and used quality activities plan, and documented mission. What is often reported in literature is the effect of using only one model of quality activities in one or more organisations. This study has identified that many types of quality activities were used simultaneously in hospital one to produce a culture of providing quality care to everyone who entered the organisation's premises. The practice of using a variety of quality activities simultaneously was noted in all health care organisations included in the research.

Quality activities not used by hospital one, but used by other study hospitals included aim to achieve best practice, benchmarking, business plans, quality activity consultants, customer focussed groups, customer service charter, positive performance indicators, prayer, quality improvement teams, and strategic planning.

For the United States of America Costin (1994) described level four quality activities as being *strategic quality management* where quality was included in the organisation's strategic plan and linked with profitability. Only two of the study hospitals used strategic planning. This did not make these hospitals any more profitable, or produce a higher quality of care, than hospitals that did not use strategic planning.

Hospital one was in the *initiating design stage* described by Wacker and Sheu (1994). Hospitals one, two and five were able to respond to their customer requirements faster than the other health services because when funds were needed for improvements in services they were allocated. Having enough resources, including staff time to complete work properly, was proven to be very important in facilitating a high quality of service.

Hospitals one and five were the only two hospitals who met de Noray's (1994) level four quality activities stage, *quality anticipation*. To attract customers these two private

hospitals aimed always to continually exceed customers' expectations for service, food and facilities.

Lowik (1994) described how Unichema Chemie B V Company, which won the first Dutch Quality Award, had a focus on providing the best customer satisfaction that could be economically afforded. This Dutch company's aim was to make customers "addicts" who would not even consider buying the products produced by the company else where. The top management of both the private hospitals in this study had the same unwritten aim.

In Western Australia, particularly in the capital city, Perth, most medical practitioners had patient admitting rights to a number of private and government hospitals. If a patient had private health care insurance this covered the person's health care costs for their treatment in a private or in a government hospital. This was one of the reasons that private hospitals competed with government hospitals and each other to provide the "best" service. Private health services actively marketed to people who had health care insurance, or who could afford to pay for their health care costs, for these people to choose their hospital to be admitted for their required health care.

Kume (1994) and Nakhai and Neves (1994) reported that competing for quality awards was used by Japanese to improve the quality of their products and services. Burton (1994) reported the same findings for industries in the United Kingdom. No hospitals included in this research were involved in competing for quality awards.

King (1994) reported on the advantages and disadvantages of using consultants to improve an organisation's quality of work. Health services three and five both used a consultant service to help improve their quality activities. This was not as successful as the quality activities in health service one where the employees themselves devised their own quality activities to meet their customers' requirements.

Ingham (1994) reported on the success of Swedish companies who allocated time for their employees to conduct quality improvement projects. Completing the projects gave employees new skills, improved organisational profits and increased customer satisfaction. All hospitals reported using quality activity projects or research to continually improve their services.

Cohen (1994), when reporting on a study of quality activities in 61 United States of America hospitals, found that as hospitals developed success in improving the quality of care there was a change from just completing individual projects based on particular problems to "improving processes that are fundamental to providing care to a significant proportion of the hospital's patients" (p.94).

Hospital four had conducted organisation wide improvement identification surveys and changed work processes as a result. Hospital five had explored ways that team work and quality activities could be used to produce a cultural change so that all employees were more internal and external customer focused. Changes in work processes had resulted from this. In both cases work process changes had improved organisational quality of service and profitability, but it had not made them the most successful organisations.

Both service and /or goods suppliers and hospitals aimed to identify ways that service could be improved. For suppliers most improvements were identified by both staff (33%) and customers (33%). For the health care organisations most opportunities for improvements were identified by staff (18.3%), quality activities (16.5%), observation (15.5%) and the customers (13.3%). Research findings identified that hospital employees used a wider variety of ways to identify opportunities for improvements in services than the private industries' employees that they were compared with. See Table 26 for further details.

Suppliers top answers for implementing service improvements were:

- Through the general manager (16.6%).
- Through trialing (16.6%).
- Through a planned program (16.6%). and
- Just do it (16.6%).

Health care staffs' top answers were:

- Through discussion with staff (17.4%).
- Through meetings (14%).
- Through a planned program (13.2%) and
- Just do it (11.8%).

Health care staff members were more likely to be consulted about implementing improvements than the suppliers' staff members interviewed. All organisations' employees reported using a wide variety of strategies to implement improvements rather than just one method. See Table 27 for more details.

For evaluation of the achievement of improvements the top answer for suppliers' was quality activities including surveys (33%). Improvements were most commonly evaluated in hospitals through verbal feedback (21.6%), quality activities (19.9%) and observation (16.8%). See Table 28 for more details.

For both groups of employees quality activities were widely used to evaluate the achievement of improvements although a wide variety of other methods were used as well. For the identification, implementation and evaluation of service improvements no one method seemed to be used by all the organisations surveyed.

Saunders, Preston, Rice, O'Sullivan and Garrigan (1997, p.117) reported that their study identified that:

The relatively high scores assigned to 'Ability to improve' indicate that both supervisors and staff see that there are opportunities for improvements to be introduced. However this perception is at odds with the perception that there are limited improvements in the quality of service provided.

This research also produced a high score for management promoting improvements (78% agreement), for employees being aware that they could contribute to doing things better (82% agreement) and a low score for employees being able to change work practices when appropriate (42% agreement). In most of the studied government hospitals' employees were expected to continually improve their work practices, but were not given the authority or resources to do this. See results reported in Tables five and six.

Costin (1994) reported that in the United States of America responsibility for quality improvement was considered front line workers' duty. In Japan it was considered a management responsibility. In the top two hospitals in this study quality activities were everyone's responsibility. In the government hospitals front line workers were the most likely to be the people expected to implement quality improvement.

The last research question was asked to identify the benefits to health services of using effective quality activities.

5.2.3 What are the economic and organisational benefits of having effective quality processes in place?

This research study identified that effective quality activities produced the following economic and organisational benefits. A high standard of patient health care. Customer satisfaction. Able to adapt to changes in government policy. An increase in the number of customers for private hospitals only. Continual improvement in organisational

activities. Good organisation wide communication. Minimal employees occupational injuries and sick leave. Employee commitment to the organisation. Cost effective services delivered.

A summary of the main economic and organisational benefits in relation to the research results, and the reason for their importance, is described below. This is followed by a discussion of the benefits in relation to the expected research theory Quality Vision Model outcomes and the reason for a change in some of the expected outcomes.

5.2.3.1 Government hospitals.

Economic benefits.

In hospital two community members repaid staff for providing a high level of satisfaction with care by financing the purchase of most of the equipment used at the health service. For example, when health care staff identified that they needed another room for outpatient and emergency care at the hospital, a local mining company gave a donation of \$5,000 to the hospital to provide this facility. See Appendix P for further details.

A consistent number of customers were required by this health service to continue its operation. This was achieved. The hospital was able to care for all patients with no waiting list. Through having enough time and other resources to provide a high standard of patient care the average length of patients' stay in this hospital had decreased as more patients were able to be cared for as outpatients and by staff members and patients' relatives at home. See Table 31. This was a cost-effective method of care.

Hospital seven questionnaire respondents reported that their health service was most easily able to adapt to changes in government policies. See table 10 results. Employees

at this health service considered the government policy of health care funding unfair, so they conducted research and used the research findings to bring about a change in the way that the government funded health services that took into account the health service needs of the community. This enabled the employees at this health service to be better funded to be able to deliver a high standard of health care. This hospital also had 100% patient satisfaction with health care.

Organisational benefits.

Staff members in hospital two had the resources to provide a high level of service. This hospital had the best patient care equipment and the best maintained premises of all the government health services included in the research study. Hospital two also had the best occupational safety and health practices of the researched health services. See Table 33. This was achieved through the involvement of the community, the education of, and the commitment of staff members to providing a high standard of occupational safety and health. See Appendix L for details of Hospital two occupational safety and health practices. Having good health and safety practices resulted in minimal sick leave being taken by staff and a high level of staff productivity. Staff members of this hospital were also the most satisfied with their salary. See Table 10.

All research study hospitals, both public and private, aimed to have an outcome of continuous improvement as part of their quality activities. See Appendix O for further details. In health services where continuous improvement was an outcome of quality activities this produced a high standard of cost effective health care.

5.2.3.2 Private hospitals.

Economic benefits.

Staff in hospital one reported the most cost-effective use of resources. See questionnaire results in Table 9. For all factors related to employee organisational commitment Hospital one employees had the highest agreement score for the

questionnaire answers. See Table 10. These employees stated that they were willing to work extra work shifts, or to decrease the number of hour that they worked, if required.

This practice occurred in none of the other research study hospitals. It enabled employees to feel secure in the knowledge that they had continuity of employment. Hospital one employees stated that they worked hard to deliver the best health care service possible. These employee work practices enabled the organisation to only pay wages for the hours of work required. This was a cost-effective practice and helped to make the organisation profitable. See Appendix P for details of employees' commitment to their work.

Shortly after the research had been conducted the organisation owning hospital one had put a tender in to purchase hospital four which the State Government was selling as health service four had a large operating cost deficit and was costing too much for the government to continue to operate.

Organisational benefits.

Employees at Hospital one had the highest average agreement score to the questionnaire answers about effective organisational communication practices (see Table 8). Hospital one employees also had the highest questionnaire answer agreement scores that the communication climate in their hospital was usually good (see Table 13) and to agreement that research results were publicised within their organisation (see Table 15). This enabled employees in Hospital one to have clear directions on how to perform their work effectively and to be able to use the results of their health service research findings to produce a high quality of patient health care.

Having a high level of patient satisfaction with health care enabled Hospital one to attract customers, run profitably and to expand its services.

5.2.3.3 Quality Vision Model outcomes in relation to economic and organisational benefits of having effective quality processes in place.

From the research theory Quality Vision Model the expected outcomes that had economic and organisational benefits were as follows.

- Customer satisfaction.
- Able to adapt to changes in government policy.
- Good organisation wide communication.
- Minimal employee occupational injuries and sick leave.

These are discussed below.

5.2.3.3.1 Customer satisfaction.

Many authors (Aune, 1998, Wilkinson, Redman, Snape & Marchington, 1998, Standards Australia / Standards New Zealand, 1994a, Jonker & Klaver, 1998, Evans, 1997, Terziovski, Samson & Dow, 1995, Gorst, Kanji & Wallace, 1998, Martinez-Lorente, Dewhurst & Dale, 1998, Brown & Van der Wiele, 1995, Wong, 1998, Laszlo, 1998, Jayaram, Handfield & Ghosh, 1997) have stated the importance of customer satisfaction as an outcome of quality activities.

The economic and organisational benefits of customer satisfaction were financial support for the health service by the community that it served for government hospitals. See Appendix P for details of community support and the benefits of this for government hospitals. The health service benefits of having members of the community purchase equipment for health care and support the continuation of a hospital's services when the government threatened to close it were not reported in any of the reviewed published literature.

For private hospitals the benefits were that members of the public used the hospital facilities for their health care. Both of these were profitable outcomes for health services.

5.2.3.3.2 *Able to adapt to changes in government policy.*

(a) Background.

Saunders Preston, Rice, O'Sullivan and Garrigan (1997) wrote that health care "managers were subject to strong, changing political agendas emanating from a central health bureaucracy driven to some extent by political agendas". For a health service to survive it was necessary for managers and other employees to be able to adapt to the constantly changing government policies.

The top four health services were all able to adapt to changes in government policies. Hospitals one and five successfully marketed their health care services to everyone whom entered their premises, medical practitioners and the local population. These were their three main sources of paying customers.

Saunders, Preston, Rice, O'Sullivan and Garrigan (1997) reported that the Australian government spent about eight percent of its gross domestic product on health care. Due to the need to contain costs the Australian Government had a policy thrust of cost containment and decreased provision of funds to health services.

(b) Government funding policy.

At the time of this research the government provided funds using the case mix funding system. This was similar to the diagnostic related group funding of the United States of America described by Lorence (1994). Hospital seven researched service costs and challenged the government when it considered that health care service funding methods were unfair. This helped the health service to receive adequate funds to be able to provide a high level of service.

Wu (1995) supported the stand taken by the staff of hospital seven. He reported that severity of illness, patients' age, economic factors and random events all influenced the

cost of patient care and the outcome of this care, no matter what the quality of care provided was. Hospitals eight, four and six all were not able to survive the government's cost cutting measures and all had considerable budget deficits due to having more customers with particular health care problems than they were funded for.

It was noted in the evaluation of mission achievement that suppliers evaluated success as an increase in customer numbers, increase in profit and customers continued use of services / products. For suppliers having an increase in the number of customers was profitable and desirable. For government health services with insufficient resources, having an increase in the number of customers meant a decrease in the amount of human and material resources available, an increase in debt, and these outcomes were undesirable.

Finance for government health services were mainly provided through taxation. An increase in the number of customers meant that there needed to be an increase in taxation funds to provide more health service funds. Although people liked having a high standard of health care provided this had to be balanced by the general population's dislike of having a high level of taxation on their income. Politicians usually tried to keep taxes as low as possible to increase their popularity so that their political party had a higher chance of being elected to government again.

This difference in public health service philosophy and that of goods and service providers was also demonstrated in the examples of the ways that employees saw customers as advocates of what was provided by the employee. Suppliers said that they knew customers were satisfied when no complaints were received (9%), when there was new business (18%) and repeat business (46%). These replies were not provided by any of the health service employees. Instead health service employees said that they knew that their customers were satisfied when the employee received verbal praise (45%), written praise (17%), from survey responses (13%), did not know (13%), when they

received a financial reward such as a box of chocolates (11%), if they received an award for excellence (1%) or if help with patient care was provided by patient's relatives when staff went on strike. See Table 23 for results. For suppliers an increase in the number of customers and an increase in sales evaluated the achievement of service improvements. This was not reported in health services as a way to evaluate the achievement of improvements.

(c) Government health care management policy.

Employees at hospital two reported more problems with having to adapt to the requirements of the Regional Health Centre than any other government policy. Staff at this health service had an additional layer of bureaucracy above them to the other researched health services. Only 29% of the hospital two reported being able to adapt easily to changes in government policy. All government policy changes were forced upon hospital two through the manager of the Regional Health Centre.

Hospital two received strong financial support from the local community. This enabled staff members to have adequate funds to provide a high level of health care no matter what the government funding policy was. Hospital three had a high level of local community support that enabled the health service to survive the government's plan to close it. At Hospital three there was good communication between the health service employees and local community members. See Appendixes H and P for details.

5.2.3.3.3 *Good organisation wide communication.*

Casalou (1991), Lynn (1991), Brown, Millen & Sohal (1995), Dawson (1995), Piggott (1996), Argo (1997), Chandler (1998), Dervitsiotis (1998), Schwebel (1998) and Stratton (1998b) all reported effective communication as being necessary to provide an organisational wide quality service.

Hospital one's effective organisation wide communication by management and other employees assisted in enabling a high standard of care to be provided to all of the organisation's customers. Good communication practices by management and other employees are a recommended input into successful quality activities (Brown, Millen & Sohal, 1995, Dawson, 1995) as well as a desirable outcome (Chandler, 1998, Dervitsiotis, 1998).

5.2.3.3.4 *Minimum employee occupational injuries and sick leave.*

IFAP (1998) reported that a high standard of occupational safety was allied to a high standard of quality in successful company business practice. Good safety practices produced minimal occupational injuries (and those that did occur were usually minor injuries), minimal sick leave, increased employee productivity and increased company profitability.

Health Department records showed that hospital two had no employee injuries in year one and one injury in year two. Records of sick leave were not available for this organisation because the regional health service manager refused to allow them to be used for research purposes. Verbal reports from the Hospital Administrator and the Director of Nursing said that employee sick leave was minimal.

All other health services for which records were kept had between 141-2728 days lost per year due to occupational injuries. An injury frequency rate varying from 22-190 per million hours worked. An injury cost per \$100 of wage roll between 33 cents to \$4.34. Sick leave per hundred hours worked varying from 2.24 hours to 3.8 hours. See Table 33 for further details.

This was a considerable cost for many health services. According to Heinrich (1980), an insurance claims manager for over 30 years, when an employee was away from work on sick leave there was the cost of paying this employee's wages and the loss of this

employee's skills and experience. In addition there was the cost of obtaining a replacement employee, the cost of training this person. There was also often the additional cost of lower work output of the replacement worker due to this person's inexperience in performing the work and the need for payment of commission to the agency supplying the temporary employee.

In addition to these costs, if an employee was injured at work, there were also medical, rehabilitation and compensation costs. If property or equipment was damaged during an accident there was the cost of replacing this, work delay costs and the cost of not being able to use the premises or equipment until it was repaired or replaced.

Heinrich (1980) wrote that the uninsured occupational accident costs for health services were the legal costs for the time the employer and employee spent in court, the court costs and the fine imposed on the employer for not meeting legal responsibilities. With an injury that occurred at work there were the first aid expenses, transportation costs if the employee needed to be taken home, the cost of an accident investigation, the cost of writing and processing an accident report and the cost of notifying the appropriate authority.

Wages costs following an injury were for the cost of the time lost by the injured employee and the cost of the supervisor's time spent attending to the injured worker's welfare. There was also the cost of time for the other employees who stopped work out of curiosity, out of sympathy, to assist the injured employee and those who stopped work following the accident for any other reason.

Another cost to the employer, according to Heinrich (1980), was the cost of having to pay full wages to the injured employee after this person returned to work if the employee was not fully recovered and able to work as well as before the accident. This frequently happened following manual handling injuries.

Further costs were often lower employee morale, increased labour conflict when employees perceived that they were injured because they were not cared about, unfavourable public relations and the loss of good will (Heinrich, 1980). Employee injuries and ill health could be very costly to an organisation, so it was important to keep the work force as healthy as possible to maintain profit.

Hospital two, in which the most employees recorded having enough time to do their work properly and be able to take meal and tea breaks, reported the lowest workers compensation costs. Hospital four, in which the least number of employees recorded the above, reported the highest workers compensation costs. See Tables 10 and 33. Having enough time to do work properly and being able to take scheduled breaks was important to employees' health.

Employees at hospital two also identified the most ways that management demonstrated their care for the occupational health, safety and welfare of employees. See Table 29. Health and safety practices varied from the cleaner conducting regular safety surveys as part of her duties. Having a consultant teach staff about occupational safety and health. Staff members reading publications about occupational safety to keep up to date with the latest safe work practices. Hospital Board members regularly discussing occupational safety and health matters and allocating funds as appropriate to improve occupational safety. See Appendix L.

Not all anticipated Quality Vision Model outcomes produced the desired economic or organisational benefits. The following anticipated outcomes of effective quality activities were changed as follows.

- From "Resources managed effectively with minimum wastage" to "*Cost effective service delivered.*"
- From "Quality timely service" to a "*High quality of patient health care.*"

- From "Increase in the number of customers " for all health services to have this outcome apply to *private hospitals only*.
- From "Innovations produced" to "*Continual improvement in organisational activities*".
- From "Employee job satisfaction" to "*Employee commitment*."

5.2.3.3.5 *Resources used effectively with minimum wastage.*

Lowik (1994) when reporting on the company to win the first Dutch quality award reported that this company delivered cost effective service and reduced the production of waste products. In the United Kingdom one of the criteria for winning the Charter Marks Quality Award was to have an organisation that provided value for money through the efficient and economical delivery of service.

Most health services employees (with the exception of those in hospital six) reported delivering cost effective care with minimum wastage. See Table 9. In most government hospitals employees reported the provision of less material and human resources and the expectation by the Health Department administration personnel that with reduced resources productivity would be increased.

Casalou (1991), Lynn (1991) and Cohen (1994) all reported that health services with the best quality of care all delivered cost effective care. Costin (1994) reported that North American businesses with level four quality activities delivered cost effective services.

Employees in health service one had the highest percentage of employees reporting the delivery of cost effective care with minimal wastage. This health service was also the most profitable. All employees who answered the questionnaire in this health service reported using their knowledge and skills to improve the way things were done and to contributing to continuous improvement through their personal commitment.

Employees in Hospital one were strongly encouraged to use their initiative. This was very important because managing resources effectively with minimum wastage did not produce as much profit as employees being able to use their initiative to deliver cost effective care. See Appendix P. Delivering cost effective service was more than just using resources effectively with minimum wastage. It was publicising and using research and quality project results to deliver improved services that were more cost effective, and encouraging employees to use their initiative to improve work processes. For example a comment made at interview by a Hospital one workplace manager was that "Anybody who sees that something needs doing ought to assume responsibility for doing it. Our people shouldn't need anyone to tell them what to do."

Health service three, according to Health Department records, was one of the most cost effectively managed health service organisations in the State. Delivering cost effective care had helped this organisation survive when the government wanted to cease the organisation's operation. This organisation did not have the budget deficit that some of the other government hospitals did under the Health Department's method of funding health care. It also had over 70 quality activity projects conducted prior to this research study. See Appendix H.

5.2.3.3.6 *Quality, timely service.*

Kotler and Armstrong (1994) wrote that "Quality must begin with the customer needs and end with the customer perceptions" (p.68). Hospital two scored 100% for customer satisfaction. If Kotler and Armstrong's definition of quality is to be used this hospital had a high quality of service.

All health services provided quality, timely service as far as practicable. Hospitals one, two and five appeared to be able to provide this the most effectively as they had the most resources available to meet customers needs. See Table 6. Hospitals one and two were the only hospitals that seemed to consistently provide service (such as the

provision of food) to visitors. These visitors then seemed to support the health service and become customers who brought increased profit to health service one and enabled health service two to survive and to provide a high standard of patient care.

Ketler and Armstrong (1994) recorded that "Quality is necessary, but may not be sufficient" (p.551). They described the key trend for the 21st century as *relationship marketing* to improve customer satisfaction, loyalty, products and service delivery. Hospital one (through the concept of being part of their family), hospital two (through community involvement in the health service) and hospital five (sharing God's love for all) built a strong relationship with their customers. See Appendix Q.

Ketler and Armstrong (1994) also advocated forming partnerships with organisational customers and suppliers to stimulate improvements and to discover new ways to deliver better value. Private hospitals (hospital one and five) generally had a stronger partnership with their suppliers than did the government hospitals. See Table 14. They also had higher quality service scores for the research questionnaire answers.

An aim of all of the eight research study hospitals' quality activities was to produce a high quality of health care. See Appendix O. Documented in the mission statement of all research study hospitals, with the exception of Hospital four, was the provision of a high quality of health care by organisational employees. As providing a high quality of health care was found to be important to Western Australian hospitals the provision of *Quality timely service* was changed to an outcome of a *High quality of health care*.

5.2.3.3.7 Increase in number of customers.

Uren (1997, p.3) wrote that health care organisations are listed in Fortune 500 as top money makers in the United States of America. For private hospitals in Australia having an increase in the number of customers was a profitable outcome. For public hospitals it was not.

It was a sellers' market for government hospitals with a waiting list for admission of 13,309 people (Rose, 1997a, p.8). In 1996 the Western Australian Government had provided state government hospitals with an extra \$81 million to help to reduce many hospital's budget over runs (Rose, 1997b, p.8). The Guardian Express ("Listen to electorate", 1998, p.6) reported that private polling by both major government political parties showed that health care issues were the biggest concern among Australians today as people were dying due to lack of health care service funding.

Public hospitals that had an increase in the number of customers were likely to have a financial deficit and have to close some services, as they were not funded for them. Hospitals four and eight had waiting lists for admissions, (see Table 31) but this did not make them profitable. This funding crisis and waiting list of people requiring health care was similar to that reported by Marsh (1994) and Debrah (1994) in the United Kingdom which had a similar method for funding public health care.

In contrast to this for private hospitals it was a buyers' market. There was competition between hospitals for customers. Private hospitals needed to provide a high quality of service to attract customers and remain profitable. This research identified that the two private hospitals were providing a higher quality of service than the six public hospitals studied.

5.2.3.3.8 *Innovations produced.*

Wacker and Sheu (1994) described their stage four (best quality practices) as the "initiating design stage". In this stage innovations were produced. De Noray (1994) called his stage four "quality anticipation".

Ketler and Armstrong (1994) wrote that "Companies can sometimes obtain small improvements by working harder, but large improvements call for fresh solutions"

(p.68). Garvin described “learning organisations” as the most profitable. He described learning organisations as experimenting with new approaches to produce innovations in products or services.

Hospital six had produced innovations in patients’ care through the use of research based findings. See Appendix O. Hospital seven had produced innovations in patient care and gardening practices. See Appendixes O and P.

Hospitals one, two, three and five had no outstanding innovations produced, just a continual improvement in services, work processes and management practices. Most of the health service employees interviewed reported being asked to be an innovator, but found that management did not allow them to exercise discretion in decision making or to change work practices when appropriate. When interviewed none of the hospital staff reported being allowed to use their initiative to identify and implement improvements while 9% of suppliers did. See Tables 26 and 27.

Being innovative did not appear to increase the profits of a health service. Innovative ideas were not always appreciated by hospital management as in many cases it was reported by employees that although they were asked to be innovators (ie work smarter), they were not always allowed to implement their ideas.

The gardener at health service seven had identified innovative work practices that resulted from his research findings. See Appendix H. His findings have subsequently been used extensively in business organisations to save water and the associated costs. At the time of the research the government was considering terminating this employee’s position and contracting out his work. Being innovative in government health care did not guarantee a job or make a profit for the organisation.

For the organisation innovative work practices improved services and decreased expenses. For government employees there were no financial benefits for being innovative. What was appreciated most in health care were staff members making small continual improvements in services. Management accepted this more than it accepted employees being innovative.

5.2.3.3.9 *Employee job satisfaction.*

Serghis (1998b) conducted a survey of 300 nurses. Seventy one percent of these nurses reported workload problems that resulted in patient care being compromised. Fifty two percent of these nurses said that they were regularly looking for a new job because of dissatisfaction with their present employment.

The International Express (1998) reported that a survey by the Royal College of Nursing in the United Kingdom identified that two in three nurses working for the National Health System had considered leaving the nursing profession during the previous twelve months. Hospital staff members stated that they found their work unrewarding when not enough time or finances were provided for basic health care. They reported a crisis in funding and the expectation that health care professionals achieve more with less resources.

Replacing employees results in high costs, loss of continuity of care for patients and often loss of productivity and quality of care until a new employee is hired and the new employee is able to perform work to the same standard as the person replaced.

Serghis (1998a) reported that nurses in Western Australia were working to rules and closing patient beds because of chronic staff shortages and poor pay. Pryer (1998) wrote that the closure of one in three hospital beds by nurses had meant that some people needing urgent medical treatment were not getting health care in time. When

employees were dissatisfied with work they could decrease the level of service that they provided.

Staff at hospital five reported the feeling of being most cared for. They had the highest agreement scores for management support, for management consulting employees when considering changes, for being educated and trained in work related tasks and for partnership with suppliers of goods and services. Being valued and consulted resulted in staff in this hospital reporting themselves as the least likely to consider changing their workplace despite the fact that this hospital was in a central city location with many other health care opportunities available for staff. See Table 10. This health service had a high level of employee job satisfaction.

Lynn (1991) identified that if hospital staff morale was high productivity was high, staff members were frequently innovative with quality improvement ideas and they tended to remain working for the health care organisation. Casalou (1991) wrote that providing a secure environment for health care employees resulted in loyalty and a long-term relationship between the hospital and its employees. Casalou (1991) reported employee commitment to work as being more important than job satisfaction.

For the research questionnaire factors related to organisational commitment (see Table 10) employees at Hospital one had the highest average agreement score. Having commitment to the organisation made employees more likely to have work related goals that were linked to the organisation's requirements.

At Hospital one all employees annually worked with their workplace manager to develop work related goals that each employee planned to achieve during the following 12 months. The achievement of these goals were then evaluated by the employee and the employee's manager 12 months later. The Director of Nursing reported that, due to personal commitment, most employees met and often exceeded their personal

achievement goals. This helped to provide a high quality of health care. Hospital one employees had the highest total questionnaire result average agreement score.

When employees were committed to their organisation they were more likely to make a maximum effort to provide the best health care possible. For example, Hospital one was the only research study hospital in which 100% of employees reported contributing to continuous improvement through their personal commitment and performing their job professionally. See Table 10. Due to these study results the outcome of successful quality activities was changed from *employee job satisfaction* to *employee commitment*.

The answers to the three research questions indicated that the original theoretical Quality Vision Model for successful health service quality activities, developed from reviewed literature, needed to be changed to a *Quality Care Model* as illustrated in Figure three on the following page.

QUALITY CARE MODEL

A MISSION & CULTURE of CARING



MANAGEMENT

- show strong leadership in promoting care, consideration, health & safety of employees, customers & potential customers.
- provide adequate human & material resources & good workplace conditions.
- are team orientated.
- provide & facilitate employee education and training.
- plan, set & implement standards, & provide clear methods on how to perform tasks.
- provides competent supervision.
- regularly evaluate organisational activities, provide feed back & implements follow-up action as necessary.
- communicate effectively

EMPLOYEES

- have a culture of caring for everyone on the premises.
- are provided with enough time to complete work tasks.
- work together as a team.
- are educated & trained in work related tasks.
- are empowered.
- are consulted & participate in the planning, implementation & evaluation of services & change.
- have security of continuing employment.
- communicate effectively

SUPPLIERS

- partners in quality activities.

RESEARCH

- conducted to improve the quality of service.
- research findings are publicised throughout the organisation.
- research findings are used to improve organisational activities

LEVEL 4 QUALITY ACTIVITIES

Customer satisfaction.

Private hospitals only
Increase in the number of customers.

High standard of health care.

Cost effective service delivered.

Employee commitment.

Minimal employee occupational injuries & sick leave.

Good organisation wide communication.

Continual improvement in organisational activities.

Able to adapt to changes in government policy.

Figure 3.

5.3 The Quality Care Model and the original Quality Vision Model.

Information obtained from questionnaire results, interviewing research study participants, checking organisational records and the observations of the researcher produced the Quality Care Model for successful health care quality activities. This model was developed from evaluating a proposed Quality Vision Model (see figure 2) and making changes where necessary for a Quality Care Model (see figure 3) in light of the research study findings.

5.3.1 Reasons for changing to having a mission and a culture of caring.

The original Quality Vision Model, under the *focus on meeting customer and potential customer requirements* had a **Vision** that aimed for excellence and a **Mission statement** that described the way the vision will be achieved. These three levels of the model were revised and changed to one statement ***A mission and a culture of caring***. The reasons for the changes are as follows.

(a) A focus on meeting customer and potential customer requirements.

Literature reviewed for the research study identified that a focus on meeting customer, and potential customer, requirements were important for successful health care (Kerridge & Kerridge, 1994, Scrivens, 1995, Lowik, 1994, Sohal & Lu, 1995, Health, 1993, Wacker & Sheu, 1994, de Noray, 1994, Buxton, 1994, Bourke, 1994, Gorst, Kanji & Wallace, 1998). Ketler and Armstrong (1994 p.562) reported that the most successful organisations turned customers into clients who had a name. Using the customer's name when speaking to the person demonstrated that the person was important.

The professional assigned to each client then cared for the clients on an individual basis. This was reported to promote a high standard of customer satisfaction and a lifetime of use of the company products or services (Gorst, Kanji & Wallace, 1998). Staff members at hospitals one, two and five all made the time to do this. These health

services had a culture of caring for everyone who came on the premises, not just external and potential customers.

Saunders, Preston, Rice, O'Sullivan and Garrigan (1997) reported that "It is common in service organisations to find a relatively high score for 'knowledge of customer needs' and for 'ability to improve', since the high level of customer contact places an emphasis on the individual service encounter" (p.115). All research study hospitals conducted customer needs assessment. See Appendix O. The hospital with 100% patient satisfaction with care did more than this.

Instead of just asking its customers what they wanted it involved its customers (members of the local community) in making decisions that would affect the level of health service delivered to them. This was achieved through the decision making activities of Board Members, by involving community services in occupational safety and health at the hospital and by involving members of the community in raising money to provide resources needed for patient care.

The local community had ownership of the hospital through their involvement in health service activities. Instead of being asked what they wanted, customers raised finance for, and implemented, what they wanted. This was more effective in providing satisfaction with health care. Ketler and Armstrong (1994) wrote "Quality improvements are meaningful only when they are perceived by the customer" (p.68). As the customers of hospital two were involved in making the improvements, the improvements were meaningful to the customers.

From a marketing point of view Lynch and Schuler (1990) identified the customer as not only the patient, but also the people who influenced the patients' choice of the health service for health care provision. Lynch and Schuler (1990) reported a study by Berkowitz and Fléxner that found that 51.6% of the patients were referred to the health

service by their treating physician. The remainder of the patients made their own health care service admission choices. In this study 16.2% of responses were that patients were referred to the health service by medical practitioners. See Table 21.

Health Service five particularly recognised the huge effect of Medical Practitioners in influencing patient admission to their health service. For each physician who used their service they had procedures documented as to how the medical practitioner wanted pre-operative, post-operative, medical, etc. care performed for his or her patients. See Appendix N. There was an excellent relationship between all medical practitioners using this health service and the staff of Hospital five because of the culture of caring for the medical practitioners' individual requirements. Patients also reported being very satisfied with their high standard of health care. See Appendix O. Nursing staff reported the need for less documentation as standard procedures were recorded for patient care. See Appendix N. This gave the nurses more time to perform direct patient care activities.

Hospital one encouraged medical practitioners to use the health service by building medical practitioner consulting rooms next to the hospital. Research by Boscarino and Steiber (1982) identified the most important criteria for people choosing treatment at a health service were convenient location, medical practitioners' recommendation and past experience. By locating medical practitioners' rooms so close to the hospital, by caring for everyone who entered the premises and by providing excellence in health care, hospital one used care and location as marketing strategies.

Lynch and Schuler (1990) surveyed 600 heads of households to identify the factors that influenced their choice of health service. The importance of factors identified were in the following order:

1. Competent nursing staff.
2. Excellent services and a nice waiting area for family and visitors.

3. Excellent patient rooms and food.
4. Excellent place for surgical care.
5. Most convenient location.
6. Staff friendly and caring.

Hospitals one, two and five provided all of the above to their customers.

Ketler and Armstrong (1994) wrote that "Quality is necessary, but may not be sufficient" (p.551). They identified the key trend for the 21st century as *relationship marketing* to improve customer satisfaction. Hospital one had developed a high level of relationship marketing by including the name of "Family" in its title and by treating everyone (staff, patients and visitors) as family. Hospital five had "reflecting God's love for all" as part of its mission statement and strongly encouraged staff to care for each other as well as their external customers. The top two hospitals in this research study both had a mission and a culture of caring. See Appendix Q.

The mission statement of each of the other research study health services was as follows.

- "We will provide a comprehensive integrated and effective health care service that is of the highest possible quality to the people in our district and the surrounding communities." (Hospital 2)
- "The mission of this hospital is to initiate the provision of facilities and promotion of the maintenance of the highest level of quality care to support both the physical and mental well being of patients entrusted to its care." (Hospital 3)
- "To detect and treat illness and injury and to provide obstetric care for the people of Western Australia." (Hospital 4)
- "To provide coordinated quality health services that meets the identified needs of the people (of the town) and the surrounding region." (Hospital 6)
- "The aim of the Health Service is directed towards ensuring that service meets community needs within the Health Service District. This is achieved through the

delivery of surgical, medical, psychiatric, obstetric, extended care and rehabilitation services. We undertake to deliver the highest standard of care within the available resources." (Hospital 7)

- "The Health Service aims to maximise the health status of our community by the delivery of health care with skill, compassion and commitment. Services will be accessible, equitable and of a consistently high quality. The principles of cost effectiveness and continuity of care will be applied in the delivery of our services." (Hospital 8)

The original Quality Vision Model's *focus on meeting external customer and potential customer requirements* is described in all of the above research study hospital mission statements. Having this focus alone was not as successful as having the mission and a culture of caring for everyone who entered the premise which Hospitals one and five had.

Lynch and Schuler (1990) stated that successful local hospitals appealed to consumers by having words such as "caring", "family orientated" and "friendly" (p.21) in their advertisements as these attracted customers by promising to meet their relationship needs. The top hospital had the word "Family" in its title, but the word was not just part of this organisation's title. Everyone who entered the premises was treated as "*family*". This included patients, visitors, employees, consultants and contractors. Hospital one management and employees provided a culture of caring that met external and internal customers' relationship needs.

The results of this research showed that in the most successful hospitals internal customers had their occupational safety, health and other work related needs met. See Appendix L, Tables 6, 7, 10, 11, 12 and 13. These results demonstrated that a culture of caring for staff as well as patients was important.

The research study findings determined that having a mission and a culture of caring for everyone who entered the premises, including staff, was more effective than having a statement of a focus on meeting customer and potential customer requirements, having a vision that aimed for excellence and a mission statement that described the way that the vision would be achieved.

Words on paper describing the health service vision and mission were often not as strong a guiding factor for work practices as the culture that was promoted and lived in the organisation. The *people orientated* cultures of Hospitals one and five helped these hospitals to have the highest questionnaire scores of all the hospitals included in this study. Although all studied hospitals had a mission statement three quarters (6/8) of these hospitals did not have a documented vision statement.

(b) Vision statement.

As part of Strategic Quality Management Foster (1998), Mangelsdorf (1998), Cosin (1994), Matta, Chen & Tama (1998) and Perry, Wong and Bernhardt (1995) considered having an organisation vision and mission statement documented as being an important part of quality management.

Only health service four and parts of health service six had a vision statement. Organisations having a vision statement did not achieve a significantly higher standard of health care than organisations without a documented vision statement. See Appendix Q. Only three of the eight suppliers surveyed had a vision statement. Having a vision statement did not influence the quality of service or organisational profitability. All research study hospitals had a mission statement.

(c) Mission statement.

Across the eight health services, of the 166 staff interviewed, only seven (4.2%) knew their organisation's mission. See Table 17. This compared to the supplier organisational staff interviewed of whom 100% who said that their organisation had no mission or who knew the mission if their organisation had one. Only two of the eight supplier organisations had a documented mission statement.

Having a documented mission statement did not seem to influence the quality of service or organisation profitability because most employees, particularly those not involved in writing the mission, did not know their organisation's mission statement. Many of the employees interviewed had no idea of what a mission statement was. Knowing the organisation mission statement was defined by the researcher as being able to state the organisation's written mission, or the general philosophy of this mission.

Prior to conducting this research it was anticipated by the researcher that employees knowing the organisation's mission statement would use this statement to guide their actions. As the mission statement was not known by most employees this did not seem to be so.

All research study hospitals had a mission statement that described the purpose of the health service. It was noted that the two top health care organisations both had a mission statement which documented caring for all staff, patients and visitors. See Appendix Q. This effective strategy was taken to the top of the quality model to bring into health services, not only a documented mission of caring, but more importantly, a *culture of caring* where the health service's mission was put into practice to care for everyone who entered the premises. According to Kelly (1996) an organisation's culture dictates how employees act, how they are treated, and each manager and other employees' actions at work can have an effect on the culture.

The next level of both quality activity models had four streams. The streams documented the actions to be taken by management, employees, suppliers and for research actions to produce effective performance in health service management. This provided a model for quality activities for health care. Some factors in the original Quality Vision Model were demonstrated by the research results to be effective. These were retained. In light of the research results other factors were required to be modified or deleted. The new model was called a ***Quality Care Model***, because this reflected a desirable culture for successful people centred health care using quality activities. The factors included in each stream for the Quality Care Model are described below, commencing with the management stream.

5.3.2 Management.

The following management actions were retained in the Quality Care Model because the research results identified that these actions were an important part of successful quality management activities.

Retained.

- Are team orientated.
- Provide and facilitate employee education and training.
- Provide competent supervision.
- Communicate effectively.

Communicate effectively.

Saunders and Preston (1994), in their S-P model of quality activity, had effective communication as an important part of successful quality management. Casalou (1991) also reported that good communication between individuals, management and among all organisational departments was an essential contribution to successful quality management.

Health service one had the highest average agreement score (85% agreement) that the communication climate in the hospital was usually good and that there was good management communication (80% agreement). See Table 8. It had the highest overall agreement score on the questionnaire (78%). Hospital one employees were the most likely to report that they had clearly written, known, and used policies and procedures. See Table 8. This was important because it meant that employees had clearly known and used guidelines to enable them to produce a high standard of work.

Brown, Miller & Sohal (1995) wrote that effective organisational communication was an important success factor for quality activities. One hundred percent of hospital one employees agreed that they had all the information that they needed in order to do their job in the most effective and efficient manner. The next highest agreement score for this question was 76% at hospital two. At hospital six the agreement was 50% of employees had all the information that they needed to perform their work effectively. See Table 12.

Hospital one had the highest employee agreement score that management regularly evaluated organisational activities. (see Table 5) had a process established to measure the performance of suppliers and had a review system in place to minimise the number of suppliers necessary. See Table 14. Hospital one also had the highest agreement score that it provided employees with feedback of evaluation of organisational activities. (see Table 8), that staff received helpful feedback on their work (see Table 12) and that research results were publicised within their organisation. See Table 15. These results are all evidence of good organisation wide communication practices.

Schwebel (1998) wrote that many quality activity health service projects were conducted in her health service, but the results were not communicated to the stakeholders. Similar findings were identified for many of the health services in this research study. See Table 15.

With the exception of health service six, management was generally reported as being accessible to all people in the organisation. See Table 8. Being accessible helped to facilitate communication between managers and other employees. Management employees also had an important role in the provision and facilitation of education and training.

Management provided and facilitated employee education and training.

Cosin (1994) identified *learning organisations* as the most successful world leaders in business. Kelly (1994a) agreed with this statement and reported that individuals and organisations that did not constantly seek new knowledge and new ways to apply this knowledge would not cope with the constant changes that occurred in today's businesses.

Garvin (1994) described learning organisations as using five main strategies to be successful. The first was systematic problem solving. Hospital one had this with its *plan, do, check, act, document* quality activity model. This model also included documentation that was important as a way to communicate what had been implemented, and how effective the actions were. The second effective strategy for a learning organisation was experimentation with new approaches. All health services did this through some of their research and quality activity projects. The other factors present in a learning organisation were described as being learning from the past, learning from the best practices of others and using knowledge. Hospitals one and five met these criteria.

Private hospital staff had 76-81% agreement that management provided and facilitated a learning environment. Public hospital staff had between 25-71% agreement to this statement. Again hospital one had the highest agreement while hospital six had the lowest agreement to being a learning organisation.

Chen & Tama (1998) wrote that an important management leadership function necessary for an organisation to be successful was management providing employees with the opportunity to obtain new knowledge to be able to work more effectively. For all questions on management education and on employee education hospital one had the highest average agreement score. See Tables 7 and 12. The outcome of managements' provision of work related education was reflected in employees' education.

Casalou (1991) reported that employees must be continually acquiring new knowledge and the skills to keep up to date with the changes in technology and ways to effectively deliver health care if they wished to work in the most effective way possible. As well as learning from management provided education employees also required competent supervisors to guide their work when required.

Provides competent supervision.

Hospital one employees were also the most likely to agree that they were provided with competent supervision when they needed it. See Table 6. Supervision was provided to inexperienced employees by other employees who were experienced in the work task. This helped to ensure that tasks were learnt correctly and the likelihood of a mistake being made was minimised.

The Health and Safety Executive (1998) wrote that an important role of managers was not only to set workplace standards, but also to provide competent supervision to employees to ensure that they knew what to do and were meeting the set performance standards when doing their work. Competent supervision provides guidance and support for employees to enable them to work as productive team members who are able to achieve a high standard of work.

Team orientated work.

“Quality. Dr. Deming says, ‘must be built in at the design stage’ and team work is essential to the process” (Casalou, 1991, P.138). Casalou (1991) described management encouraged and facilitated teamwork by all disciplines caring for the customers as important for providing a high standard of health care. He writes that teamwork allows all individuals to participate in the decision making process, improves the group performance through the use of a variety of skills and individual’s knowledge and enhances the overall level of commitment to the provision of a high standard of service throughout the organisation.

In the highest ranked health service (hospital one) 95% of respondents reported management as being team orientated. In the lowest ranked hospital (hospital six) 40% of respondents recorded that management was team orientated. All other health services were between these values. See Table 5.

From observation of work practices it was noted that employees in hospital two organised their work as a team effort. This resulted in work being performed safer and faster. See Appendix P. Employees at Hospital two were also proactive in preparing for future work, so extending teamwork between shifts, as well as within work shifts. This allowed employees to have time available to provide a high standard of patient care.

Casalou (1991) reported that teamwork should not just be limited to the delivery of patient care services. Teamwork was also necessary for effective materials management, accounting, medical records, maintenance, transportation, personnel management and the wide variety of employment positions necessary for an effective health service.

In hospital one, managements promotion of teamwork resulted in 100% of employees reporting that they felt comfortable asking colleagues for assistance when assistance

was needed and 100% of employees reporting that when the going gets busy everyone gets in and works as a team. In contrast to this in hospital six only 60% of respondents reported the first statement and 45% reported the second. See Table 13.

Casalou (1991) wrote that, instead of having individual performance appraisals for staff group performance should be rewarded. At hospital one a quality trophy was awarded each month to the department which had produced the best new initiative to improve work processes. See Appendix O. This helped to promote effective teamwork for improving customer services.

To enhance teamwork Casalou (1991) recommended that staff members constantly look at whom they are serving and treat this person, or department, as their customer. The management of hospital five particularly promoted this concept. See Appendix I. Using this philosophy had broken down barriers between departments and promoted organisation wide teamwork that resulted in a high standard of service being provided to customers.

The concept of management being team orientated was considered important in both the Quality Vision and Quality Care Models. Some of the other factors in the Quality Vision Model were changed for the Quality Care Model to provide more successful business outcomes. The changes are as follows.

Changed.

- From "Show strong leadership" to "Show strong leadership *in promoting care, consideration, health and safety of employees, customers and potential customers.*"
- From "Provide adequate resources" to "Provide adequate *human and material resources and good workplace conditions.*"
- From "Provide clear methods on how to perform tasks" to "*Plan, set and implement standards, then* provide clear methods on how to perform tasks."

- From "Regularly evaluates organisational activities. provides feedback and implements follow-up action as necessary *for continuous improvement*" to "Regularly evaluates organisational activities. provides feedback and implements follow-up action as necessary."

Show strong leadership in promoting care, consideration, health and safety of employees, customers and potential customers.

The statement '*show strong leadership*' was broad. The additions to this statement (show strong leadership in promoting care, consideration, health and safety of employees, customers and potential customers) describe what it is important for management to show leadership in.

Wong (1998) described research into the effectiveness of Total Quality Management in 53 companies that had everything that was done documented. the companies had achieved ISO Certification and employees had memorised the right words to say to assessors. The implementation of Total Quality Management in these companies had not brought improvements in employees' actions, or an increase in company profitability because these employers and their management staff members did not demonstrate care and consideration for their employees and customers.

Taylor, Easter & Hegney (1999) wrote that successful organisations cared for their employees. These authors stated that one of the reasons why quality management was not always successful was because the internal customers, (employees), were not cared for by the employer. Taylor, Hegney and Easter (1999) recorded that when staff members felt that there was consideration of their needs by their employer they were more likely to do extra work to promote a high standard of care to external customers.

Vass & Kincade (1999) agreed with this. These authors stated that employees' basic needs (a safe working environment, adequate resources, adequate membership, adequate benefits, appropriate compensation and fair treatment) had to be met by the

employer and the workplace managers, for employees to be motivated, and be able to, work effectively. The next level in organisational development was to have strategies to promote and improve the effectiveness of employees. Vass and Kincade (1999) saw this as being through the development a people orientated culture that promoted care.

In this research study Hospital one management leadership style was described by 100% of the questionnaire respondents (see Table 5) as being one of promoting care and consideration of customers. This was a central philosophy of the organisation that enabled it to achieve business success. Gorst, Kanji & Wallace (1998, p.S100) wrote that "a satisfied customer is the least expensive way to generate revenue and profit."

Martinez-Lorente, Gallego-Rodriguez & Dale (1998) conducted a research survey of 223 companies and found that "for TQM success employees are the key element more so than any other company characteristic" (p.70). The results of this research showed that for Hospitals one and five 90% of questionnaire respondents said that management provided a supportive environment for employees. See Table 6. These were the top two hospitals. For the remaining hospitals in this research study employees had a 35-76% agreement that management provided a supportive environment for employees.

Saunders, Preston, Rice, O'Sullivan and Garrigan (1997) identified that the effectiveness of top management in health services was directly linked to the amount of power that the leader had to implement change. In both the private hospitals top management was given the power and support to effect changes as needed to make improvements.

In the public hospitals employees were told what to do by the Health Department and had to follow Health Department policies and operational instructions. In general the Health Department dictated that health services had to have a culture of caring for their

external customers as the government funded health services from taxpayers' money. This alone did not produce a culture of quality, profitable service.

Terziovski (1998) wrote that for an organisation to have successful business outcomes managers must meet the needs and expectations of internal customers (employees) as well as the external customers. It was noted by Martinez-Lorente, Gallego-Rodriguez and Dale (1998) that a culture of caring for fellow employees produced the most effective organisation. It was identified that if the organisation had a culture of caring for employees, employees were able to work more effectively and to produce a more profitable health care service. For example, with the provision of rehabilitation to employees who were injured at work, Cornally (1986), and Lagrange, Clarke, Lukowski and Mussett (2000) all identified that a key to successful rehabilitation of an employee injured at work was caring for the employee by this person's workplace manager. If an employee felt valued and cared for this person was able to work more effectively to care for everyone who entered the premises.

Management providing care, consideration and a safe, healthy workplace for employees had resulted in the outcomes of minimal occupational injuries and sick leave (see Appendix L and Table 33), 100% customer satisfaction (see Appendix H) and a high standard of health care (see Appendix O) being provided by the employees of Hospital two. It also enabled Hospital two employees to become more cost effective in providing patient care. See Table 32 and Appendix J.

Sohal and Lu (1995) described how employees at a workplace that had been unprofitable for 12 years changed their work practices to make them more effective. The changes resulted in the workplace making a profit of \$120,000 in a following year. What motivated these employees to change their work practices was the fact that the General Manager told all employees that he cared for them and was committed to

enabling employees to keep their jobs, even though the employees' store had not been profitable.

This store also changed to promoting and rewarding external customer care. The Store Manager presented staff members with an "I care" badge at a gathering of store employees if an external customer provided the Store Manager with praise for an employee's work. Employees at this workplace were encouraged to recognise work well done and to help each other to achieve good customer service.

Part of the management role in providing a supportive environment for employees is providing good physical workplace conditions and enough resources for employees to be able to perform their work to a satisfactory standard.

Provides adequate human and material resources and good workplace conditions.

The change from *provide adequate resources* to provide adequate human and material resources and good workplace conditions was made to provide more specific direction in the provision of resources and the conditions required for effective work.

It was noted that Hospital five employees had the highest positive response to the statement that management "provide an organisational structure that facilitates continuous improvement" (see Table 6). Hospital five employees also had the highest positive response to the statements that management provided good physical workplace conditions, adequate equipment / resources for them to complete their work satisfactorily and an adequate number of staff for their department (see Table 6). This had resulted in Hospital five employees reporting to be the most committed to continuing to work for the same employer and not considering changing their workplace. See Table 10.

Olson (2000) described a survey that had been conducted in the year 2000 throughout all Californian Nursing Homes by the United States of America Nursing Union. Survey findings documented that staff turn over was 40% greater in understaffed nursing homes. The results also recorded that nursing homes that had an adequate number of staff to provide patient care had 50% less incidence of patients having bedsores and of incontinence as the incidence in nursing homes where the staff numbers were considered too low. The reason for this lower incidence of adverse events provided by survey respondents was that with an adequate number of staff a higher quality of customer care could be provided.

Adrian (2000) wrote that the cost of having an adequate numbers of expert staff, quality equipment, technological support systems and quality improvement systems for health care are undeniably high, but cost of not having these is higher.

The potential for clinicians to make errors or be involved in situations where people suffer injury or other harm increases exponentially when: short cuts are taken; equipment is not appropriately maintained, repaired or replaced; or when staff are too few in number or inadequately educated or experienced to undertake the role at hand (Adrian, 2000, p.36).

Ashworth (2000, p.4), when reporting about patient care in a Western Australian State Government Hospital with more than 100 active legal cases against it, wrote that the "hospital management was warned 20 months ago that unless extra staff could be employed to cope with the big number of patients with increasingly complex medical conditions, medico-legal problems would be on the rise." Management had ignored the advice. Current pay outs per malpractice case were up to \$5 million each. This was far more expensive than employing enough qualified staff to be able to provide a safe standard of patient care.

In the organisational development model of Vass and Kincade (1999) adequate resources and a safe working environment (good physical workplace conditions) were

basic (first level) organisational cultural foundation requirements for business success. This was because without enough human and material resources and good physical workplace conditions it was not possible to provide a high standard of customer service. Vass and Kincade (1999) concluded that without these basic requirements effective quality activities could not be implemented.

For a high standard of customer care to be able to be provided, as well as providing good physical workplace conditions and enough resources for employees to be able to perform their work, this research identified that management employees need to plan, set and implement work standards and to provide clear methods on how to perform the work tasks.

Plan, set and implement standards, then provide clear methods on how to perform tasks.

Dickhout (1998) described effective managers as those who set high standards for employee work practices and then facilitate their people in achieving their expectations. Managers at Hospital one were described by the research participants as doing this and being proactive in putting effective systems of work in place with the aim of preventing deficits or mistakes occurring (see Appendix P).

In Hospital one the process used for quality activities was Plan, Do, Check, Act, Document (see Appendix Q). Management of Hospital one used the philosophy of this model to ensure that work processes were discussed with employees to plan the most effective way to perform them. In consultation with employees work processes and policies were then documented to set standards and implemented.

The questionnaire results showed that 90% of Hospital one questionnaire respondents reported that management provided documented procedures for their work tasks. This

was the highest agreement score for the answer to this statement (see Table 8). For Hospital six 25% of questionnaire respondents agreed with this statement. This was the lowest agreement score. Hospital one respondents also had the highest agreement score (85% agreement) that employees in this health service delivered cost effective service with minimum wastage (see Table 9). For Hospital six 30% of questionnaire respondents agreed with this statement. This was the lowest agreement score.

These results show a link between having clear methods provided on how to perform work tasks effectively and being able to deliver cost effective service with minimum wastage. Deming (1986) stated that when there was conformance to set standards of work through the use of quality activities, then there was less rework. The Health and Safety Executive (1998) agreed with Deming and recorded that for a high quality of work to be performed there must be documented, known and used work procedures that meet, or exceeded, set legal standards for safe work practices.

Casalou (1991), when discussing the provision of a culture of high quality in health care, wrote that "emphasis must be placed on the **setting** of appropriate clinical outcomes rather than **monitoring** outcomes" (p.137). Employees at hospital one were involved in setting and meeting clinical standards. See Appendix P. This helped to create a culture of providing excellence in health care.

Regularly evaluates organisational activities, provides feedback and implements follow-up action as necessary.

The Director of Nursing for Hospital one said that if anyone saw something that needed doing at work they should do it. See Appendix P. This produced a higher standard of health care than just doing what was needed for continuous improvement because it reinforced the idea that **everything** that needed to be done should be done. ***not just*** the actions that were needed for ***continuous improvement***. Continuous improvement was

an outcome of doing everything that needed to be done and so was changed in the Quality Care Model to being an outcome of the quality activity strategies used.

Doing what should be done enabled the cultural foundation elements to be implemented and the organisational effectiveness of existing personnel, which are the first two basic levels of Vass and Kincade's (1999) organisational development model, to be achieved. Vass and Kincade (1999) concluded that these basic management functions had to be implemented before continuous improvement could be expected of employees. The findings in this research were similar.

Martinez-Lorente, Dewhurst & Dale (1998) wrote that regular evaluation of organisational activities allowed management to provide praise to employees for work well done and to identify ways that the quality management system could be improved. Staffaroni & Bernstein (1998) stated that another advantage of top management and other managers being involved in regularly evaluating organisational activities was that it allowed the managers to develop action plans and implement concrete follow up actions for improving each business unit. It also enabled managers to identify any need for improving the acquisition of skills by employees where these were required to provide employees with increased knowledge to be able to implement a higher standard of customer service.

Managers in Hospital one did this. Hospital one had a quality improvement activity review plan in which all aspects of service and the outcomes of these were reviewed by the appropriate manager at set intervals. See Appendix O. Hospital one also had monthly quality improvement meetings to review organisational activities. This meeting was to identify what had been done well so that the relevant people could be given praise for their actions. It was also used to identify where there was an opportunity for improvements. See Appendix O.

When a problem, or an opportunity for improvement, was identified a team of the main stakeholders (people affected by the problem) was formed to identify, implement and evaluate improvement objectives. When all necessary actions were achieved the committee was disbanded.

Schwebel (1998), Chandler (1998) and Goldrick (1998) identified that providing feedback to people throughout the organisation about the evaluation of organisational activities was an important part of successful quality activities. At Hospital one all inspection forms and audits had a section to document to whom feedback about the results was given. The questionnaire results (see Table 8) showed that employees at Hospital one had the highest agreement score for the statement that management provides me with feedback of evaluation of organisational activities. Hospital six questionnaire respondents had the lowest score for this statement. Hospital six also had no regular management review of organisational activities. See Appendix O.

Deleted.

- Supports the vision.
- Provides encouragement and rewards for effective vision achievement.

Aune (1998) considered that an organisation having a documented vision was one of the most important factors in having successful quality management for an organisation. Under the category of "Strategic Direction" the 1999 Australian Quality Awards for Business Excellence requires an organisation to have a documented vision.

For this research having a documented vision did not prove to be an important part of effective quality activities. Employees' work practices and attitudes were more driven by the organisational culture than the organisation's documented vision. Merry (1995) stated that organisational cultures are complex social environments that are created by groups of interacting individuals within the organisation. It is this organisational culture

that determines the acceptable behaviour of people working there. According to Merry (1995), if providing a high quality of care is the acceptable behaviour, then this culture drives employees' work related actions more than a documented organisational vision.

Wai-Kwon & Wai-Kwon (1995) agreed with this. They wrote "The key to success lies profoundly in *company culture*" (p.41). These authors continued on to document that rather than a company's culture being created by a documented vision, that it was established by the behaviour and work performance of employees. This included the actions of the company leaders and the encouragement that these people provided for employees to follow the example that they set.

For health services strong leadership in establishing and maintaining the organisation's vision was not demonstrated, either because the health service did not have a vision, or because the vision was just written on a piece of paper and not used. Only 1.8% of hospital employees surveyed knew their organisation's vision. See Table 16.

Encouragement or rewards for employees and suppliers to achieve the vision were not provided at any of the health services with a documented vision. Hospitals four, six, seven and eight had documented organisational goals. Having goals that were in line with the organisations' vision/mission did not produce a higher standard of service.

Reinforces organisational culture.

This was changed to the top of the Model as everyone's responsibility, not just a management responsibility. The top of the Model also defines what the culture should be. The original model did not do this.

Are accessible to all people in the organisation.

This was part of effective communication and was not needed as a separate heading.

5.3.3 Employees.

Retained.

- Are empowered.
- Are educated and trained in work related tasks.

Are educated and trained in work related tasks.

Two of the 14 key points in Dr Deming's Total Quality Management were described by Casalou (1991) as being *institute training and retraining*, and *institute a vigorous program of education and retraining*. Heinbuck (1993), Kelly (1994), Costin (1994), Dobson & Tosh (1998), Garvin (1998), Lemaire & Jonker (1998) and Governey (1998) all agreed that it was important for employees to be trained in work related tasks so that they were able to perform their work tasks effectively. Untrained employees were less likely to be able to perform work tasks to a high standard and more likely to make mistakes because they did not know what to do.

Dobson & Tosh (1998) recorded that education and training in work related tasks had enabled employees in their company to keep abreast of the latest work related technology changes and to be innovative. This had enabled the business to be profitable and for the company to win the 1997 British Training Award.

In this research study the results showed that private hospitals had an average agreement score for employee education that ranged between 72-83%. Public hospitals had an average agreement score for the same questions of 46-67%. See Table 12. The main problem reported by public hospital staff was not having the opportunity to update work related skills. Employees at the private hospitals had an agreement of between 66-67% that they had adequate opportunity to update their skills, while the agreement score for public hospitals was 20-53%.

Employees in hospital five had the highest agreement score for being educated and trained in work related tasks and the second highest score for employee education. The

provision of a high standard of work related education and training was part of managements' support to enable employees to provide excellence in customer service.

Other benefits of employees being educated in work related tasks included the educated employees having the ability to anticipate and adapt to changes in work processes and to use technology effectively as part of their work. Employees at hospital one had the highest agreement score for being able to anticipate and adapt to changes in work processes and the highest agreement score for employee education. Ninety percent of the employees at this hospital said that they used technology effectively. The agreement scores of the other hospitals for this was from 52-71% of employees being able to use technology effectively to perform their work tasks.

Employees are empowered.

The world's best performing organisations, according to Donovan (1994), Bourke (1994) and Goldrick (1998) are empowering employees to make work-related decisions. These authors stated that this was because the people actually doing the work usually knew best what needed to be done and what their customers required. Being empowered, these authors said, also enabled employees to make immediate decisions instead of waiting, often for considerable periods of time, for the employer or a manager to make a simple work related decision. This enabled more efficient and cost effective customer service to be provided.

Bourke (1994) stated that part of Hertz Car Rentals success was due to training employees for succession to management positions and to empowering employees to make decisions that affected the quality of service or their work. Hospital seven had the highest agreement score for allowing employees to exercise discretion in decision making, for employees stating that they did not fear failure when trialing new ideas and for finding that their department was easily able to adapt to changes in government policy. It also had the highest agreement score for employees reporting a strong influence over workplace decisions (80% agreed) but had the lowest score for

employees being able to change work practices when appropriate (28% agreed). This finding is similar to that of Saunders, Preston, Rice, O'Sullivan and Garrigan (1997) who identified that although many health service employees had the ability to improve their service this was often not "translated into systems to achieve the improvement" p.118.

Under the heading of employee control hospital one had the highest agreement score. See Table 11. Results from this research study also showed that employees from Hospital one were the most likely to report being able to challenge work processes. See Table 5 results. This ability empowered these employees to present to management better ways of performing work tasks. This in turn then improved the quality of customer service provided and helped to attract more customers to use this health service so increasing company profits.

Hospital one also had the highest agreement scores for the following factors. Employees reporting that they had enough authority to carry out their workplace responsibilities and employees being able to change work practices when appropriate. See Table 11. Employees being able to implement appropriate solutions for identified problems. (see Table 5) and for the employer asking employees to be innovators. See Table 9. The average agreement score for consulting employees when considering changes in their workplace was 71-72% for private hospital employees and 30-66% for government hospital employees.

Cohen (1994) identified that hospitals that encouraged information sharing, risk taking in a supportive environment and empowered their employees were more advanced in implementing quality activities than hospitals whose culture emphasised hierarchy and bureaucracy. Hospital one employees had a culture that most met this criteria.

Changed.

- From "Are consulted and participate in planning, implementation and evaluation of change" to "Are consulted and participate in planning, implementation and evaluation of *services and change*"

Employees are consulted and participate in the planning, implementation and evaluation of services and change.

Wong (1998) identified that having change forced on them by top management, rather than employees being consulted and actively participating in the planning, implementation and evaluation of organisational services and change, had made the implementation of Total Quality Management unsuccessful in a variety of companies. This was because the employees had no ownership or commitment to providing a high quality of work.

Goldrick (1998) agreed with this and stated that management should consult and encourage employees who are doing the hands on work to participate in planning, implementing and evaluating organisational services and ideas for change. This way the people doing the actual work, and who were the most likely to know what their customers wanted, would be involved in making, implementing and evaluating practical ideas. Due to their involvement Goldrick (1998) stated that there was more likelihood of these employees being committed to making the services and changes work to benefit the organisation.

Employees in Hospitals five and one were the most likely (71-72%) to report that management consulted them when considering changes in their workplace. Employees in government hospitals had 30-57% agreement to this statement. See Table 8. Employees in the private hospitals, Hospital one (71%) and in Hospital five (67%), were also the employees to report the highest agreement score to the statement that they

were asked to be innovators. Employees in Hospital one were the most likely to report being able to change work practices when appropriate. See Table 11.

It was noted that at Hospital one, when a problem, or opportunity for improvement, was identified a team of the employees who were affected by the problem, or opportunity for improvement, was formed to identify, implement and evaluate improvement objectives. See Appendix O. This proved to be an effective way to provide a high standard of health service because the people who delivered the service, or who were likely to be affected by the planned change, were involved in doing the work and in making the decisions that affected the quality of their work.

Added.

- Have a culture of caring for everyone on the premises.
- Are provided with enough time to complete work tasks.
- Work together as a team.
- Have security of continuing employment.
- Communicate effectively.

Have a Culture of caring for everyone on the premises.

In all organisations it was observed that employees had a role in creating and reinforcing the organisational culture.

Employees at hospital one reported the highest agreement score for all aspects of employee co-worker support. See Table 13. Employees at this health service treated everyone who entered the premises (and this included all staff members for all departments) as family. This brought about a collegial and collaborative relationship between departments and with co-workers.

The Director of Nursing in hospital one said that some very successful leaders in both the military and in management had been able to foster such an attitude of belonging

that their followers would do basically anything for either the leader or the group. Everyone at hospital one was encouraged to think of the hospital as a place where they belonged. According to the Director of Nursing employees in this health service were provided with responsibility, empowerment, trust, faith in their ability to achieve and a sense of belonging. They repaid this trust by providing a high standard of caring service to their fellow employees, customers and potential customers. Employees had tenure of employment and a sense of ownership for the success of the continuity of their health service. See Appendix P.

Ketler and Armstrong (1994, p.576) reported that Federal Express lured its customers by providing them with unbeatable reliability and service, rather than a low priced product. The staff employed at hospitals one and five used this philosophy to attract and keep their customers.

Myers (1997) identified that, for a quality culture to be present, it must be possible to do a good job. Employees must have the knowledge and skills to perform their tasks. Employees must know what is expected of them and there should be good communication of organisational objectives to everyone. These factors were all present at health service one.

Casalou (1991), when writing about factors necessary for a quality culture, identified that it was:

unrealistic to expect high performance from employees when they are working with poorly maintained or inadequate equipment, substandard suppliers, poor lighting or ventilation, incompetent supervision, or lack of clear methods on how to perform a task" (p.139-140).

Hospitals one and two had excellent facilities and equipment, but hospital five had the highest agreement scores for the provision of good physical workplace conditions, adequate equipment and human resources. It also had the highest agreement score for management support. All of these factors helped this organisation's employees to provide a high standard of customer care.

Total quality management builds an accountability hierarchy that *inverts the organisational chart* and requires management to meet the needs of its subordinates by providing them with the resources, training, education and work environment that they need to perform their jobs better (Casalou, 1991, p.140-141).

Hospital five was the only health service to invert its management chart so that the Hospital Board supported the Chief Executive, who in turn supported management staff, who supported the staff providing hands on patient care. External customers were at the top of this organisation's chart. See Appendix Q. All customers and staff were very well cared for. Adequate resources, education and training were provided for staff.

This chart was not just drawn on paper. It was practiced. The Chief Executive Officer not only knew and supported the management staff he also knew most of the employees and patients by name and provided support for them as required. There was an attitude of caring throughout the whole organisation. Staff continually did more for each other and for patients than required. When staff members retired many of them returned to work for the organisation as voluntary workers. See Appendix P.

Hospital five management cared very well for its voluntary employees. Particularly valuable was the work related education provided to the volunteers so that they could be effective in their unpaid service. No other organisation included in the research provided work-related education for volunteers. Voluntary workers in this organisation performed many more service tasks than voluntary workers at other study hospitals.

For most people working in health care Hospital five was their first choice of hospitals to be admitted to if they needed medical treatment because of the excellence in care provided. Having all patient beds occupied made the organisation profitable. The Chief Executive Officer said that was quite happy when he could not park his car in the

hospital grounds and had to park it in the street as it meant that the hospital was full of patients and their visitors.

In all government health services the Commissioner of Health or a Board of Management was at the top of the organisation with all employees below them. External customers were not included in other health service organisational charts. See Appendix Q.

Hospital two was the only government hospital with 100% customer satisfaction documented on a state wide government conducted patient satisfaction with care survey that was completed for all State Government health Services. As well as caring for employees and patients this hospital's employees also cared for visitors to the premises and provided visitors with morning tea, afternoon tea or supper if they were on the premises at the times that this was taken to the patients. In turn people in this health service district donated money to Hospital two to buy health care resources so that a high standard of health care could be provided. This hospital had more up to date health care equipment than any other health services included in this research study. See Appendix P.

Hospital one employees also provided morning tea, afternoon tea and supper to visitors to the premises. The food at this health service was outstanding. Many visitors were heard to say that if ever they needed health care they would come to this hospital because the food and drinks were so good. See Appendix P. Caring for everyone, including visitors to the premises, was a successful marketing strategy that helped this health service to be profitable.

Are provided with enough time to complete work tasks.

Having enough time to complete work tasks was not a common theme of the literature reviewed related to quality activities. In the Worksafe Plan (WorkSafe Western Australia, (1999 p.31-32) it is stated that a common reason given by people in

workplaces whose management system was audited, and found to be substandard, was that work was not completed safely because there was not enough time to do this. Indicator 1.8 of the WorkSafe Plan (1999) was that all employees have sufficient time to carry out their work tasks. The provision of time to complete work safely was considered such an important resource that, as well as being mentioned under the heading of resources, it was also given its own audit indicator.

Complains about having too much to do in too little time, and not enough time to complete work tasks properly, was a common theme from the research study participants of hospitals three, four, six, seven and eight who were interviewed. See Appendixes P and Q. This theme was also echoed in other Australian hospitals. In the article "Accreditation paperwork comes first in aged care" (2000, p.3) it was reported that

In many instances staff are working in overdrive to meet the increasing demands of management, quite often missing out on meal and tea breaks. As for toilet breaks, that is what we have in the morning before we go to work and what we have as soon as we rush through our front door.

Clancy (2000) agreed with this and added that when health care staff had insufficient time to care for their customers the work that they did was often not performed well, was unrewarding and stressful.

Employees not having enough time to do their work properly influenced the quality of care that could be provided. Hospital two, the government hospital that had the highest level of customer satisfaction (100%), had 85% of employees reporting that they had enough time to do their job properly. In the remaining research study hospitals the agreement to this statement varied from 24% (Hospital 8) - 57% (Hospital 5). See Table 10. For a high standard of service to be provided there must be enough time for employees to complete necessary work tasks and it must be possible to do a good job (Myers, 1997).

Work together as a team.

Routhieaux & Gutek (1998) reported that teamwork was important because many organisational processes and problems were complex so were more effectively dealt with by a team of people with diverse backgrounds and skills. Hospitals one, three, five, seven and eight used monthly Quality Improvement Team Meetings as part of their quality management practices to enable groups of employees to work together to identify opportunities for improvements, implement improvements and evaluate improvements. See Tables 26, 27 and 28 and Appendix O. Generally these meetings were effective in improving the quality of service provided if staff were allowed enough time to be able to implement and evaluate the identified improvements.

Hospital one went further than this. When a problem or opportunity for improvement was identified a Quality Team of the main stakeholders was formed to identify, implement and evaluate improvement objectives. This meant that the people affected by the changes were involved in identifying what was best to do, implemented it and evaluated the effectiveness of these changes in terms of solving the identified problem or opportunity for improvement. See Appendix O. This teamwork produced high levels of quality services.

Henry (1998) reported that teamwork facilitated work process improvements. Many employees interviewed in Hospital eight stated that they did not have enough time to provide basic services, let alone become involved in improving services, indicating that the use of team work alone was only part of the recipe for success.

The main value of teamwork in the researched health services appeared to be that work could be completed faster with teamwork than if individuals worked alone. One hundred percent of employees in Hospital one reported that "when the going gets busy everyone gets in and works as a team" See Table 13. Working as a team when busy enabled a higher standard of healthcare to be provided to patients as work tasks were more likely to be completed within the necessary time. Teamwork enabled employees

to help each other so that work was performed more effectively. Teamwork was also used in the researched hospitals to enable experienced employees to teach new employees how to use efficient work practices. See Appendix P.

Have security of continuing employment.

In the reviewed literature concerning quality activities the importance of the employer valuing the employees' work was discussed. Sohal & Lu (1995) described how employees at a workplace, when provided with the security of having continuing employment at the company, changed an unprofitable organisation into one that made a profit of \$120,000 the following year. The difference was that these employees now had a commitment to the organisation and, with security of employment, were able to concentrate on improving work processes and in providing more effective customer service.

At Hospitals 3, 4, 6, 7 and 8, (see Appendixes P and Q), there had been a decrease in the number of staff employed and many of the remaining employees feared that they would be the next people to lose their job. Instead of identifying and implementing service improvements staff members who felt threatened with the loss of their employment said at the research interview that they were actively seeking to work elsewhere. These employees were angry about the current situation as they felt that their past contributions to the organisation were not valued and stated that improving their service to customers was a waste of their time.

In Health Services one and five employees were given security of continuing employment as long as their organisation remained profitable. This provided these employees with more incentive and commitment to concentrate on identifying, implementing and evaluating service improvements. It was noted that in these two hospitals the employees were most likely to identify their customers as "everyone who comes on the premises" (see Table 21) and to report that customers were advocates of

their department. See Table 22. There was a high standard of service provided by employees in both hospitals one and five.

Communicate effectively

Brown, Millen and Sohal (1995) described good communication as an important part of quality activities. Employees in Hospital one were the most likely to state that the communication climate in their hospital was usually good. See Table 13. Dervitsiotis (1998) stated that a good communication climate allowed work-related knowledge to be effectively exchanged between employees. This raised the standard of work related outcomes.

At Hospital six only 30% of questionnaire respondents stated that the communication climate in this Health Service was usually good. See Table 13. Poor organisational communication meant that knowledge about improved ways to perform work related tasks were not as often communicated so improvements were not made. Effective communication was an important part of successful quality activities as it enabled employees to know what was happening within the health service and to keep up to date with current work-related trends.

Deleted.

- Work towards a common organisational vision.

Most of the researched health services did not have a documented vision. See Appendix Q and Table 16. If the organisation did have a documented vision most of the employees did not use this vision to guide their daily work. This was an unexpected finding as the Health Department of Western Australia, the Australian Quality Award, the Malcolm Baldrige National Quality Award, the European Quality Award and many authors including Foster (1998), Mangelsdorf (1998), Cosin (1994), Nakhai & Neves (1994), Perry, Wang & Bernardt (1995), Saint Lawrence & Sinnett (1994) and Richardson (1994) considered that having strategic planning, that included a documented organisational vision, as an important part of quality management.

- Are asked to be innovators.

Innovations were not welcome in health care. Instead small continuous improvements were more appreciated as health service employees were less afraid of having legal problems if changes occurred gradually. This was another unexpected finding as in industry being innovative was equated with being successful (Wacker & Sheu. 1994. Dervitsiotis. 1998. Hamel. 1998. Garvin. 1994. Walker. 1994. Plsek. 1998. Provost & Langley. 1998. Ferry. 1994. Dean. 1998 and Russell. 1999).

- Don't fear failure when trialing new ideas.

This was part of being empowered.

- Are able to anticipate and adapt to changes in technology and work processes. and
- Use technology effectively.

The outcomes of work related education and teamwork covered the above skills.

- Deliver cost effective service with minimum wastage.

This was an organisational outcome of effective quality care practices. not something that was the sole responsibility of employees.

- Have collegial and collaborative work relationships.

This was part of teamwork practices and did not need to be listed as a separate practice.

- Departmental and personal goals are linked to the organisation's vision.

The organisation's vision did not play a major part in producing effective quality activities so this practice was deleted from the model.

5.3.4 Suppliers.

Changed.

- From ""Partners in vision achievement" to "Partners in *quality activities*."

There was no evidence of suppliers being partners in achieving any of the health services' visions. Baldrick, Preston and Saunders (1995) and Saunders, Preston, Rice, O'Sullivan and Garrigan (1997) all reported a similar lack of focus for partnership between health care services and suppliers in their research studies.

Health services two, five and six involved suppliers in their quality activities. See Appendix I. This was beneficial as it improved the quality of service provided to the health services' customers and encouraged a long-term relationship to develop between the supplier and the health service.

Ketler and Armstrong (1994) wrote that "Quality requires high quality partners. Quality can only be delivered by companies whose value chain partners also deliver quality" (p.68). Casalou (1991) agreed with this and identified that to have a high quality of service it was important for suppliers of goods and services to health care organisations to consistently meet the needs of their customers and to be willing to continually improve.

Terziovski (1998) reported on the results of a five year survey conducted by Monash University and Ernst & Young Australia of 780 Australian Companies concerning what their company considered were the characteristics of a "quality organisation". Findings included that a "quality organisation" had supplier agreement contracts, strategic alliances were formed with suppliers and that suppliers were involved in the organisation's improvement programs.

Matta, Chen & Tama (1998) recorded that having suppliers as partners in quality activities was essential as the service provided to the organisation's customers was affected by the organisation's suppliers' products and services. Being involved in an

organisation's quality activities. according to Matta. Chen & Tama (1998) allowed the organisation and the suppliers to have joint input into improving products and services to meet the organisation's customers' needs.

When asked if the research hospitals involved the suppliers in the hospital's quality activity programs only the suppliers to hospitals two, five and six said "yes". See Appendix I. Hospital five employees were the most likely to report communicating with suppliers so that they were aware of the organisation's needs and expectations, of choosing suppliers based on the value of products and service, not price tag alone and of having a strong partnership with their suppliers to improve the organisation's employees' ability to meet customers' expectations. See Table 14.

Hospital one, although it did not involve suppliers in its quality activities, took the most active role of all of the research study hospitals in measuring the performance of their suppliers, minimising the number of suppliers and in having a long term mutually beneficial relationship in place with preferred suppliers. See Table 14. Deming (1986) promoted the use of all of these supplier management strategies to improve quality management. Contracts awarded to government hospital goods and service suppliers were usually an annual event. In private hospitals supplier contracts were awarded for longer periods of time allowing suppliers to develop an ongoing motivation to develop their goods and services to meet the needs of the health service's customers. This management practice enabled a better quality of service to be provided by the hospital employees.

5.3.5 Research.

Changed.

- From "Conducted to improve products and service" to "Conducted to improve *the quality of service*"

Cohen (1994) reported ongoing research of medical outcomes and clinical effectiveness as being of the utmost importance to improving health care organisational effectiveness. Maintaining a high standard of research support and facilitating organisational research activities was recorded as essential for continual improvement in customer services, work processes and products by Wacker & Sheu (1994), de Noray (1994), Garvin (1994) Button (1994), Kelly (1994) and Gilbert (1995). All health services surveyed used research as a method of identifying ways to improve the quality of health care services. The main areas of research conducted in the studied hospitals was research to identify ways to improve work processes, or research to identify better ways to meet customer needs and expectations. See Appendix H.

The organisation in which employees reported conducting research based quality improvement activities the most was hospital one. See Table 15. When actual named research projects were asked for health service one had only one research project named (the lowest number), while health service six had 20 (the highest number). See Appendix H. Research that was the most effective in improving the quality of health care provided was the research that had its findings and recommendations publicised and used.

Added.

- Research findings are publicised throughout the organisation.
- Research findings are used to improve organisational activities.

The highest incidence of reported publication of research findings within the organisation occurred from Hospital one respondents (71%) and the lowest from Hospital six respondents (5%). See Table 15. It was noted that 76% of Hospital one respondents reported implementing research findings at work, while only 30% of Hospital six respondents reported implementing research findings or research based quality improvement findings. See Table 15.

Findings of this research study have highlighted the fact that it is not enough to just conduct research to improve work processes and organisational services. Employees and other relevant people need to be informed of the research results and recommendations. Lindsay (1995) stated that the results of research investigations are of little use if they are not communicated to others so that the knowledge gained through the research study can be put to good use. The Health and Safety Executive (1998) agreed with Lindsay (1995) and recorded that unless research based ideas for improvements were communicated to the relevant people the findings would not be known, implemented and used to improve organisational activities.

Schwebel (1998) identified that in a New South Wales Health Service many quality activity projects were conducted but the project results were not recorded or communicated to the stakeholders so improvements in service were not made. This author stated that when research was conducted and the findings were not communicated there were no financial or organisational improvement benefits from the research.

In Hospital one the results of research and quality activity projects were likely to be communicated to relevant stakeholders and the findings implemented as appropriate to improve organisational services. See Appendixes H and O. This allowed employees to improve their work processes and the quality of health care given to customers.

Employees interviewed at Hospital six described 20 research or quality activity projects, 19 of which had recently been completed. See Appendix H. However on the research study questionnaire only 5% of this organisation's employees recorded that the research results were publicised within the organisation so that the research outcomes were known and used. See Table 15.

This difference in perception may have been because in hospital one 71% of employees said that research results were publicised in their organisation. This was the hospital in which the findings of quality activity projects and research were most likely to be used to improve services. See Appendix H for details. For the other research study hospitals only 5% to 57% of respondents said that research findings were publicised in their organisation. See Table 15.

For research to be beneficial the findings need to be publicised and used. In general, the findings of most research studies conducted to improve work practices and health care services were implemented in Hospitals one, two and five, and in the other hospitals if the finance was available to implement the research finding recommendations. See Appendix H. The original Quality Vision Model had only included conducting research and missed including publicising the research findings throughout the organisation and using these research findings to improve organisational activities. These deficits are addressed in the new Quality Care Model.

5.3.6 Summary.

A problem with the original Quality Vision Model was that it commenced at level three of Vass & Kincade's (1999) organisational development model (see Figure one) and neglected lower level needs. The Quality Vision Model expected Health Care Organisations with successful quality management practices to be driven by shared values and goals. In Vass & Kincade's model this was described as having an organisational vision that was communicated and having an organisational mission that was used to direct a functioning work climate.

This research identified that, more important than the use of strategic planning, was having a mission and a culture of caring for everyone who entered the premises. This met the cultural foundation needs at the base of Vass & Kincade's (1999) model as the Quality Care Model includes providing employees with a safe work environment.

adequate resources to be able to complete their tasks to provide a safe standard of work and providing employees with fair treatment. The provision of all of these allows employees to provide a high standard of customer care.

Vass & Kincade's (1999) model describes an employee needs hierarchy. The Quality Care Model goes further than this. The Quality Care Model, as well as meeting employees' needs also includes meeting the needs of health service customers and potential customers, of making suppliers partners in quality activities and includes conducting, publicising and using research based findings to continually improve health service work practices and customer services.

This research also identified that important roles of managers were to:

- Show strong leadership in promoting care, consideration, health and safety of employees, customers and potential customers.
- Provide adequate human and material resources and good workplace conditions.
- Be team orientated.
- Provide and facilitate employee education and training.
- Plan, set and implement standards and provide clear methods on how to perform tasks.
- Provide competent supervision.
- Regularly evaluate organisational activities, provide feedback and implement follow up action as necessary.
- Communicate effectively.

For employees the Quality Care Model documented following factors as important. That employees:

- Have a culture of caring for everyone on the premises.
- Are provided with enough time to complete work tasks.
- Work together as a team.

- Are educated and trained in work related tasks.
- Are empowered.
- Are consulted and participate in the planning, implementation and evaluation of services and change.
- Have security of continuing employment.
- Communicate effectively.

Using the above work practices and actions for health service management produced the desired outputs of:

- Customer satisfaction.
- A high standard of healthcare.
- Cost effective service delivered.
- An increase in the number of customers for Private Hospitals.
- Ability to adapt to changes in government policy.
- Continual improvement in organisational activities.
- Good organisation wide communication.
- Minimal employee occupational injuries and sick leave.
- Employee commitment.

All of the above important points described in the summary are included as part of the Quality Care Model for quality activities for Western Australian hospitals.

5.3.7 Reasons for adopting the Quality Care Model.

There are four main reasons why this Quality Care Model should be adopted by health care organisations.

1. Research results indicate that this Quality Care Model is better than the health care quality activities currently used in Western Australian hospitals.
2. The model is consistent with health care needs, values and experiences.
3. The Quality Care Model is simple. It is easy to understand and implement.

4. The benefits of using these quality activities can be observed and evaluated.

5.4. A comparison between the Quality Care Model and the Australian Quality Award Criteria.

No Western Australian hospitals in the research study were using the Australian Quality Council Business Excellence Award criteria for their quality management practices. The Australian Quality Council (1998b) stated that health services would be wise to consider using "the Australian Business Excellence Framework, the Australian Council on Healthcare Standards' (ACHS), the Evaluation and Quality Improvement program (EQUIP), the Quality Improvement Council's (QIC) Community Health Accreditation and Standards Program (CHASP) and the International Standards Organisation's ISO 9000 family of quality system standards" (p.4).

The Australian Quality Council recognised that meeting the Business Excellence Award criteria only may not be enough for the most successful health care quality management. Ganley (1998) and Breen (1998) used the Australian Quality Council's Award Criteria as an organisational quality management system and reported that, on its own, this framework was not sufficient for a successful quality management structure for health care organisations. However, as the Australian Business Excellence framework is an Australian Quality Management Framework for general industry a comparison is made between the Quality Care Model and the Australian Business Excellence (ABE) Framework for 1999. Figure three shows the Quality Care Model. Section 2.5 of the literature review describes the Australian Business Excellence Framework for 1999.

Using the Quality Care Model the employer, managers, other employees and suppliers have a mission and a culture of caring directing all of their actions. The ABE Framework for 1999 does not have this. The ABE Framework is very orientated towards strategic management, the role of senior executive officers in providing

organisational direction, leadership and maximising the profits that can be obtained from intellectual property, such as copyrights, registered designs and patents. In the Quality Care Model managers are also expected to show strong leadership, but this leadership is in promoting care, consideration, health and safety of employees, customers and potential customers.

The ABE Framework is aimed at general industry customer requirements and documentation of activities so that these can be easily measured by auditors. The Quality Care Model identifies specific practical strategies that can be implemented by health care managers, other employees and suppliers to produce successful quality management in a health care organisation.

The ABE Framework was more applicable to private hospitals than government hospitals as it documented strategies to implement to increase the number of customers for the business. Some of the government hospitals included in this research study had too many customers and were having to close wards as they had spent the money allocated by the Health Department to care for people with specific medical conditions or who required specific surgical procedures. These hospitals already had long waiting lists of customers who required health care and whose health was deteriorating because there were not enough resources available to provide them with the required care.

Both models required employees to be consulted and participate in the planning and implementation of services. The Quality Care Model also includes employee involvement in the evaluation of services and change. This allows the people affected by the organisational decisions to help decide how effective these decisions are and to have input into making suggestions to implement for improvements where necessary.

Another practice that was included in the Quality Care Model, but not the ABE Framework, was the need for employees to have the security of continuing employment.

When employees did not have this the research results showed that the employees concentrated on finding another job rather than improving the work practices in their current workplace. Bohle & Quinlan (2000, p.445) wrote "Job security had significant implications for occupational health and safety." As such job security was important for employees to have to produce a high quality of work.

The ABE Framework encouraged a culture of innovation and risk taking. These research study results showed that this was not valued in health care. It was identified in this research study that conducting research to improve the quality of service, publicising the research findings throughout the organisation and using these research findings to improve organisational activities was important. The use of research practices for quality improvement was included in both models.

The Quality Care Model documents specific outcomes that are requirements for successful health care, such as a high standard of health care provided. See Figure 3. The ABE Framework includes in its criteria that part of an organisation's quality management must include indicators of sustainability and success such as meeting stakeholders' objectives, measurements of progress and / or having a holistic approach. The outcomes of using the ABE Framework are not described, just criteria that must be met to win the award.

Both models require suppliers to be partners in the organisation's quality activities, good communication practices, employees being educated and trained in work related tasks and the provision of a work environment where health, safety and employee well being was promoted. Downer (1999) wrote that a healthy work population is more productive as healthy individuals are able to use their skills more fruitfully, and so improve the economic growth of their organisation. Both the ABE Framework (1999) and the Quality Care Model recognise that there is a strong link between good occupational safety and health practices and the provision of successful quality management.

The theory behind the development of the Quality Care Model is similar to the duty of care theory behind Robens 1972 Report into the requirements for successful occupational health and safety practices for Britain. Bohle & Quinlan. (2000) stated that the findings of Robens 1972 Report have been implemented to shape the occupational safety and health laws in Britain, Australia and many other countries. They are the foundation for the International Labour Organisation (ILO) Convention No. 155 (1981) concerning occupational safety and health and the working environment. The Quality Care Model contains not only a duty of care, but also a culture of caring for everyone who enters the workplace premises. As such the Quality Care Model could be used not only to improve the quality of patient care, but also as a management framework for successful occupational safety and health practices.

5.5 The use of the Quality Care Model for the management of occupational safety and health.

The Health and Safety Executive (1998) stated that the principles and approaches to managing successful occupational safety and health are the same as those advocated for managing quality. These authors wrote that the traditional approach to ensuring quality emphasised quality control at the end of the manufacturing process when products were inspected and sorted for deficits before they reached the customer. This was costly and inefficient.

In the Quality Care Model both quality and safety are managed into the organisation in the design stage of a work process, work environment, the purchase of equipment and products, and by providing employees with relevant work related education and competent supervision. The Quality Care Model required actions for managers, employees, suppliers and the expectations for the research actions support the inclusion of safety and quality in the design stage. See Figure 3.

The Quality Care Model meets all of the legal requirements of the Western Australian Occupational Safety and Health Act 1984 and the Western Australian Occupational Safety and Health Regulations 1996 for effective occupational safety and health management. As such it can be used, in conjunction with this legislation, as a model for successful occupational safety and health practices.

Both quality and occupational safety and health are strongly affected by management practices, employees behaviour, the work environment, equipment and products used and the way that work processes are performed. Krause and Finley (1993) described occupational safety and health management and quality management as being two sides of the same coin as the safety effort gains strength from the quality effort and visa versa. Krause (1997) wrote that Deming's work in quality management contributed to the idea of behaviour based safety. The Health and Safety Executive (1998) recommended the use of Deming's Plan, Do, Check, Act Model as the basis for successful occupational safety and health management.

Peterson (1996) described three basic steps for improving safety performance.

1. Decide where the organisation wants to be.
2. Determine where it is now.
3. Provide the difference.

The Quality Care Model provides a framework to use to be able to achieve this. The outcomes of the Quality Care Model (see Figure 3) are also the desired outcomes for successful occupational safety and health management practices.

5.6 Summary

The first research question asked "What quality management practices are used in health care organisations to improve the quality of patient care?" The answer to this question identified 25 different quality management practices used by the employees at the eight research study hospitals. A combination of the successful quality management strategies used were grouped together to form a quality care model.

The second research question asked "Which quality practices produced the highest level of patient care according to clinical indicator results and patient satisfaction with care survey results?" A problem with using the measurement of clinical indicator results was that a record of these to identify the outcome of patient care was not kept by all hospitals. Clinical indicator results were however kept for the top four research questionnaire score study hospitals.

Both Hospitals one and two had a perfect clinical indicator score. See Table 30. Both of these hospitals had a culture of caring for everyone who entered the hospital premises. A mission and a culture of caring was placed as the top driver for quality management in the Quality Care Model. The findings of this research agreed with the findings of Powell (1995) and Krause & Hindley (1989) who also identified that the culture in an organisation was the most powerful determinant of business success.

The key factor in the answer to the question of how a high level of patient satisfaction with care was obtained turned out to be employees having enough time to complete their work properly. This factor was added to the Quality Care Model.

The final question asked "What are the economic and organisational benefits of having effective quality processes in place?" This research identified that the benefits were:

- Cost effective service delivered.
- High quality of patient health care.
- Customer satisfaction.

- An increase in the number of customers (for private hospitals only).
- Able to adapt to changes in government policy.
- Continual improvement in organisational activities.
- Good organisation wide communication.
- Minimal employee occupational injuries and sick leave.
- Employee commitment.

The following section records the conclusions, study limitations and recommendations related to these research findings.

6 CONCLUSIONS AND RECOMMENDATIONS

This section discusses the recommendations and study conclusions based on the research findings.

6.1 Conclusions.

The purpose of this research study was to answer the following three research questions.

- Which quality activities produce the highest level of patient care according to clinical indicator results and patient satisfaction with care survey results?
- What quality management practices are used in health care organisations to improve the quality of customer care?
- What are the economic and organisational benefits of having effective quality processes in place?

The answer to the first research study question concerning which quality activities produced the highest level of patient care according to clinical indicator results and patient satisfaction with care survey results was having a culture of caring for everyone who entered the premises. This included patients, staff members, contractors, suppliers and visitors. Another important factor was identified as employees being allowed enough time to complete work tasks properly as this decreased the number of work related errors made by employees and increased the level of patient satisfaction with care.

The answer to the following research question, what Quality Management practices were used in health care organisations to improve the quality of customer care, was as follows. Inspections, surveys, audits, research, continuous improvement, a documented mission, customer focused groups, plan, do, check, act, document management model positive performance indicators, prayer, quality activity meetings, quality activity projects, quality improvement teams, strategic planning and written quality plans. Other approaches used included the following. Accreditation, aim to achieve "best practice."

benchmarking and business plans. See Appendix O for more details of each research study hospital's quality activities. From an evaluation of the quality activities identified as used in Western Australian hospitals, and of the factors included in the Quality Vision Model (see figure 2), a Quality Care Model (see figure 3) was developed.

The answer to the last research question, what are the economic and organisational benefits of having effective quality processes in place, was a high standard of patient health care. Customer satisfaction. Ability to adapt to changes in government policy. An increase in the number of customers for private hospitals only. Continual improvement in organisational activities. Good organisation wide communication. Minimal employees occupational injuries and sick leave. Employee commitment to the organisation and cost effective services delivered. These benefits are included as an outcome of the Quality Care Model (see figure 3).

A review of literature was undertaken to provide a theoretical foundation for an anticipated model of successful quality activities for Western Australian hospital health care management. Following the review of previously published literature about quality activities a Quality Vision Model was developed (see figure 2). To evaluate the Quality Vision Model data was collected from study participants at the eight hospitals selected (as described in section 3.2 of the Methodology) to be part of this research study.

Study participants were selected according to the procedures described in section 3.3 of the Methodology. Data was collected from 167 of the 168 selected study participants answering a set questionnaire of 82 questions. Research data was also collected from the responses to set interview questions that were answered by 174 out of the selected 176 study participants, from organisational records and from the researcher's observations. The data collected identified that the original Quality Vision Model should be changed to a Quality Care Model to take into account the findings of the research results.

All factors included in the Quality Care Model (see Figure 3) were considered important to use for successful quality activities in health care. However the most important success factor for quality activities was identified in this research as having a culture of caring, co-operation and belonging. When people felt that they belonged they wanted to contribute. The most successful hospitals met their customers' relationship needs. See section 5.3. Relationship needs were met in by having community involvement in quality activities and by having a culture of caring for everyone who entered the premises. When employees were cared for they responded to the needs of the health service and also were able to deliver a higher quality of care. See Section 4.2.12.

Another important success factor was providing staff with enough resources to complete their work properly. Without adequate resources it was identified that it was not possible to do a good job (Adrian, 2000). This research study identified that resources lacking in many health care organisations were *enough time* to complete work safely. *Enough time* to implement and evaluate the effectiveness of quality activities. *Enough time* for staff work related education and *enough time* for staff to be proactive in acquiring and using new knowledge to improve their service provision. See Tables 7+10. As well as being provided with adequate resources employees must be empowered to be able to make needed improvements (Goldrick, 1998).

A further important success factor in quality activities was identified as communication (Schwebel, 1998). Without good organisation wide communication quality activities are just *pockets of excellence*, used in one area and not benefiting a whole organisation and community. See Appendix O. Survival in today's changing world of customer demands depends on having effective quality activities (Shea & Howell, 1998).

Quality Maturity.

Powell (1995) found that there was no performance correlation between the length of time a firm had quality management in place and business success. This research had similar findings, although the quality maturity of some of the hospitals was difficult to assess as half of the research study health care services (Hospitals 4, 5, 7 and 8) had no record, and the staff members did not know, when quality activities were first introduced into their health service. See Appendix O. Of the studied hospitals that did know the year of introduction Hospital six was the hospital that had organisational quality activities for the longest period of time. Quality activities were first introduced into Hospital six in 1988. This hospital had the lowest level of customer satisfaction with service of all of the research study hospitals on the State Government Patient Satisfaction with Care Survey results. Patient satisfaction with care had decreased at Hospital six by 7% over the last two years. See Appendix O. Hospital six also had the lowest questionnaire agreement score. See Section 4.2.12.

Hospitals one and five had the most effective quality activities to provide the desired business outcomes. See Section 4.2.12 and Table 22. Results of this research indicated that having a mission and a culture of caring was more important for effective quality activities than the length of time that quality activities had been in place. See Section 5.3 and Appendixes O, P and Q.

6.2 Recommendations.

This research study identified the important factors for Quality Activities that are required to produce the most profitable and the highest quality of health care are a *culture of caring*, providing employees with *enough time* to complete their work and

having *good organisation wide communication*. See Section 5.3. The following recommendations provide a **Quality Care Model** for health care organisations.

(a) Have a Mission and Culture of Caring

Many of the health services researched concentrated on meeting the needs of their external customers. This alone did not provide external customers with a high standard of care. It was more effective to have a mission and a culture of caring for everyone who entered the health care premises. See Section 5.3. Having a documented mission statement was not on its own effective. See Appendix Q. What was effective was having all employees translate the organisation's mission of providing care into action so that it was part of all health service workplace actions and it became the organisational culture. See Section 5.3.

The caring must start with the Minister of Health who should be at the bottom of the organisational hierarchy chart. It is the Minister's task to support all health care organisations by allowing them to have enough resources and an organisational structure of caring to allow health services to operate effectively. Without the Minister of Health's support health care can not be provided for all the people who desperately need it.

For Public Hospitals the next level up should be the Health Department. Instead of creating more and more work for each health service, the Health Department should be there to support the effective operation of each health service with enough resources. Bureaucracy should be minimised. Health services should be provided with as much autonomy as possible to enable employees to make and implement decisions on how to provide their customers with the best care affordable. This autonomy should also apply to country hospitals that are currently dictated to by their regional health service centre.

The third level up should be the Hospital Board, followed by the Health Service Manager, then senior management, line management, other employees and at the top of the organisation should be the External Customers.

Support and caring should flow from the Minister for Health at the bottom of the organisation up to the External Customers at the top of the organisation. This organisational structure was found to produce a culture with the highest standards of care. See Appendix Q. When staff were cared for and supported they were able to work more effectively and efficiently to provide a higher standard of cost effective service (Taylor, Easter & Hegney, 1999).

Staff must have tenure of appointment (Bohle & Quinlan, 2000). Contract staff and other staff members without continuing employment are generally less willing to provide the level of commitment needed to produce continuing improvements in service because they know that their employment prospects for on-going work in the health service are not certain. Staff who do not have the security of continuing employment are likely to be looking for other sources of employment to sustain their income. See Appendixes P and Q. Private hospitals should have a similar organisational structure and culture.

(b) Provide adequate resources.

Most employees were aware that they *could* contribute to continuous improvements, but there was often *not enough time* to perform work tasks to an acceptable level, let alone implement improvements. See Table 10 and Appendix P. A very important resource to provide was *enough time* to perform work properly (Clancy, 2000).

Included under the heading of time is allowing enough time so that employees can have tea and meal breaks to allow their work efficiency and effectiveness to improve. The

quality of food provided to employees and external customers needs to be of a standard that they can enjoy to provide them with the needed energy. See Appendix P.

Appropriate workplace conditions and equipment must be provided so that work can be performed safely and effectively (Adrian. 2000). There must be enough people with the required skills to perform the work. When there are not enough people to perform the work professional fatigue occurs (Olson. 2000). This communicates indifference to the customers whose needs are not met within the required time. See Appendix O. If short cuts are taken by employees to try to cope with excess work, safety issues are often compromised. This can result in the employee being injured or suffering ill health. It may also result in patients being given inadequate health care so that complications occur and patients require a longer stay in hospital to recover from their injury or disease (Ashworth. 2000).

(c) Encourage teamwork

Where individuals were working on their own it was often noted that work was performed at a much slower pace and less safely. See Appendix P. Teamwork was noted to improve the efficiency, effectiveness and often the safety of work processes. See Section 5.3. Teamwork must be used to allow people's different abilities and knowledge to be used to the best advantage (Routhieaux & Gutek. 1998). Experienced employees should use teamwork to educate and supervise inexperienced employees at work (Henry. 1998). To encourage teamwork wards and departments must be provided by top management with recognition for, and publicity of, all quality improvements made. See Appendix O.

(d) Create a learning organisation

Employees must have the knowledge and skills to perform their work tasks (Chen & Tama. 1998). They must be included in performing job safety analysis and identifying the best ways to perform work tasks (Taylor. Easter & Hegney. 1999). The identification of, and trialing of, new ways to work more effectively to meet customers'

needs must be encouraged. See Appendix H. Being involved in planning and setting standards for work processes gives employees commitment to performing the tasks in the decided way (Goldrick, 1998). Clear guidelines must be provided by the employer, and communicated to the employees, on how they are to perform their work tasks (Dickhout, 1998). This was most likely to occur in Hospital one and produced a high standard of work.

Employees must be provided with the opportunity to seek out new work related knowledge through research, education, experimentation with new approaches and be provided with the resources, including enough time, to learn (Dobson & Tosh, 1998). This allows employees to keep up to date with new knowledge, changes in technology, ways to effectively deliver health care, develop new skills, to perform their tasks effectively and to improve the way that service is provided. See Appendix P.

New health care and improved work process knowledge is constantly being generated world wide through trial, evaluation and research activities (Lemaire & Jonker, 1998). Without an ongoing commitment by management to allow employees to learn, their employees' knowledge does not continue to increase and work is not always performed to its optimal level. See Appendix P.

(e) Empower employees.

Employees must be consulted and work with management to plan, set and implement clear standards of work. Employees must be involved in evaluating work processes and quality activities effectiveness and implementing follow up action as necessary (Health and Safety Executive, 1998). It is of no use employees identifying and knowing of opportunities for improvement if they have *no power to make needed changes*. Managers and other employees must be trusted and given the needed support to work effectively so that continual improvements and innovations in service can be implemented. Everyone then benefits. See Appendix P.

In relation to quality activities staff need to be customer focused (internal and external) and adapt the quality care model to meet their own customers' needs. See Section 5.3.

(f) Evaluate organisational activities, provide feedback to employees and customers, and implement changes as appropriate.

Evaluation of the effectiveness of organisational activities must be performed to identify if further improvements could be made (Health and Safety Executive, 1998). This was generally well done in all health services. See Table 28. Feedback on the evaluation of organisational activities must be provided to staff and customers as without feedback no one knows what has happened. This commonly was not provided and impeded the sharing of success or the making of further improvements. See Table 15.

(g) Communicate effectively.

As well as providing clear policies and procedures for work, management must also provide staff members with helpful feedback on their work performance and the achievement of work related quality improvement goals (Martinez-Lorente, Dewhurst & Dale, 1998). Employees must know what is expected of them. Each health service must have quality included in the design stage of any work process with appropriate outcomes for service delivery set and communicated, rather than having outcomes just monitored. See Appendix L.

To provide more time to give a high standard of care documentation requirements should be decreased. Standard operating procedures should be used. This includes being customer focused as in hospital five where Medical Practitioners' standing orders were used for patient care and staff signed that they were followed. Only occurrences out of the ordinary should be documented.

Staff members must constantly look at whom they are providing service to, and treat this person, or department, as their customer. Good communication should be promoted between the customer and the service provider. The customer should have input into, and provide feedback on, the service providers quality activities as occurred in Hospital two.

A customer for all health services is the community in which the health service is located. There must be good communication between the health service employees and key local community members. The local community members should have input, through the Hospital Board, voluntary work, involvement in health and safety (for example, the Fire Brigade should have input into fire safety), through fund raising activities, etc. in facilitating a high standard of health care. This occurred in Hospital two.

When community members have input into the provision of health care quality and other activities they are more likely to be satisfied with the level of service received. Hospital two had 100% patient satisfaction on a State Government conducted Patient Satisfaction with Care Survey. Feedback on the effectiveness of the health care, and any difficulties experienced, must then be provided to the local community members so that they can help to implement further changes if needed. If community members are involved in making health service improvements, then the improvements are more meaningful to them and are more likely to meet their health care needs.

(h) Make suppliers partners in quality activities.

Health service managers must build strong partnerships with suppliers, award long-term service or goods supply contracts and *make the chosen supplier a partner in the health service quality activities program*. This will make the supplier more customer focused, should stimulate improvements in the suppliers' products and services and promote the discovery of new ways to deliver better customer value. Quality care can best be

provided when goods and service providers (value chain partners) also deliver quality products and services (Ketler & Armstrong, 1994).

The number of suppliers used should be minimised as having less suppliers to deal with decreases the work load. It allows a stronger customer focused relationship to develop between the health service and its goods and services suppliers. This occurred in Hospital one.

Suppliers' performance should be regularly reviewed as part of the organisational quality activities to ensure that the health service needs are met. Feedback on the evaluation should be provided to suppliers so that they receive praise for work well done or are made aware of opportunities for improvement (Matta, Chen & Tama, 1998).

(i) Conduct, publicise findings and use research to improve organisational activities.

Research must be conducted to identify opportunities for improvements. For research findings to be effective they must be used, publicised throughout the organisation and publicised elsewhere as appropriate. This allows the widest possible use of the research findings. See Table 15 and Appendix H.

(j) Use a Quality Care Model.

The Quality Care Model (see figure 3) is recommended for use for health service quality management. It includes all the quality activity factors that this research identified as important to provide the highest standard of patient care, the best use of health care funds for public hospitals and the most profit for private health care services. See Section 5.3.

6.3 Future research.

This research was an exploratory study. Glaser and Strauss (1967) and Yin (1984) wrote that exploratory research studies are a hypothesis generating process. These

authors state that the goal of an exploratory research study is to develop ideas for further studies.

The quality care model developed from this research study findings has not yet been tested. It is recommended that the Quality Care Model should be implemented in a health service and later evaluated for effectiveness against the expected outcomes. The expected outcomes of using this model of quality activities are:

- Cost effective service delivered
- A high standard of health care.
- Customer satisfaction.
- Able to adapt to changes in government policy.
- Increase in the number of customers for private hospitals.
- Continual improvement in organisational activities
- Good organisation wide communication.
- Minimal employee occupational injuries, sick leave and absenteeism.
- Employee commitment to the organisation.

The quality care model could also be implemented and trialed for effectiveness in other profit and non-profit making organisations. Research could then be conducted to identify if the success factors for quality activities described as effective for health care organisations facilitate the same successful business outcomes in other industries in Australia and internationally.

This research identified a similarity between the legal duty of care owed by employers, employees, suppliers, manufactures, etc. in the Western Australian Occupational Safety and Health Act, 1984 and the care for everyone who enters the organisation's premises promoted by the Quality Care Model as being a key driver for successful quality activities. This raises the possibility of future research being conducted to identify if

the Quality Care Model can also be used as a framework for successful occupational safety and health management.

Another area for future research is the use of business continuity planning to overcome major mistakes made, or disasters that occur that may affect the quality of future organisational activities.

6.4 Summary.

Terzioviski (1998, p.42) reported that "improving quality lead to increases in productivity, performance and profits." This research study has identified success factors for quality activities in Western Australian Hospitals and amalgamated these to form a Quality Care Model. This Model can be trialed for Quality Activity Management in Western Australian health care organisations and, in conjunction with the Western Australian Occupational Safety and Health Act 1984 and the Western Australian Occupational Safety and Health Regulations 1996, as a model for successful occupational safety and health management.

Findings of this research study have been used by the National Expert Advisory Group on Safety and Quality in Australian Health Care to make recommendations to Australian State and Federal Health Ministers (National Expert Advisory Group on Safety and Quality in Australian Health Care, 1999). Using this advice the Federal and State Health Ministers have established the Australian Council for Safety and Quality in Health Care (Witham, 2000).

Successful quality management practices are required for hospitals as the Australian health care system needs to improve its cost effectiveness (Pryor, 2000). This research study has identified that having a mission and a culture of care may be an answer. This exploratory research study has also described areas for future research to identify successful quality, occupational safety and health care management practices.

7. REFERENCES

- Accreditation paperwork comes first in aged care. (2000). *Australian Nursing Journal*. 7(9), p.3.
- Adam, E., Corbet, L. and Rho, B. (1994). Quality Improvement Practices in Korea, New Zealand and the USA. *Asia Pacific Journal of Quality Management*. 3(2), 13-25.
- Adams, G. & Schvaneveldt, J. (1991) *Understanding research methods* (2nd ed.). New York: Longman.
- Adrian, A. (2000). Clinical and corporate governance - salvation or just jargon. *Australian Nursing Journal*. 7(10), 36-37.
- Alderman, C. (1997). Bulling in the workplace. *Nursing Standard*. 11(35), 22-24.
- Anderson, S. (1993, August). *The patient - Do we care*. Paper presented at the Hospital Association of Western Australia Annual Conference, Princess Margaret Hospital, Perth, WA.
- Argo, W. (1997). A commitment to excellence in Safety and Health. *Safety in Australia*. 20(1), 16-19.
- Ashworth, K. (2000, May 16). Doctors at KEMH sued repeatedly: staff body. *The West Australian*. p.4.
- Aune, A. (1998). Quality and quality management at a crossroad. *Total Quality management*. 9(4&5), S6-S12.
- Australian Council on Healthcare Standards. (1998). *The EQuIP Guide. Standards and Guidelines for ACHS Evaluation and Quality Improvement Program* (2nd ed.). Sydney, NSW: Author.
- Australian Quality Council. (1994). *Australian Quality Awards assessment Criteria*. Saint Leonards, NSW: Author.
- Australian Quality Council. (1998a). *Australian Business Excellence framework*. Saint Leonards, NSW: Author.
- Australian Quality Council. (1998b). *Healthcare 98*. Saint Leonards, NSW: Author.
- Badrick, T., Preston, A. & Saunders, I. (1995). An evaluation of total quality management in health care organisations using a logical model. *Asia-Pacific Journal of Quality Management*. 4(3), 30-43.
- Badrick, T., Saunders, I. and Preston, A. (1996). Factors influencing the implementation of TQM in Australian Health-care organisations. *Paper presented at the First International Research Conference on Quality Management* February 5-7, 1996.

- Bailey, D. (1997). *Research for the Health Professional. A practical Guide (2nd ed.)*. Philadelphia, PA: F. A. Davis Company.
- Ball, H. (1996). Management of bullying and bulling in management. *Accident and Emergency Nursing*, 4, 114-118.
- Bakker, S. (2000). *Covert violence in nursing*. Unpublished master dissertation. Edith Cowan University, Perth, Western Australia.
- Barrett, T & Cameron, D. (Eds.). (2000). *Safe Business. Good Business. A practical guide to workplace safety, health & insurance in Australiasia*. Perth, WA: Allen Gianatti Vineyard Publishing.
- Baulderstone, P. (1992, April). *Hospital funding - Dilemma and Directions*. Paper presented at the Combined Regional Workshop of the Australian College of Health Service Executives held at Old Parliament House, Canberra.
- Benson, P., Saraph, J. & Schroeder, R. (1991). The effects of organisational context on quality management: An empirical investigation. *Management Science*, 37(9), 1107-1124.
- Berg, B. (1989). *Qualitative research methods for the social science*. Needham Heights, Massachusetts: Simon & Schuster.
- Black, S. & Porter, L. (1996). Identification of the critical factors of TQM. *Decision Sciences*, 27(1), 1-22.
- Blazey, M. (1998). Insights into organisational self-assessments. *Quality Progress*, 31(10), 47-52.
- Bohle, P. & Quinlan, M. (2000). *Managing occupational health and safety. A multidisciplinary approach (2nd ed.)*. South Yarra, Victoria: Macmillan Publishers Australia Pty. Ltd.
- Boscarino, J. & Steiber, S. (1982). Hospital shopping and consumer choice. *Journal of Health Care Marketing*, 2, 15-23.
- Bourke, V. (1994). Herz presents a moving target. *European Quality*, 1(4), 38-42.
- Bower, A. (1998, January 21). Staff fear for care standards. *The West Australian*, p.28.
- Branson, R. (1998). Small is the best practice. *European Quality*, 5(4), 60-63.
- Breen, L. (1998). Baronor Private Hospital moulds quality into unique healthcare service. In Australian Quality Council. *Healthcare 98* (pp. 20-21). Saint Leonards, NSW: Author.

- Brown, A. (1994). The role of case study research on quality management. *Proceedings of the First National Research Conference on Quality Management*. Monash University, Melbourne, Victoria: pp. 59-64.
- Brown, A., Millen, R. and Sohal, A. (1995). Future research issues in total quality management. *Asia Pacific Journal of Quality Management*. 4(2), 89-92.
- Brown, A. & van der Wiele, T. (1995a). Industry experience with ISO 9000. *Asia Pacific Journal of Quality Management* 4(2), 8-17.
- Brown, A. & van der Wiele, T. (1995b). Quality management Self-Assessment in Australia. *Total Quality Management Journal*. 7(3), 253-308.
- Bryman, A. (1998). *Quality and Quality in Social Research*. London, England: Unwin Hyman Ltd.
- Burns, J. (1994). National overview. *European Quality*. 1(3), 9.
- Burns, N. & Grove, S. (1987). *The practice of nursing research conduct, critique and utilization*. Philadelphia, United States of America: W.B. Saunders Company.
- Buxton, F. (1994). Marks for Public Service. *European Quality*. 1(4), 12-16.
- Carson, P., Carson, K., Eden, W. and Roe, W. (1998). Does empowerment translate into action? an examination of service recovery initiatives. *Journal of Quality management*. 3(1), 133-148.
- Casalou, R. (1991). Total Quality Management in Health Care. *Hospital and Health Services Administration*. 36(1), 134-146.
- Caszlo, G. (1998). Implementing a quality management program - the three Cs of success: commitment, culture, cost. *The TQM Magazine*. 10(4), 281-287.
- Chamber of Minerals and Energy of Western Australia Inc. (1998). *Guide to positive performance indexing for the management of occupational safety and health in the mining industry*. Perth, WA: Author.
- Chandler, K. (1998). Investing in the future: High-Tech Solutions for quality improvement. *Quality Progress*. 31(7), 65-69.
- Chandra, M. (1993). Total Quality Management in Management Development. *Journal of management development*. 12(7), 19-31.
- Churchill, G. (1979). A paradigm for developing better measures of marketing construct. *Journal of marketing research*. 16, 64-73.
- Clancy, M. (2000) Big-hearted Michael lobbies for change. *Australian Nursing Federation*. 17(1), 12.

- Clayton, D. (1998). The Australian Business Excellence Framework - new directions for 1999. *The Quality Magazine*. 7(6), 6-7.
- Cohen, A. (1994). Evaluating new ways of managing quality: An interview with Stephen M. Shortell and Jim O'Brien. *Journal on Quality Improvement*. 20(2), 90-95.
- Converse, J. & Schuman, H. (1974). *Conversations at random: Survey research as interviewers see it*. New York: Wiley.
- Cornally, S. (1986). Management's participation in rehabilitation: Success versus failure. *Journal of Occupational Health and Safety – Australia/NZ*. 3(4), 382-387.
- Conti, T. (1994). A promising future. *European Quality*. 1(4), 52-53.
- Costin, H. (1994). *Reading in Total Quality Management*. Orlando, Florida: Haradcourt, Brace and Company.
- Cremer, C. (1998). Quality in the age of communication. *Quality Progress*. 31(7), 47-50.
- Creswell, J. (1994). *Research Design: Qualitative and Quantitative Approaches*. Thousand Oaks, CA: Sage.
- Cronbach, L. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*. 16, 297-334.
- Crosby, p. (1979). *Quality is free*. New York: McGraw-Hill.
- Dahlaggaard, S., Dahlaggaard, J. & Edgeman, R. (1998). Core values: The preconditioning for business excellence. *Total Quality magazine*. 9(4&5), S51-55.
- Dale, B. (1992). Total quality management: What are the research challenges? in Hollier, R., Boaden, R., & New, S. (Eds.), *International Operations*. London, England: Elsevier Science Publishers.
- Dale, B. & Plunkett, J. (1995). *Quality costing (2nd ed.)*. London: Chapman & Hall.
- Dawson, P. (1995). Implementing quality management. Some general lessons on managing change. *Asia Pacific Journal of Quality management*. 4(1), 35-46.
- Dean, J. (1998). Research on transformations to quality organisations. *Quality Management Journal*. 5(2), 15-23.
- Debrah, Y. (1994). Evolution and implementation of a quality improvement programme: a case study of two health care organisations. *Total Quality Management*. 5(3), 11-25.

- Deming, W. (1986). *Out of crisis*. Cambridge, Mass.: MTI Centre for Advanced Engineering Study.
- de Noray, J. (1994). The Age of Anticipation. *European Quality*, 1(4), 49-51.
- Dervitsiotis, K. (1998). A new total quality management frontier: Getting ready to jump the curve. *Total Quality Management*, 9(4&5), S56-S61.
- Dickhout, R. (1998). All I ever needed to learn about change management I learnt at engineering school. *The Quality Magazine*, 7(1), 17-22.
- Dobson, P. and Tosh, M. (1998). Creating a learning organisation: Training and development in British Steel's universal beam mill. *Total Quality Management*, 9(4&5), S66-S70.
- Donovan, G. (1994). The move to freedom and self-managed work teams. *Business Directions*, 50, 14-15.
- Downer, A. (1999, December). From the Minister. *Focus*, p.1.
- Duff, E. (1995). Horizontal violence: a conundrum for nursing. *Collegian Journal of the Royal College of Nursing Australia*, 2(2), 5-17.
- Edgeman, R. & Dahlgaard, J. (1998). A paradigm for leadership excellence. *Total Quality Management*, 9(4&5), 575-579.
- Ell, M. (1994). Is Quality Top Priority? *Association for Quality in Health Care (Western Australia) Newsletter*, 7(4), 2-10.
- Eton, M. (1994a). Quality certification. Boom in the recession. *Quality Australia*, 10(6), 16-17.
- Eton, M. (1994b). Quality Improvement and Managed Care. *Association for Quality in Health Care (Western Australia) Newsletter*, 7(3), 8-10.
- European Quality Publications Ltd. (1998). Bigger, better, improved? *European Quality*, 5(4), 30-37.
- Evans, J. (1997). Critical linkages in the Baldrige Award Criteria: Research Models and Educational Challenges. *Quality management Journal*, 5(1), 13-30.
- Farrell, G. (1997). Aggression in clinical settings: nurses view. *Journal of Advanced Nursing*, 25, 501-508.
- Feigenbaum, A. (1983). *Total Quality Control: Engineering and management* (3rd ed.). New York: Mc Graw-Hill.
- Ferry, J. (1994). The secret of swatch. *European Quality*, 1(4), 18-24.

- Finn, M. and Porter, L. (1994). TQM Self-assessment in the UK. *The TQM Magazine*. 6(4), 56-61.
- Fisher, T. (1991). A quality approach to occupational health, safety and rehabilitation. *Journal of Occupational Health and Safety - Australia and New Zealand*. 7(1), 23-28.
- Flynn, B., Schroeder, R. & Sakakibara, S. (1994). A framework for TQM research and an associated measurement instrument. *Journal of Operations management*. 11(4), 339-366.
- Ford, J. (1998). Integrating occupational health and safety. *The Quality Magazine*. 7(6), 46-47.
- Forte, R. (1993). *Best Practice and Benchmarking: A Discussion Paper*. (Available from Roberto Forte, Senior Workplace Development Officer, Workplace Development Unit, Human Resources Branch, Health Department of Western Australia.)
- Foster, S. (1998). The ups and downs of customer-driven quality. *Quality Progress*. 31(10), 67-72.
- Fountain, M. (1998). The target assessment model as an international standard for self-assessment. *Total Quality Management* 9(4&5), S95-S99.
- Frost, F. & Jones, M. (1994). Quality Standards in Export Marketing. *Asia Pacific Journal of Quality Management*. 3(1), 60-76.
- Ganley, H. (1998). A business improvement program utilising the Australian Business Excellence Framework Criteria. In the Australian Quality Council. *Healthcare* 98 (pp. 15-17). Saint Leonards, NSW: Author.
- Garvin, D. (1994). Beyond Buzzwords. A realistic approach to Total Quality and the learning organisation. *European Quality*. 1(2), 20-25.
- Garvin, D. (1998). How to build a learning organisation. *European Quality*. 5(2), 28-33.
- Gertz, D. (1995). Growing businesses best. *European Quality*. 1(4), 75.
- Gibson, J., Ivancevich, J. and Donnelly, J. (1985). *Organisations Behaviour, Structure, Processes*. (5th ed.). Plano, Business Publications Incorporated.
- Gibson, J., Ivancevich, J. and Donnelly, J. (1994). *Organisations Behaviour, Structure, Processes*. (8th ed.). Sydney, NSW: Irwin.
- Gilbert, S. (1995). Business improvement philosophies and techniques. What makes them successful and sustainable? *Asia Pacific Journal of Quality Management*. 4(2), 35-43.

- Giraud, A. & Jolly, D. (1992). How to induce physicians to engage in Quality Assurance Activities in a University Hospital: A Policy. *Quality Assurance in Health Care*. 4(1), 19-24.
- Glaser, B. & Strauss, A. (1967). *The discovery of grounded theory: Strategies for qualitative research*. Chicago: Aldine.
- Goldsmith, C. (1994). What good OHS can do for your bottom line. *The Australian Journal of Workplace Health and Safety*. 12(3), 4-6.
- Goldrick, P. (1998). The new face of leadership. *The Quality Magazine*. 7(4), 43-46.
- Gorst, J. Kanji, G. and Wallace, W. (1998). Providing customer satisfaction. *Total Quality Management*. 9(4&5), S100-S103.
- Governey, M. (1998). Measuring up to great expectations. *European Quality*. 9(1), 18-21.
- Grandjean, E. (1988). *Fitting the task to the man. A textbook of occupational ergonomics (4th ed.)* Philadelphia, PA: Taylor and Francis Ltd.
- Greene, R. (1993). *Global quality: A synthesis of the world's best management models*. Milwaukee: Society for Quality Control Press.
- Gupta, P. & Pongetti, D. (1998). Standards. *Quality Progress*. 31(10), 19-24.
- Hakim, C. (1987). *Research Design. Strategies and choices in the design of social research*. London, England: Unwin Hyman Ltd.
- Hamel, G. (1998). A time for revolutionaries. *European Quality*. 5(4), 20-25.
- Hammerschmid, K. & Uliana, L. (1998). Environmental management systems - the ISO 14001 certification process and its benefits to industry. *The Quality Magazine*. 7(3), 54-57.
- Hardie, N. (1998). The effects of quality on business performance. *Quality Management Journal*. 5(3), 65-82.
- Harrison, M. (1987). *Diagnosing Organizations*. Newbury Park, CA: Sage.
- Hausner, A. (1999). Australian Quality Awards for Business Excellence linked to improved bottom line. *The Quality Magazine*. 8(4), 47-48.
- Health & Safety Executive. (1998). *Successful Health and Safety Management*. Norwich, England: Author.
- Health Department of Western Australia. (1994). Best Practice in the Health Sector. *Human Resource Link*. 8, 12-13.

- Heath. P. (Chairperson). (1993). *The ACHS Accreditation Guide. Standards for Australian Health Care Facilities*. (12th ed.) Zetland. N.S.W.: The Australian Standards on Healthcare Standards Ltd.
- Heinbuck. S. (1993). Walk the talk: Applying TQ principles to an element of management development - contracting. *Journal of Management Development*. 12(7), 60-70.
- Heinrich. H. (1980). *Industrial accident prevention* (5th ed.). New York, NY: McGraw-Hill.
- Henry. J. (1998). Lessons from team leaders. *Quality progress*. 13(3), 57-59.
- Herme. W. (1995). Design for quality: the practice of leading Australian manufacturers. *Asia Pacific Journal of Quality Management*. 4(2), 18-34.
- Herring. J. (1999, April 11). Your say. *The Sunday Times*, p.15.
- Hiam. A. (1993). *Does quality work? A review of relevant studies*. New York: The Conference Board.
- Hopkins. A. (1999). "Repeat disasters: The lessons of the Moura Coal Mine." In Mayhew. C. and Peterson. C (Eds.). *Occupational Health and Safety in Australia: Industry, Public Sector and Small Businesses*. St. Leonards, NSW: Allen & Unwin.
- Horan. M. (1999, August 29). Health budget ailing. *The Sunday Times*, p. 22.
- Horwood. S. (1993). Standardising quality improvement. *Quality Australia*. 10(5), 24-28.
- Hurley. R. (1994, July). TQM and marketing. How marketing operates in quality companies. *Quality Management Journal*. 42-51.
- IFAP. (1998, March). Full commitment to quality and care brings results. *Safety WA*, p.5.
- Iliffe. J. (1999). Nurses can help protect Medicare. *Australian Nursing Journal*. 7(3), 1.
- Inham. T. (1994). How to Implement Management by Objectives into the workplace. *The TQM Magazine*. 6(4), 53-54.
- Jayanth. J., Handfield. R. & Ghosh. S. (1997). The application of quality tools in achieving quality attributes and strategies. *Quality Management Journal*. 5(1), 75-100.
- Jick. T. (1979). Mixing qualitative and quantitative methods: Triangulation in action. *Administrative Science Quarterly*. 24, 602-611.
- Johansson. C. (1994). Self Investment. *European Quality*. 1(4), 6-10.

- Jonker, J. (1998). The need for a new quality instinct. *European Quality*. 5(3), 8-11.
- Jonker, J. and Klaver, J. (1998). The hole at the heart of TQM. *European Quality*. 5(1), 26-28.
- Kandampully, J. (1998). Service quality to service loyalty: A relationship which goes beyond customer service. *Total Quality Management*. 9(6), 431-443.
- Kanji, G. (1998). Measurement of business excellence. *Total Quality Management*. 9(7), 633-643.
- Kannan, V., Tan, K., Handfield, R. & Ghosh, S. (1999). Tools and techniques of quality management: An empirical investigation of their impact on performance. *Quality management Journal*. 6(3), 34-49.
- Krause, T. (1997). Trends and developments in Behaviour-Based Safety. *Professional Safety*. 42(10), 21-25.
- Krause, T & Finley, M. (1993). Safety and continuous improvement, two sides of the same coin. *The Safety and Health Practitioner*. 11(9), 19-22.
- Krause, T. & Hindley, J. (1989, October). Behaviourly based safety management. Parallels with the quality improvement process. *Professional Safety*. 20-25.
- Kaufman, R. (1998). If benchmarking is the solution, what's the problem? *The Quality Magazine*. 7(1), 48-53.
- Keegan, R. (1998). Clusters of excellence. *European Quality*. 5(5), 44-46.
- Keinath, B & Goski, B. (1999). An empirical study of the Minnesota Quality Award evaluation process. *Quality Management Journal*. 6(1), 29-39.
- Kelly, M. (1994a). Editorial. *European Quality*. 1(2), 1.
- Kelly, M. (1994b). Serious about Service. *European Quality*. 1(4), 56-57.
- Kelly, R. (1996). Worker psychology and safety attitudes. *Australian Safety News*. 67(10), 45-47.
- Kennedy, R. (1998). TPM: the next quality frontier. *The Quality Magazine*. 7(6), 48-54.
- Kerridge, D. & Kerridge, S. (1994). The Deming Legacy. *European Quality*. 1(2), 32-37.
- Ketler, P. & Armstrong, G. (1994). *Principles of marketing* (6th ed.). Englewood Cliffs, NJ: Prentice-Hall International Inc.

- King, G. (1995). Achieving customer retention through quality management and marketing. *Asia Pacific Journal of Quality Management*. 4(2), 59-61.
- King, L. (1994). Consultants, certification and celibacy. *Quality Australia*. 10(6), 20-23.
- King, M. (1998). Organisational self-assessment. Observation and reflections. *The Quality Magazine*. 7(2), 39-45.
- Kume, H. (1994). A generous gift. *European Quality*. 1(2), 38-40.
- Lagrange, L., Clarke, S., Lukowski, S. & Mussett, J. (2000). *Rehabilitation, Compensation and Health Promotion*. Claremont, Western Australia: Edith Cowan University.
- La Grone, R. (1980). *A qualitative case study of explicit and implicit goals in a small school district*. Texas Tech University, Texas: University Microfilms International.
- Larsen, B. & Haveisjo, T. (1998). The price of quality: A critical discussion of the Public Sector Quality Award. *Total Quality Management*. 9(4&5), S152-S155.
- Laszlo, G. (1998). Implementing a quality management program - the three Cs of success: commitment, culture, cost. *The TQM Magazine*. 10(4), 281-287.
- Lemaire, P. and Jonker, J. (1998). Why learning must be a way of being for the next generation. *European Quality*. 5(5), 52-56.
- Lendrum, T. (1995). *The Strategic Partnering Handbook*. Sydney, NSW: McGraw Hill Book Company.
- Lewis, B. (1994). The four column model - Some views on purchaser/provider separation. *Paper prepared for the Health Department of Victoria*. Canberra, ACT: Management Consortium Ltd.
- Lindsay, D. (1995). *A guide to scientific writing* (2nd ed.). Melbourne, Vic.: Longman.
- Listen to electorate. (1998, April 14-20). *Guardian Express*, p.6.
- Longbottom, D. (1998). Self-assessment: Game over? *Total Quality Management*. 9(4&5), S156-S159.
- Lorence, D. (1994). Benchmarking Quality under U.S. Health Care Reform: The Next Generation. *Quality Progress*. 27(4), 103-107.
- Löwik, J. (1994). Waging war on waste. *European Quality*. 1(2), 26-31.
- Lynch, J. and Schuler, D. (1990). Consumer evaluation of Hospital Services from an economics of Information Perspective. *Journal of Healthcare Marketing*. 10(2), 16-22.

- Lynn. M. (1991). Deming's Quality Principles: A Health Care Application. *Hospital and Health Services Administration*. 36(1). 111-120.
- MacNeal. J. & Rimmer. M. (1993). Benchmarking in Australia: The state of play. *Asia Pacific Journal of Quality Management*. 2(3). 30-45.
- Main. J. (1994). From satisfaction to joy. *European Quality*. 1(4). 44-48.
- Mangelsdorf. D. (1998). Evolution from quality management to an integrated system in modern business. *Total Quality Management*. 9(4&5). S164-S166.
- Marsh. J. (1994). Consultant's Assessment. *European Quality*. 1(4). 14-15.
- Marshall. J. (1994). Key issues in certification. *European Quality*. 1(2). 56-58.
- Martinez-Lorente. A., Dewhurst. F. and Dale. B. (1998). Total Quality Management: origins and evolution of the term. *The TQM Magazine*. 10(5). 378-386.
- Martinez-Lorente. A., Gallego-Rodriguez. A. & Dale. B. (1998). Total Quality Management and company characteristics: An examination. *Quality Management Journal*. 5(4). 59-71.
- Matta. K., Chen. H. & Tama. J. (1998). The information requirements of total quality management. *Total Quality management*. 9(6). 445-461.
- Mc Comish. J. (1998). Policy Connections. *European Quality*. 5(4). 12-14.
- Mc Kimmie. M. (1995. November 23). 120 Health Jobs go in new purge. *The West Australia*. p.8.
- Mc Leod. N. (1998). Performance indicators - Negative and positive. *Safety Institute of (Western) Australia Journal*. 6(1). 12-16.
- Mc Leod. W. (1985). *Collins English Dictionary*. London, England: Collins.
- Mc Millan. I. (1995). Loosing control. *Nursing Times*. 91(15). 40-43.
- Merry. C. (1995). *Instilling a safety culture in the workplace*. Ohio: National Hearing Conservation Association.
- Motzko. S. (1989). Variation. system improvement and safety management. *Journal of Professional Safety*. August 1989. 17-20.
- Mullen. E. (1997). Workplace violence: cause for concern or the construction of a new category of fear? *Journal of Community and Applied Social Psychology*. 7. 21-32.

- Mussett, J. (1994). Total Quality Management Principles in Occupational Health and Safety. *Safety Institute of (Western) Australia Journal*, 2(2), 7-8.
- Myers, K. (1997). Cultural change following quality initiative. *Quality Newsletter* 9, 10-11.
- Nakhai, B. & Neves, J. (1994). The Deming, Baldrige and European Quality Awards. *Quality Progress*, 27(4), 33-37.
- National Expert Advisory Group on Safety and Quality in Australian Health Care. (1999). *Implementing safety and quality enhancement in health care. National actions to support quality and safety improvement in Australian health care*. Canberra: Commonwealth Department of Health and aged Care.
- Nettle, D. (1995). Reflections on the evolution of the quality movement in Australia. *Asia Pacific Journal of Quality Management*, 4(5), 56-58.
- North, R. (1995, April 19). We are not getting proper hospital care. *The West Australian*, p.14.
- Norusis, M. (1997). *SPSS Professional statistics 7.5*. Chicago, Ill: SPSS Inc.
- Noy, M., Miskimmin, S. & Testi, J. (1993). Best Practice Building and Construction: The C11 Benchmarking Research Project. *Benchmark*, 6, 18-19.
- Nunnally, G. (1967). *Psychometric Theory*. New York, NY: McGraw-Hill.
- Nursing Times. (1998). Stressed night nurses warn patients could die. *The Australian Nursing Journal*, 5(9), 15.
- Olson, M. (Ed.) (1999). As many as 50,000 patients are injured. *ANF Newsletter*, 15(7), 2.
- Olson, M. (2000). US aged care nurses in the same leaky boat as us. *Western Nurse*, 17(4), 3.
- Oswald, L. & Lang, A. (1998). It takes more than sparkling water. *Quality Progress*, 13(3), 60-64.
- Peters, J. (1994). Operationalizing Total Quality: A business Process Approach. *The TQM Magazine*, 6(4), 29-33.
- Peterson, D. (1997). Accountability, culture and behaviour. *Professional Safety*, 42(10), 45.
- Perry, C. & Coote, L. (1994, December). *Processes of a Case Study Research Methodology: Tool for Management Development*. Paper presented at the Australian and New Zealand Association for Management, Victoria University of Wellington, Wellington, New Zealand.

- Perry, C., Wong, S. & Bernhardt, S. (1995). Relationships between TQM, marketing and strategic management. A case study investigation. *Asia Pacific Journal of Quality Management*. 4(3), 16-29.
- Philips, L., Chang, R. & Buzzell, R. (1983, Spring). Product quality, cost position and business performance: A test of some key hypotheses. *Journal of Marketing*. 26-43.
- Piggott, K. (1996). Culture in safety. *Safety Institute of (Western) Australia Journal* 4(2), 7-9.
- Plsek, P. (1998). Incorporating the tools of creativity into quality management. *Quality Progress*. 13(3), 21-28.
- Polit, D. & Hungler, B. (1985). *Essentials of Nursing Research. Methods and applications*. Philadelphia, Pennsylvania: J. B. Lippincott Co.
- Powell, T. (1995). Total TQM as competitive advantage: A review and empirical study. *Strategic Management Journal*. 16(1), 15-37.
- Power, P. (1995). Best practice and benchmarking: The Australian Hospital Association perspective. *Australasian Association for Quality in Health Care*. 5(4), 11-15.
- Preston, A. & Saunders, I. (1994). Understanding quality leadership. *Asia Pacific Journal of Quality Management* 3(1), 24-42.
- Preston, A. Saunders, I., O'Sullivan, D., Garrigan, E. & Rice, J. (1995). Matching leadership and quality practices in a hospital setting. *Asia Pacific Journal of Quality management*. 4(2), 69-71.
- Prichard, M. (1994, December). *Media statement. Government of Western Australia*. Perth, WA: Western Australian Government.
- Princess Alexandra Hospital. (1994). *Best Practice Communication Strategy*. Brisbane, Queensland: Author.
- Provost, L. & Langley, G. (1998). The importance of concepts in creativity and improvement. *Quality Progress*. 13(3), 31-38.
- Pryer, W. (1998, April 20). Urgent patients left in queues. *The West Australian*. p.4.
- Pryor, W. (2000, March 23). \$9 million budget hole looms at hospital. *The West Australian*. p.4.
- Radtke, P. (1998). Berlin's supermodel. *European Quality*. 5(3), 12-16.

- Rafter, D. (1999). Outsourcing of support services. Optimising supplier performance via relationship and delivery method selection. *The Quality Magazine*. 8(4), 43-46.
- Rayner, C. and Hoel, H. (1997). A summary review of literature relating to workplace bullying. *Journal of Community and Applied Psychology*. 7, 181-191.
- Reeve, T. (1993). *Coherent and Consistent Quality Assurance and Utilisation Review Activities in Public and Private Hospitals in Australia*. Canberra: Department of Health, Housing, Local Government and Community Services.
- Reichheld, F. & Sasser, W. (1990). Zero defection: Quality comes to services. *Harvard Business Review*. 68(5), 105-111.
- Richardson, G. (1994). *Best Practice in the Health Sector*. Canberra, ACT: Department of Health, Housing, Local Government and Community Services.
- Robertson, P. (1998). Teams and the learning organisation. *The Quality Magazine*. 7(6), 55-57.
- Rose, R. (1997a, October 11). Waiting list pledge fails to cut figure. *The West Australian* p.8.
- Rose, R. (1997b, October 11). W.A. eyes hospital fees plan. *The West Australian* p.8.
- Routhieaux, R. & Gutek, B. (1998). TQM/CQI effectiveness at team and departmental levels. *Journal of Quality management*. 3(1), 39-62.
- Russell, C. (1999). Innovation and Quality. *The Quality Magazine*. 8(4), 51-52.
- Saint Lawrence, D. and Stinnett, B. (1994). Powerful planning with simple techniques. *Quality Progress*. 27(7), 57-64.
- Saint Vincent's Hospital. (1994). *Best Practice and Workplace Reform. A case study*. Melbourne, Victoria: Author.
- Saunders, I., Preston, A. (1994). A model and a research agenda for total quality management. *Total Quality Management* 5(4) 185-202.
- Saunders, I., Preston, A., Rice, J., O'Sullivan, D. & Garrigan, E. (1997). Hospital leadership for quality: Theory and practice: Quality performance evaluation. *Australian Health Review*. 20(1), 108-121.
- Searles, B. (1998). Benchmarking network for organisational self-assessment. *The Quality Magazine*. 7(2), 16-20.

- Serghis, D. (1998a). WA nurses pay fight set to escalate. *Australian Nursing Journal* 5(7), 5.
- Serghis, D. (1998b). Royal Hobart study confirms workload woes. *Australian Nursing Journal* 5(7), 6.
- Scrivens, E. (1995). *Accreditation. Protecting the profession or the consumer?* Buckingham, Philadelphia: Open University Press.
- Shea, C. & Howell, J. (1998). Organisational antecedents to the successful implementation of Total Quality Management. A social cognitive perspective. *Journal of Quality Management*, 3(1), 3-24.
- Skilleteer, R. (1994). TQM and safety: CIG's continuous improvement strategy. *Safety Institute of (Western) Australia Journal*, 2(1), 10-11.
- Sluti, D. & Maani, K. (1995). Empirical analysis of quality improvement in manufacturing instrument survey instrument development and preliminary results. *Asia Pacific Journal of Quality Management*, 4(1), 47-72.
- Smart, R. (1998). Leadership and learning in organisations. *The Quality Magazine*, 7(5), 44-46.
- Sohal, A. & Lu, E. (1995). The quest for quality at Safeway Australia. *Asia Pacific Journal of Quality management*, 4(3), 44-61.
- Sorqvist, L. (1998). Measuring the cost of poor quality. *European Quality*, 5(4), 42-47.
- Sosa, O & Barry, G. (1995). Management by deployment. *Asia Pacific Journal of Quality Management*, 4(2), 82-84.
- Staffaroni, K & Bernstein, M. (1998). NCR's Quality Turnaround. *Quality Progress*, 31(10), 75-79.
- Standards Australia / Standards New Zealand (1994a). *Quality systems - Model for quality assurance in design, development, production and servicing. AS/NZS ISO 9001:1994*. Homebush, NSW. / Wellington, NZ.: Authors.
- Standards Australia/Standards New Zealand. (1994b). *Quality management and quality system elements. Part3: Guidelines for processed materials. AS 3904.3:1994. NZS 90004.3: 1994. ISO 9004-3:1993*. Homebush, NSW/Wellington, NZ.: Author.
- Standards Australia/Standards New Zealand. (1994c). *Quality systems - Model for quality assurance in final inspection and testing. AS/NZS ISO 9003: 1994*. Homebush, NSW./Wellington, NZ.: Authors.
- StateWest Credit Society Ltd. (1996). StateWest recognises excellence in the workplace. *Western Star*, 2(2), 5.

- Stephens. K. (1994). Quality Systems and Certification: Some observations and thoughts. *Asia Pacific Journal of Quality Management*. 2(2). 11-25.
- Stratton. B. (1998a). Overlook Hospital Emergency department: Meeting the competition with quality. *Quality Progress*. 31(10). 41-44.
- Stratton. B. (1998b). UPS: Its long-term design delivers quality millions of times each day. *Quality Progress*. 3(10). 37-38.
- Stratton. B. (1998c). Texas nameplate Company: All you need is trust. *Quality Progress*. 31(10). 29-32.
- Stuart. W. (1994. May). *Achieving international competitiveness through Benchmarking*. Paper presented at the Best Practice in Health Sector Conference. World Congress Center. Melbourne.
- Schwebel. D. (1998). Developing an effective quality monitoring tool. *The Quality Magazine*. 7(5). 34-35.
- Smith. T. (1999). What's wrong with behaviour-based safety? *Professional Safety*. 44(9). 38-40.
- Tabladillo. M. (1994. July). Creation of management performance measures from employee surveys. *Quality Management Journal*. 1(4). 52-66.
- Taylor. G., Easter. K. & Hegney. R. (1999). *Advancing Safety. An Australian Workplace Guide*. Perth. WA: Training Publications.
- Taylor. M. (1998). Preventative vs. Corrective Actions: The horse, the barn door, and the apple. *Quality Progress*. 13(3). 66-71.
- Terziovski. M. (1998). Quality and the Australian manufacturing sector. *The Quality Magazine*. 7(6). 42-44.
- Terziovski. M., Samson. D. and Dow. D. (1995). The impact of ISO 9000 certification on customer satisfaction. *Asia Pacific Journal of Quality Management*. 4(2). 66-68.
- Tuft. V. (1995). CRINE - Cost reduction initiative for the new era. *Trans IMarE*. 107 Part 1. 1-11.
- UK Nurses. Two in three think of quitting. (1998. January 27). *International Express*. p.2.
- Underwood. D. (1998). Everything not so fine in aged care. *The Australian Nursing Journal*. 5(9). 4.
- Uren. J. (1997). Nurses and the corporatisation of health care. *Australian Nursing Journal* 4(9). 3.

- Van der Wiele, T., Dale, B., Williams, R., Bertsch, B. & Timmers, J. (1994). An examination of the type of Total Quality Management teaching and research carried out by European academic institutions. *Total Quality Management* 5(5), 299-308.
- Van der Wiele, T., Dale, B., Williams, R., Kolb, F., Luzon, D., Schmidt, A. & Wallace, M. (1995). State-of-the-art study on self-assessment. *The TQM Magazine* 7(4), 13-17.
- Van Loon, H. (1998). The audit is dead! Long live assessment. *The Quality magazine*. 7(3), 63-65.
- Vass, D. & Kincade, D. (1999). Relationship of TQM implementation and employee opinion survey: A study of three manufacturers. *Quality Management Journal*. 6(1), 60-73.
- Videnieks, M. (1999, January 17). The waiting shame. *Sunday Times*. pp. 8-9.
- Vincoli, J. (1991). Total Quality Management and the Safety and Health Professional. *Journal of Professional Safety*, June 1991, 27-32.
- Vogel, N. (1998). Global quality perspective and directions. *The Quality Magazine*. 7(4), 47-50.
- Vogel, N. & Hausner, A. (1998). Quality management practices linked to business performance. *The Quality Magazine*. 8(4), 49-50.
- Wacker, J. & Sheu, C. (1994). Stages of Quality Management Evolution in the Pacific Rim. *Asia Pacific Journal of Quality Management*, 3(2), 42-54.
- Wai-Kwok, L. & Wai-Kwok, T. (1995). Company culture and total quality management: a case study. *Asia pacific Journal of Quality management*. 4(4), 41-45.
- Walker, J. (1994). Brent's Total Quality Programme. *The TQM Magazine*. 6(4), 9-10.
- Webber, J. (1995, May 6). Wards now less orderly. *The West Australian*, p.5.
- Weller, L. and Hartley, S. (1994). Teamwork and cooperative learning: An educational perspective for businesses. *Quality Management Journal*. 1(4), 30-41.
- Wiarda, E. and Luria, D. (1998). The best- practice Company and other benchmarking myths. *Quality progress*. 13(2), 91-94.
- Wilkins, D. (1998). Practical management and ISO 9001? *The Quality Magazine*. 7(6), 33-40.

- Wilkinson. A., Redman. T., Snape. E. and Marchington. M. (1998). *Managing with Total Quality Management. Theory and Practice*. London: Macmillan.
- Wilmott. P. (1994). Total Quality with teeth. *The TQM Magazine*. 6(4). 48-50.
- Witham. H. (2000). Australian Council for Safety and Quality in Health Care formed. *Australian Nursing Journal*. 7(9). 7.
- Wong. W. (1998). A holistic perspective on quality quests and quality gains: The role of environment. *Total Quality Management*. 9(4&S). S241-S245.
- WorkSafe Western Australia. (1999). *WorkSafe Plan*. Perth. WA: Author.
- Wu. A. (1995). The measure and mismeasure of hospital quality: Appropriate risk adjustment methods in comparing hospitals. *Annals of Internal Medicine*. 122(2). 149-150.
- Yin. R. (1984). *Case Study Research. Design and Methods*. Beverley Hills: Sage Publications.
- Zantanidis. S. & Tsiotras. G. (1998). Quality management: A new challenge for the Greek construction industry. *Total Quality Management*. 9(7). 619-632.
- Zonnenshain. A., Naveh. E. and Halevy. A. (1998). A survey on the cost of Nonquality to a Nation's Economy: The Israeli Experience. *Quality Progress*. 3(10). 93-97.
- Zuckerman. A. (1998a). EU trends could prove costly to American businesses. *Quality Progress*. 13(2). 49-53.
- Zuckerman. A. (1998b). Experts see standards as a threat to U.S. competitiveness in world market place. *Quality Progress*. 13(5). 16-22.

8. APPENDIXES

APPENDIX A

**Research Application form for Hospital
Ethics Committee.**

RESEARCH APPLICATION FORM FOR HOSPITAL ETHICS COMMITTEE.

Project Title

An Exploratory Analysis of Success Factors in Quality Activities in Western Australian Hospitals.

Applicant's Name

Janis Mussett.

Institution

Churchlands Campus, Edith Cowan University.

Degree

Doctor of Philosophy (Business).

Principal Supervisor: Alan Brown (Associate Professor).

Phone: 273 8278

Study Aim

The purpose of this research is to identify the aspects of health care organisational management and activities that produce the highest level of quality care.

Methodology

This research will be conducted as an Exploratory Multi-Case Control Study.

Four Western Australian hospitals, who are judged by certifying and professional health care bodies to have the best quality activities in Western Australian Health care, and who meet the study inclusion criteria, will have their quality practices analysed and compared to four other Western Australian hospitals who are not considered to have the most effective quality activities.

Information on each selected hospital's quality activities will be collected from organisational records, questionnaire answers, interviews and direct observations. Information on assessed quality activities and their results will be categorised and used to answer the research questions.

Construct validity will be provided using multiple sources of evidence to establish a chain of evidence to identify the strategies necessary to provide the most effective quality activities. Key informants will be asked to review a draft report to ensure its accuracy.

External validity will be provided by repeating the study in a series of four case and four control hospitals. This allows the findings to be generalised for Australian hospital quality activities.

All data will be collected by one researcher. This will provide inter-rater reliability. A pilot study has been performed in a West Australian hospital to test the reliability and validity of the research tools.

Ethical Considerations.

Consent to participate in this study is requested from your Hospital's Research Ethics Committee and each Research participant. The hospital, and each participant, is free to withdraw from the study at any time without penalty.

Any research name identifying data will be shredded at the completion of the study. Research hospitals and participants will be not be identified by name.

Research approval for this study has been granted by the Edith Cowan University Ethics Committee.

Perceived Benefits of conducting this research

Common factors identified as being effective will be used to describe the benefits of quality activities and to develop a hospital quality care strategic plan which can be adopted Australia wide by other hospitals to enable health care dollars to be used in the most effective ways, to provide ideas and guidelines for other health care organisations to use to increase customer satisfaction, achieve improvements in the quality and timeliness of service, improve productivity, provide greater employee job satisfaction, improve communications, make better use of resources, reduce errors, wastage and service costs, accelerate innovations, and to facilitate organisational survival.

Signed: _____

Date: _____

APPENDIX B

**Ethical Approval to conduct the research
study.**



**EDITH COWAN
UNIVERSITY**

PERTH WESTERN AUSTRALIA
CHURCHLANDS CAMPUS

Pearson Street, Churchlands
Western Australia 6018
Telephone (09) 273 8333
Facsimile (09) 387 7095

Committee for the Conduct of Ethical Research

Ms Janis Mussett
2 Little Russell Street
North Perth 6006

Dear Ms Mussett

Re: **Ethics Approval**

Code: 95-100

Project Title: *An Exploratory Analysis of Success Factors in Quality Activities in Western Australian Hospitals.*

Thank you for providing the clarification and additional information as requested.

This has been considered by members of the Committee, and I am now able to confirm that your project has been cleared for implementation.

With best wishes for success in achieving worthwhile outcomes.

Yours sincerely


ROD CROTHERS
Executive Officer

26 September 1995

Please note: Students conducting approved research are required to submit an ethics report as an addendum to that which they submit to their Faculty's Higher Degrees Committee.

cc: A/Professor Alan Brown, Supervisor
Mr Barry Chapman, Higher Degrees Co-ordinator
A/Professor Steve Barrie, Doctoral Studies Committee

APPENDIX C

**State Health 1995 Patient Satisfaction
Survey.****Results for one Health Authority.**

A Metropolitan Health Authority

757 patients were surveyed - 285 males (38%), 472 females (62%).

271 patients were day patients (36%). 265 patients stayed for 1-3 nights (35%), 104 patients stayed for 4-7 nights (14%) and 115 patients stayed for 8 or more nights (15%). The ages ranged from 0 to 90 years, average age was 41 with a standard deviation of 23 years. 235 patients were aged 0-30 years (38%), 212 patients were aged 31-60 years (35%) and 144 patients were aged 61 years or more (27%). 144 patients did not state age (19%).

Table 1 Responses to the Statewide Patient Satisfaction Survey

Survey question	Rating	1	2	3	4	5
	Number of responses (% responses)					
Q1. How would you rate the quality of service you have received?	2	23	95	241	396	
	(0.3)	(3)	(12.5)	(31.8)	(52.3)	
Q2. Did you get the kind of service you wanted?	2	8	34	186	527	
	(0.3)	(1.1)	(4.5)	(24.6)	(69.6)	
Q3. To what extent has our hospital met your needs?	1	13	47	230	466	
	(0.1)	(1.7)	(6.2)	(30.4)	(61.6)	
Q4. If a friend needed hospital care, would you recommend our hospital?	4	7	24	111	611	
	(0.5)	(0.9)	(3.2)	(14.7)	(8.7)	
Q5. In general how helpful were our staff?		5	22	90	640	
		(0.7)	(2.9)	(11.9)	(84.5)	
Q6. How much of the information you received while in hospital did you really understand?	3	13	52	254	435	
	(0.4)	(1.7)	(6.9)	(33.6)	(57.5)	
Q7. If something went wrong, how satisfied were you with the way it was put right?	19	20	45	169	256	
	(3.7)	(3.9)	(8.8)	(33.2)	(50.3)	
Q8. In an overall, general sense, how satisfied were you with waiting times in our hospital?	21	51	115	289	281	
	(2.8)	(6.7)	(15.2)	(38.2)	(37.1)	
Q9. In an overall, general sense, how satisfied are you with the service you have received?	8	8	59	191	491	
	(1.1)	(1.1)	(7.8)	(25.2)	(64.9)	
Q10. If you needed to go to hospital again, would you choose to come back to our hospital?	6	10	29	111	601	
	(0.8)	(1.3)	(3.8)	(14.7)	(79.6)	

Note: The higher the rating the more positive the result

APPENDIX D

Research Requests.

RESEARCH REQUESTS.

As part of my Doctorate Research Studies into Quality Activities I am requesting permission to obtain the following:

QUANTITATIVE DATA.

See the requests for additional information from the:

- Quality Co-ordinator
- Staff Development Co-ordinator
- Director of Administrative Services
- Human Resource Manager
- Occupational Health. Safety and Rehabilitation Co-ordinator.

QUALITATIVE DATA.

- * Tour of the hospital.
- * Permission to view relevant written hospital Policies and Procedures.
- * Permission to attend hospital Quality Activity Meetings.
- * Structured interviews. (see example). with the following people:
 - Chief Executive Officer
 - Medical Director
 - Director of Administrative Services
 - Quality Activities Co-ordinator
 - Occupational Health. Safety. Rehabilitation and Compensation Co-ordinator
 - Researcher
 - Human Resource Manager
 - Staff Development Co-ordinator
 - Director of Nursing.

A randomly chosen:

- Nurse Manager
- Clinical Nurse Specialist
- Registered Nurse
- Enrolled Nurse
- Orderly
- Caterer (Food Service employee)
- Maintenance worker
- Clerical employee
- Cleaner
- Gardener
- Allied Health Professional
- Supply department employee
- Hospital goods supplier.

Thank you for your consideration.

Dear Quality Co-ordinator.

I would very much appreciate receiving the following:

1. A copy of the Hospital's Quarterly and Annual Report of Quality Activities for the last 2 years including the analysis of Quality Assurance Audit Results and Clinical Indicator Results.

2. A copy of the Hospital Quality Improvement Policy and Goals/Objective. A description of how they are implemented and their achievement evaluated.

3. Information on the Organisation's Profile:

- Size: eg. Bed numbers.
- Services provided: eg. Urology. Palliative care.
- Composition of the workforce including total number of employees and number of employees in each designation:
eg. Doctors. Nurses. Cleaners. Clerical staff.
- Vision Statement.
- Hospital's Mission and how it is achieved.
- Organisational Management Structure.
- How organisational quality activities originated and major quality activity events.
- Strategies, processes and technology used for quality activities and employee participation in these activities.
- How customers and suppliers are involved in quality activities.
- Waste management.
- Outcomes of quality activities and plans for the future.

Dear Director of Administrative Services.

I would very much appreciate receiving information on the following:

* Per financial year. for the last 2 years. what was -

1. The number. and duration of care. (average bed occupancy days). of patients in each hospital patient care diagnostic related group:

2. The number of outpatient services performed:

3. Service costs:

(a) Total: _____

(b) Average per case for each hospital patient care diagnostic related group. and
for the outpatients' service: _____

Dear Staff Development Co-ordinator.

I would very much appreciate receiving information on the following:

* Over the last 2 years -

1. Were formal staff training needs completed annually? _____

2. What work related education did the hospital provide for employees? _____

3. Were reviews conducted of hospital provided staff development training effectiveness? _____

If so, how?

4. Was this training resourced by the hospital? _____

Dear Occupational Health, Safety and Rehabilitation Co-ordinator.

I would very much appreciate receiving information on the following:

*Per financial year, for the last 2 years, for employee injuries what are the:

(a) Total claims _____

(b) Loss-time injury numbers _____

(c) Non loss-time injury numbers _____

(d) Frequency rate _____

(e) Incident rate _____

(f) Cost per \$100 of wage roll _____

(g) Rehabilitation success rate _____

*How are improvements in employee health, safety and welfare organised and evaluated? _____

Dear Human Resource Manager

I would very much appreciate receiving information on the following:

*Per financial year, for the last 2 years, what is the employee frequency rate (per 1 million hours worked) for sick leave taken from work?

*What is the average length, in years, of service for employees? _____

APPENDIX E

Questionnaire.

Dear Colleague,

Your hospital has been chosen by certifying and professional health care bodies as one of the eight hospitals to participate in a study of current quality activities used in Western Australian Hospitals. This study is part of my Doctorate Research Project which aims to identify the most successful strategies for producing cost effective quality care in Australian Hospitals.

Knowledge gained from this study will be used to develop a Hospital Quality Care Strategic Plan which can be adapted Australia wide by hospitals to enable health care dollars to be used in the most effective ways to provide customer and staff satisfaction, increased productivity and organisational survival.

For this research to be successful, it is very important that your co-operation is gained. I realise that there are many questions and that I may be encroaching on your valuable time, but all information requested is important as the data obtained relates to the quality of service provided. I would be extremely grateful if you could provide me with the following information by

Confidentiality of response is assured as research hospitals and participants will not be identified by name, the study raw data will just be viewed by the researcher, and results will be reported in groupings only. You are free to withdraw from this study at any time without penalty. Any research name identifying data will be shredded at the conclusion of the study.

Upon completion of the research analysis a copy of the research report will be sent to your hospital Chief Executive Officer for distribution as appropriate.

Thank you for your time and co-operation.

Yours sincerely,

Janis Mussett
Registered Nurse
Master of Public Health.
Telephone: (09) 328 1772

QUESTIONNAIRE FOR HOSPITAL STAFF

THIS SECTION RELATES TO YOUR FEELINGS ABOUT YOUR WORKPLACE.

PLEASE ANSWER THE FOLLOWING QUESTIONS BY CIRCLING THE STATEMENT WHICH MOST CLOSELY REPRESENTS YOUR OPINION ON THE ISSUE.

IF YOU STRONGLY AGREE WITH THE STATEMENT PLEASE CIRCLE THE NUMBER AT THE UPPER END OF THE SCALE (5), MODERATELY AGREE, CIRCLE (4), DON'T KNOW, CIRCLE (3), MODERATELY DISAGREE, CIRCLE (2), OR STRONGLY DISAGREE, CIRCLE (1).

*Strongly
disagree*

*Strongly
agree*

LEADERSHIP STYLE

MANAGEMENT:

•Lead by using the best workplace practices	1	2	3	4	5
•Are team oriented	1	2	3	4	5
•Allow employees to challenge work processes	1	2	3	4	5
•Promote the use of improved work processes	1	2	3	4	5
•Regularly evaluate organisational activities	1	2	3	4	5
•Implement appropriate solutions for identified problems	1	2	3	4	5
•Promote care and consideration of customers	1	2	3	4	5
•Do NOT Allow employees to exercise discretion in decision making	1	2	3	4	5

SUPPORT

MANAGEMENT

•Support the hospital's vision	1	2	3	4	5
•Provide encouragement and rewards for vision achievement	1	2	3	4	5
•Facilitate achievement of the hospital's mission	1	2	3	4	5

	<i>Strongly disagree</i>			<i>Strongly agree</i>	
Provide me with competent supervision when I need it	1	2	3	4	5
Provide a supportive environment for employees	1	2	3	4	5
Facilitate opportunities for identification of improvements	1	2	3	4	5
Provide good physical work place conditions	1	2	3	4	5
Provide adequate equipment/resources for me to complete my work satisfactorily	1	2	3	4	5
Provide an adequate number of staff for my department	1	2	3	4	5
Provide an organisational structure that facilitates continuous improvement	1	2	3	4	5
EDUCATION					
MANAGEMENT					
Develop other employees as leaders through coaching and mentorship	1	2	3	4	5
Provide and facilitate a learning environment	1	2	3	4	5
Coach employees to focus on under- lying causes of problems, not just events and trends	1	2	3	4	5
COMMUNICATION					
MANAGEMENT					
Provides clear policies for my work	1	2	3	4	5
Provides documented procedures for my workplace tasks	1	2	3	4	5
Do NOT consult me when considering changes in my workplace	1	2	3	4	5
Provides me with feedback of evaluation of organisational activities	1	2	3	4	5

	Strongly disagree			Strongly agree	
•Are accessible to all people in the organisation	1	2	3	4	5
•Communicate with me effectively	1	2	3	4	5

In the hospital EMPLOYEES:

•Work towards achieving a common organisational vision	1	2	3	4	5
•Are all leaders, recognised as modelling organisational values and fostering a learning environment	1	2	3	4	5
•Deliver cost effective service with minimal wastage	1	2	3	4	5
•Are involved in ensuring their own health and safety at work	1	2	3	4	5
•Are asked to be innovators	1	2	3	4	5

PERSONAL FEELINGS

As an EMPLOYEE I:

•Don't fear failure when trialing new ideas	1	2	3	4	5
•Have departmental goals which are linked to the organisation's vision	1	2	3	4	5
•Have personal goals which are linked to the organisation's vision	1	2	3	4	5
•Contribute to continuous improvement through my personal commitment	1	2	3	4	5
•Go out of my way to apply newly gained knowledge through involvement in improvement activities	1	2	3	4	5
•Use my knowledge and skills to improve the way we do things	1	2	3	4	5
•Have enough time to do my job properly	1	2	3	4	5
•Take full meal and tea breaks each shift	1	2	3	4	5
•Have a job which provides challenging work	1	2	3	4	5

	Strongly disagree			Strongly agree	
	1	2	3	4	5
•Have a clearly defined career path	1	2	3	4	5
•Look forward to coming to work	1	2	3	4	5
•Receive sufficient financial reward for the work I perform	1	2	3	4	5
•Perform my job professionally	1	2	3	4	5
•Have in the past two months had times when I planned to change my job	1	2	3	4	5
•Find my department is NOT able to adapt easily to changes in government policy	1	2	3	4	5

CONTROL

•I do things in my job which should be done differently	1	2	3	4	5
•I have too little authority to carry out my responsibilities	1	2	3	4	5
•I have a strong influence over my workplace decisions	1	2	3	4	5
•I am aware that I can contribute to doing things better	1	2	3	4	5

EDUCATION

As an EMPLOYEE I:

•Get helpful feedback on my work performance	1	2	3	4	5
•Have adequate opportunity to update my skills	1	2	3	4	5
•Am aware of current trends in my area of work	1	2	3	4	5
•Am able to anticipate and adapt to changes in technology and work processes	1	2	3	4	5
•Use technology effectively	1	2	3	4	5

*Strongly
disagree*

*Strongly
agree*

•Have the information I need in order to do my job in the most effective and efficient manner

1 2 3 4 5

•Am NOT educated or trained in work related tasks

1 2 3 4 5

SUPPORT

As an EMPLOYEE I:

•Feel comfortable asking for assistance from colleagues when I need it

1 2 3 4 5

•Have full confidence in the skills of my peers

1 2 3 4 5

•Feel valued by my colleagues

1 2 3 4 5

•Find that my immediate supervisor is supportive

1 2 3 4 5

•Observe that when the going gets busy everyone gets in and works as a team

1 2 3 4 5

•Find that the communication climate in this hospital is usually good

1 2 3 4 5

SUPPLIERS

In this HOSPITAL we:

•Communicate with our suppliers and they are aware of our needs and expectations

1 2 3 4 5

•Choose suppliers based on the value of the products and service, not price tag alone

1 2 3 4 5

•Have processes established to measure the performance of suppliers

1 2 3 4 5

•Have a review system in place to minimise the number of suppliers necessary

1 2 3 4 5

	Strongly disagree			Strongly agree	
•Have long-term mutually beneficial relationships in place with preferred suppliers	1	2	3	4	5
•Have a strong partnership with our suppliers which improves our ability to meet customers expectations	1	2	3	4	5

RESEARCH

•I continually question why we do things the way we do, and look for better ways of doing them	1	2	3	4	5
•Research is conducted in my department to:					
(a) Solve work related problems	1	2	3	4	5
(b) Identify ways to improve services	1	2	3	4	5
(c) Develop services	1	2	3	4	5
(d) Evaluate the effectiveness of services	1	2	3	4	5
(e) Develop and evaluate work procedures	1	2	3	4	5
(f) Evaluate products used	1	2	3	4	5
•I am involved in conducting research based quality improvement activities	1	2	3	4	5
•I evaluate research findings and implement them at work as appropriate	1	2	3	4	5
•Research results are publicised within my organisation	1	2	3	4	5
•I go out of my way to apply research based quality improvement findings	1	2	3	4	5

My employment position is: _____

Thank you for your co-operation.

APPENDIX F.

Interview.

EDITH COWAN UNIVERSITY**FORM OF DISCLOSURE & INFORMED CONSENT FOR RESEARCH**

The purpose of this study is to identify the most successful strategies for producing cost effective quality care in Australian Hospitals. Both Management and Employee perspectives will be studied. information being sought via questionnaire. observation and interview methods.

If you have any questions about the study please ask the researcher at any stage. You may decline to participate if you so desire. Confidentiality of response is assured as research hospitals and participants will not be identified by name. and results will be reported in groupings only.

I (the Participant) have read the information above and any questions I have asked have been answered to my satisfaction. I agree to participate in this activity. realising that I may withdraw at any time.

I agree that the research data gathered for this study may be published provided that my name is not used.

Participant Date

Investigator Date

INTERVIEW

1. What is your current employment position?

2. What is your organisation's **vision**?

3. What is the organisation's **mission**?

4. How are the organisation's vision and mission statement **communicated** to all employees? _____

5. How is the mission **implemented**?

6. How is the mission achievement **evaluated**?

7. How are your department's customers and potential customers **identified**?

8. Are your customers **advocates** of your department? _____

9. Give an **example**. _____

10. What **research** has been completed by your department over the last two years, and how were the findings **implemented**? _____

11. How are areas for service improvement **identified**? _____

12. How are service improvements **implemented**? _____

13. How is the achievement of improvements **evaluated**? _____

(Hospital Employees question only) How do management demonstrate their care for the health, safety and welfare of employees?

(Suppliers only) Do you have a long term supply contract with hospital?

Does the hospital involve you in its Quality Improvement Program? _____
How? _____

Thank you for your information.

APPENDIX G

**All hospitals combined questionnaire
responses.**

ALL HOSPITALS' COMBINED RESULTS.

QUESTIONNAIRE FOR HOSPITAL STAFF

THIS SECTION RELATES TO YOUR FEELINGS ABOUT YOUR WORKPLACE.

PLEASE ANSWER THE FOLLOWING QUESTIONS BY CIRCLING THE STATEMENT WHICH MOST CLOSELY REPRESENTS YOUR OPINION ON THE ISSUE.

IF YOU **STRONGLY AGREE** WITH THE STATEMENT PLEASE CIRCLE THE NUMBER AT THE UPPER END OF THE SCALE (5), **MODERATELY AGREE**, CIRCLE (4), **DON'T KNOW**, CIRCLE (3), **MODERATELY DISAGREE**, CIRCLE (2), OR **STRONGLY DISAGREE**, CIRCLE (1).

_____ R = Reverse Score

Strongly disagree Strongly agree

LEADERSHIP STYLE

%

MANAGEMENT:

- Lead by using the best workplace practices
- Are team oriented
- Allow employees to challenge work processes
- Promote the use of improved work processes
- Regularly evaluate organisational activities
- Implement appropriate solutions for identified problems
- Promote care and consideration of customers
- Do NOT Allow employees to exercise discretion in decision making

4	6	26	(41)	23
1	2	3	4	5
3	10	14	(37)	36
1	2	3	4	5
4	8	17	(41)	30
1	2	3	4	5
2	6	14	(45)	33
1	2	3	4	5
4	11	21	(40)	24
1	2	3	4	5
4	9	18	(37)	32
1	2	3	4	5
5	4	6	28	(57)
1	2	3	4	5
10	11	19	(30)	30
1	2	3	4	5 R

SUPPORT

MANAGEMENT

- Support the hospital's vision
- Provide encouragement and rewards for vision achievement
- Facilitate achievement of the hospital's mission

1	2	15	(43)	39
1	2	3	4	5
7	23	25	(32)	13
1	2	3	4	5
	8	33	(41)	18
1	2	3	4	5

	Strongly disagree			Strongly agree		
•Provide me with competent supervision when I need it	2	13	21	(35)	29	
	1	2	3	4	5	
•Provide a supportive environment for employees	3	12	17	(37)	31	
	1	2	3	4	5	
•Facilitate opportunities for identification of improvements	1	9	16	(51)	23	
	1	2	3	4	5	
•Provide good physical work place conditions	4	14	15	(35)	32	
	1	2	3	4	5	
•Provide adequate equipment/resources for me to complete my work satisfactorily	5	14	20	(34)	27	
	1	2	3	4	5	
•Provide an adequate number of staff for my department	11	19	13	(35)	22	
	1	2	3	4	5	
•Provide an organisational structure that facilitates continuous improvement	4	15	29	(32)	20	
	1	2	3	4	5	

EDUCATION

MANAGEMENT

•Develop other employees as leaders through coaching and mentorship	10	16	24	(35)	15	
	1	2	3	4	5	
•Provide and facilitate a learning environment	7	16	21	(37)	19	
	1	2	3	4	5	
•Coach employees to focus on underlying causes of problems, not just events and trends	9	17	27	(29)	18	
	1	2	3	4	5	

COMMUNICATION

MANAGEMENT

•Provides clear policies for my work	5	9	14	(46)	26	
	1	2	3	4	5	
•Provides documented procedures for my workplace tasks	5	17	18	(37)	23	
	1	2	3	4	5	
•Do NOT consult me when considering changes in my workplace	12	13	17	(31)	27	
	1	2	3	4	5	R
•Provides me with feedback of evaluation of organisational activities	5	12	20	(44)	19	
	1	2	3	4	5	

- Are accessible to all people in the organisation
- Communicate with me effectively

Strongly disagree			Strongly agree	
2	13	11	41	33
1	2	3	4	5
4	13	16	36	31
1	2	3	4	5

In the hospital **EMPLOYEES:**

Work towards achieving a common organisational vision

5	13	26	41	15
1	2	3	4	5

Are all leaders, recognised as modelling organisational values and fostering a learning environment

7	27	31	22	13
1	2	3	4	5

Deliver cost effective service with minimal wastage

7	11	16	46	20
1	2	3	4	5

Are involved in ensuring their own health and safety at work

1	5	15	43	36
1	2	3	4	5

Are asked to be innovators

5	12	29	40	14
1	2	3	4	5

PERSONAL FEELINGS

As an **EMPLOYEE** I:

Don't fear failure when trialing new ideas

2	8	11	37	42
1	2	3	4	5

Have departmental goals which are linked to the organisation's vision

2	5	21	41	31
1	2	3	4	5

Have personal goals which are linked to the organisation's vision

1	5	16	47	31
1	2	3	4	5

Contribute to continuous improvement through my personal commitment

	1	6	40	53
1	2	3	4	5

Go out of my way to apply newly gained knowledge through involvement in improvement activities

1	4	12	42	41
1	2	3	4	5

Use my knowledge and skills to improve the way we do things

	2	4	43	51
1	2	3	4	5

Have enough time to do my job properly

17	22	17	25	19
1	2	3	4	5

Take full meal and tea breaks each shift

31	22	10	20	17
1	2	3	4	5

Have a job which provides challenging work

7	7	8	36	42
1	2	3	4	5

	Strongly disagree			Strongly agree	
10	19	25	25	21	
1	2	3	4	5	
1	7	17	44	31	
1	2	3	4	5	
17	23	14	24	22	
1	2	3	4	5	
	1	4	35	60	
1	2	3	4	5	
19	21	14	19	27	R
1	2	3	4	5	
11	21	25	22	21	
1	2	3	4	5	R

- Have a clearly defined career path
- Look forward to coming to work
- Receive sufficient financial reward for the work I perform
- Perform my job professionally
- Have in the past two months had times when I planned to change my job
- Find my department is NOT able to adapt easily to changes in government policy

CONTROL

8	32	19	22	19	
1	2	3	4	5	R
9	15	11	34	31	
1	2	3	4	5	R
5	11	18	43	23	
1	2	3	4	5	
2	5	11	48	34	
1	2	3	4	5	

- I do things in my job which should be done differently
- I have too little authority to carry out my responsibilities
- I have a strong influence over my workplace decisions
- I am aware that I can contribute to doing things better

EDUCATION

As an EMPLOYEE I:

9	23	15	38	15	
1	2	3	4	5	
12	21	20	29	18	
1	2	3	4	5	
2	6	13	48	31	
1	2	3	4	5	
	9	16	45	30	
1	2	3	4	5	
2	10	21	41	26	
1	2	3	4	5	

- Get helpful feedback on my work performance
- Have adequate opportunity to update my skills
- Am aware of current trends in my area of work
- Am able to anticipate and adapt to changes in technology and work processes
- Use technology effectively

Strongly disagree

Strongly agree

•Have the information I need in order to do my job in the most effective and efficient manner

2	11	19	45	23
1	2	3	4	5

•Am NOT educated or trained in work related tasks

10	11	17	31	31
1	2	3	4	5

SUPPORT

As an EMPLOYEE I:

•Feel comfortable asking for assistance from colleagues when I need it

2	3	7	38	50
1	2	3	4	5

•Have full confidence in the skills of my peers

	12	17	41	30
1	2	3	4	5

•Feel valued by my colleagues

2	7	20	39	32
1	2	3	4	5

•Find that my immediate supervisor is supportive

6	7	17	29	41
1	2	3	4	5

•Observe that when the going gets busy everyone gets in and works as a team

5	10	15	38	32
1	2	3	4	5

•Find that the communication climate in this hospital is usually good

5	20	19	37	19
1	2	3	4	5

SUPPLIERS

In this HOSPITAL we:

•Communicate with our suppliers and they are aware of our needs and expectations

1	8	39	35	17
1	2	3	4	5

•Choose suppliers based on the value of the products and service, not price tag alone

5	8	41	31	15
1	2	3	4	5

•Have processes established to measure the performance of suppliers

5	16	50	23	6
1	2	3	4	5

•Have a review system in place to minimise the number of suppliers necessary

8	10	55	17	10
1	2	3	4	5

9%

Strongly disagree Strongly agree

- Have long-term mutually beneficial relationships in place with preferred suppliers
- Have a strong partnership with our suppliers which improves our ability to meet customers expectations

3	5	50	26	16
1	2	3	4	5
3	5	49	28	15
1	2	3	4	5

RESEARCH

- I continually question why we do things the way we do, and look for better ways of doing them
- Research is conducted in my department to:
 - (a) Solve work related problems
 - (b) Identify ways to improve services
 - (c) Develop services
 - (d) Evaluate the effectiveness of services
 - (e) Develop and evaluate work procedures
 - (f) Evaluate products used
- I am involved in conducting research based quality improvement activities
- I evaluate research findings and implement them at work as appropriate
- Research results are publicised within my organisation
- I go out of my way to apply research based quality improvement findings

1	6	20	43	30
1	2	3	4	5
4	10	19	42	25
1	2	3	4	5
4	5	18	50	23
1	2	3	4	5
4	8	22	44	22
1	2	3	4	5
4	8	22	40	26
1	2	3	4	5
2	14	20	41	23
1	2	3	4	5
3	11	29	38	19
1	2	3	4	5
14	15	24	30	17
1	2	3	4	5
11	14	23	33	19
1	2	3	4	5
14	17	33	20	16
1	2	3	4	5
10	16	23	33	18
1	2	3	4	5

My employment position is: _____

Thank you for your co-operation.

APPENDIX H

**Health service research and quality
activity projects.**

Health service research and quality activity projects.

At employee interview, when answering question ten, employees reported the following research activities and quality activity projects as being recently completed at their health service.

Hospital one.

Research activities.

When answering question ten of the research interview employees reported the following research projects and quality activities as being recently completed.

(1) Data was collected by the National Bureau of Statistics on the cost per patient for disposable products and the time spent using these. This research was in progress.

Quality Activity Projects included:

- (1) Evaluating work practices and their outcomes. This research was in progress.
- (2) Collection of data for clinical indicators and review of discharge summaries. These projects were conducted by the Quality Activities Coordinator. Improvements were made as appropriate. Both demonstrated that a high standard of patient care was provided.
- (3) Assessment of the quality activities of potential contractors. If potential service providers did not have documented quality activities contractors who did were awarded the work in preference to those without them.
- (4) Work experience students. Students undertaking work experience in this organisation evaluated the learning provided. Future student work experience activities were planned and implemented on the basis of the results of the evaluation.

- (5) Kitchen traffic flow. This was evaluated by kitchen staff and changes made as appropriate.
- (6) Out patient protocol. The effectiveness of this was evaluated by staff working in out patients. Changes were made as appropriate to ensure the most efficient and effective patient service was provided.
- (7) Frequency of incoming telephone calls. This was evaluated to ensure that there was enough staff to provide an effective telephone answering service.
- (8) Efficiency of having photocopies of important communication data in a filing cabinet in comparison to having a communication book for staff to read communication from. This research was in progress.
- (9) A survey of staff members meal purchasing practices. This resulted in a stream lining of purchasing procedures.
- (10) A survey of antenatal class participants satisfaction with class teaching. The class format of lectures and activities was revamped following this survey.
- (11) Collated results for documented inspections of cleaning effectiveness, infection control practices, needle stick and other staff work related injury occurrences and patient and staff safety at work. All showed that a high standard of care was provided.
- (12) Identification of the number of nursing staff needed for the operating room and recovery. Evaluation of this area's work-load showed that 4 nurses were needed instead of the three currently employed. An extra nursing staff person was allocated to work in this area.

(13) Patient theatre and post-operative care. It was identified from an evaluation of these that some patients had too low a temperature during and post operation. As a result of this monitoring two new warming blankets were brought for theatre and recovery room patient care use.

(14) Evaluation of patient care equipment from the Independent Living Center. Products from this supplier were trialed by patients and staff. Equipment that was found beneficial for improving patient comfort and safety was purchased.

(15) An evaluation of patient satisfaction with meals provided. This survey was performed at regular intervals to check that the food provided to customers was meeting their needs and if anything could be done to improve meals and food service. Results consistently showed that the quality of food and service by this department was outstanding and delighted the customers.

(16) Staff in the maintenance department read widely to ensure that they were up to date with current maintenance practices. For example, the prevention of legionella disease in water-cooling towers. Based on the results of their reading staff benchmarked their work practices with known standards and ensured that these were met.

(17) A Leatherwood gift pack was provided to all patients on admission. This gift pack consisted of a toothbrush, tooth paste, soap, hair shampoo and conditioner all supplied on a tray. A survey was conducted to see if patients liked what was provided. It was found that most of the patients preferred to use the soap, tooth brush, tooth paste and hair care products that they brought into hospital from home to the ones provided by the Health Service. Based on these findings patients were asked by staff, on

admission, if they would like this gift pack, or if they would prefer to continue using their own toilet care articles.

Customer needs research.

On admission all patients were given a leaflet titled "Help us make it better." Inside the leaflet was recorded the Health Service Goal that was to provide "High quality medical services and personalised care." Under this statement was written a customer survey.

The first 6 topics required a Yes/No answer. The topic headings were Admission Procedure (2 questions). Accommodation (4 questions). Your Meals (4 questions). Nursing Staff (4 questions). Discharge (3 questions) and General (5 questions).

Under the heading of Maintenance there were lines for patients to record details of any thing that needed repair or improvements. The last heading was Additional Comments and Suggestions. There were lines under this heading for patients to record their thoughts.

The answers recorded by patients on these leaflets were reviewed by all Department Heads once a month, and by the Administrator/Director of Nursing biannually. The results of patients' answers to this survey demonstrated that patients consistently thought the hospital services were excellent.

Hospital two.

Research activities.

The research activities described were as follows.

- Patient satisfaction with care survey.

This research was conducted in conjunction with the Health Department of Western Australia and responses showed that all patients were 100% satisfied with their care at the hospital.

- Food survey

The kitchen staff had conducted a survey of patient and staff opinions of the food served. It was identified by their customers that they would like a hot meal at mid day and a cold meal for the evening meal. All other aspects of the food and service provided were considered excellent. Menus and service were changed to reflect customers' preferences.

Hospital three.

Research activities.

Research activities described were:

- (1) Health Department Review of Building Related Services. At the time of interview results were not known.
- (2) A survey of Medical Practitioners' after hours provision of diabetic patient care. At the time of interview results were not known.
- (3) State-wide Health Department Patient Satisfaction with Care Survey. Results of this survey showed that the patients in this health service had a high level of satisfaction with the health services provided.

Quality Activity Projects included:

(1) *Patient education.*

(a) A survey to measure patients' understanding of their medical condition, assess future patient education needs and to assess any increase or decrease in patients' perception of quality of life resulting from educational sessions.

Results of this survey showed that patients' perception of quality of life showed changes as their understanding of their medical condition improved due to nursing provided educational sessions. Patients generally felt that these educational sessions were of value to them. Survey results were provided to both the Quality and to the Medical Advisory Committee.

(b) Use of Patient Information Booklet.

A survey was conducted to identify the number of bed lockers with the Patient Information Booklet on them, the number of patients who were aware of the booklet, the number of patients who read the booklet and the number of patients who found the booklet useful. Sixty two beds were checked. Half of the beds contained the booklet in the locker. Only three patients knew the booklet was there. Of these three patients two had read the booklet. Both had found it useful. Following this result all Admission Clerks were asked to bring to all patients' attention this Patient Information Booklet.

Two months later a similar audit was conducted. Of the 20 lockers checked all contained the booklet. Half of the patients in these beds knew the booklet was there. Nine of the patients had read the booklet. These patients suggested that the booklet should also contain information on visiting times, meal times, kiosk opening times and instructions for telephone usage. Following patient suggestions this information was included in the booklet when it was reprinted.

(c) An evaluation of Antenatal education provided by the health service midwives.

Patients were asked to complete a questionnaire related to the effectiveness of the antenatal education provided to them on the last evening of the program, within a week post baby's birth discharge and 4-8 weeks postnatally to measure the long term effectiveness of the information provided in the program. This evaluation had not been completed at the time of interview.

(2) *Discharge recording evaluation.*

(a) An evaluation by a Clinical Nurse specialist of the effectiveness of Nursing Discharge Planning and of the utilisation of the Silver Chain Liason Nurse for home care nursing following hospital discharge. Over a two months period twenty percent of all patient discharge notes were randomly audited. There was generally poor compliance to the criteria audited. Follow up to this audit was to redesign the "Discharge Plan" form, provide education to health care staff on how to effectively use this form, develop an appropriate discharge letter, and to implement a multi disciplinary approach to discharge planning. After six months of trialing the new discharge planning procedures the audit was to be repeated to evaluate if patient discharge planning had improved.

(b) A retrospective audit by the Coding Officer of the adequate completion of discharge summaries in patients' hospital medical records. Seventy two percent of the 53 medical records screened contained completed discharge summaries. Nurses had completed two thirds of the discharge summaries, medical practitioners one-third. Of the records completed only 59% had correctly identified the principle diagnosis which created difficulties when coding patients' according to diagnostic related groups. Results of this audit were to be discussed with the Medical Advisory Committee.

(c) A triplicate discharge summary form for Medical Practitioners to record discharge information on was trialed. A random sample of 20% of discharges at the end of the

trial period were examined. Medical Practitioners had used the form to record discharge information on in only 20% of the patient notes examined. Following this finding education was to be provided to Medical Practitioners on the importance of recording discharge information and of recording the patients' medical diagnosis in relation to a diagnostic related group.

(3) Staff satisfaction.

(a) One hundred and fifty questionnaires were distributed to staff to check their satisfaction with payroll service. Most respondents indicated dissatisfaction with the way that payroll inquiries had been handled, with 30% of respondents stating that errors had occurred in their pay within the last six months. Following this survey a pay inquiry sheet for staff to use was introduced, a new computer system (HRIS) to allocate salary payments was implemented, managers were instructed to ensure that correct hours worked by staff were sent to the Payroll Officer and staff were provided with education on the new payroll system and its information needs.

(b) A questionnaire was given to staff at the end of the orientation program to measure their satisfaction with, and awareness of, information in the orientation program. All staff reported a high level of satisfaction with the program.

(c) A questionnaire was given to 150 health service staff to assess their satisfaction with the maintenance service. There was high satisfaction with the courtesy of the staff, but low satisfaction with response times and availability. Further investigation showed that the maintenance staff had too much work and not enough staff to complete all the work immediately. Due to financial restraints more staff could not be employed for this department, so the completion of maintenance work had to continue to be prioritised by staff.

(4) *Customer satisfaction with care.*

(a) A questionnaire was provided to high school teachers to evaluate their awareness of, and satisfaction with, their Nurse's role. There was a 36% response rate from the teachers. Very few respondents knew what days the school nurse was available, or the range of services that the School Nurse provided. As a follow up to this result the School Nurse was providing a roster of her days available at each school to all teachers, discussing her qualifications with staff and outlining her role at the school with staff.

(b) A questionnaire was posted to all parents of high school students who had a health intervention made by the High School Health Nurse during the previous three months to evaluate parents' satisfaction with the high school health service.

(c) A questionnaire was given to all high school students presenting at the School Health Service during a three month period to evaluate students' satisfaction with the School Health Nurse role.

(d) Over a two week period a questionnaire was given to all clients who entered the four Child Health Centres to measure their satisfaction with the general service.

None of these surveys had been completed at the time of interview.

(e) Over a four week period a questionnaire was given to all gynaecological patients discharged from the hospital to assess their satisfaction with the nursing care that they received. Patients were asked to post this questionnaire back to the hospital within two weeks after discharge home. All respondents indicated that they were satisfied with the quality of care provided and that the information packs given to them on admission and on discharge were useful. Some patients wanted additional information about their

medical condition post operatively. The requested information was included in the admission information pack.

(4) *Food service.*

- (a) A questionnaire was distributed to 43 patients to assess their satisfaction with special diets over the period of a week. There was a 42% response rate. Seventy eight percent of the respondents said that the food choice and variety was good and that they were satisfied with the service.
- (b) A questionnaire was provided to diabetic patients to assess their understanding and satisfaction with the nutritional component of the diabetic education session. A high level of satisfaction with the information presented was recorded by 100% of the participants.
- (c) A questionnaire was administered to all catering staff to assess their understanding of, and satisfaction with, nutritional education sessions. Catering staff stated that they generally enjoyed and benefited from the sessions, but would like more information on dietary disorders and special diets.
- (d) A questionnaire was distributed to 30 patients to check their satisfaction with the hospital meal service. Patients were generally satisfied their mid day and evening meals. There were complaints that breakfast toast was usually cold and patients requested to sometimes have eggs for breakfast. Follow up introduced toast bags to try to keep toast warmer. The dietitian said that it was not practical to have eggs for breakfast, so cereal was introduced.

Quality activities were used extensively in this Health Service to evaluate and improve customer services. The Quality Activity Co-ordinator provided the researcher with records of 70 projects which were being conducted, or which had been conducted, over

the last year to evaluate internal and external customers' opinions of services provided, staffs' compliance with standard working procedures and staff documentation of patient care. The above are a sample of some quality activity projects that respondents reported in their interview.

Customer needs research.

On admission all patients were given a leaflet titled "Have we met your expectations?"

Inside were four questions.

1. "Did our staff respond to your requests to your satisfaction?"
2. "If you need hospitalisation in the future, would you choose to come back here?"
3. "During your stay did you find a staff member who was exceptionally caring? Name. . . ."
4. "Do you have any other suggestions or comments to improve our service?"

Each question had a "yes" "no" box under it. This was followed by a request for, and a space to include, comments related to the question. At the side of each question were four boxes for customers to tick to describe if the answer to the question was excellent, good, fair or poor. Customers were requested to put the completed forms in a box in the main hospital foyer. Information from this patient satisfaction survey was collated on a database and reviewed by the Hospital Executive. Customer suggestions were acted on as appropriate.

Hospital four.

Research

Research activities described were:

- Medical practitioner conducted research.

“Inter-practice comparison of Medical Practitioner Services.”

This research project had been conducted through the College of General Practitioners at Wollongong. It compared medical practices Australia wide. Research results for the national study were not yet known. but locally the Medical Practitioner involved had identified the need for his practice to provide more after hours services and to increase efficiency. This had since been implemented.

- “Quality Maturity Grid.”

The organisation’s maturity in relation to quality activities had been assessed as at the awakening stage. Following this research all departments had been asked to prepare a Business Plan to improve their service and to determine future activities.

- “Staff Attitude Survey”

This survey had been conducted by an out side researcher. The respondent did not know the outcome of the survey. or if any action had been taken based on the survey’s results.

- “Survey of Staff Needs.”

The Staff Development Co-ordinator had surveyed staff education needs. Staff development educational programs had been developed and implemented following this research.

- “Improvement Identification Surveys.”

Staff members were encouraged by the Quality Activities Co-ordinator to identify areas for improvements. Mental Health Department had conducted a survey to identify areas where service could be improved. The mail delivery system, admission procedures to the hospital, referral procedures for mental health services and service in the Accident and Emergency Department had all been assessed to identify where improvements could be made. Following these surveys improvements were to be made if finance was available.

- “Effectiveness of Mental Health Rehabilitation Program at the Farm.”

It was determined that it cost \$90 a day for care of clients on the farm, in comparison to \$490 a day in a psychiatric ward. Most clients referred to this service had been considered long-term cases and usually took 3 to 6 months rehabilitation before they were capable of living safely in the general community. The research showed that farm care was cost effective and usually had positive outcomes.

- “Intravenous canulation.”

A preparation pack had been supplied for use when performing intravenous canulation. Infection of the insertion site rates following the introduction of this pack were being monitored. This study was in progress.

- “Effectiveness of a pre-admission clinic.”

A pre-admission clinic was being funded for 6 months by the Health Department. The effectiveness of this service in improving patient health outcomes was being monitored to decide if this service was to be continued beyond the 6 month period.

- “Triple care.”

The use of this product to prevent pressure areas developing in extended care patients was trialed and found to be effective in preventing excoriation in incontinent patients. The hospital could not afford to buy the products so patient relatives were required to pay for it if they wished it to be used.

- “Epidemiological survey of Invasive Pneumococcal Disease in Western Australia”

This research was being conducted by the University of Western Australia and this Health Service was helping the researchers collect relevant data. The research project was in progress.

- “Trauma Registry Project.”

This project was being conducted by the Health Department. Data was being collected on the injuries sustained and the accident and further medical care provided at the Health Service to these clients.

- “Follow up to the Monica Study.”

This research was being conducted to identify patient survival rates 2 years post myocardial infarction.

The following Improvement Projects had been completed and relevant findings implemented. Mail service. Car usage. Patient Discharge Planning. The use of individual patient medication draws. Waste Management. Efficiency of Engineering Requisitions. The Health Service had a Project Proposal form. Staff members were encouraged to conduct quality activity research to improve services and had their

project approval by the Quality Assurance Committee and project data registered on this form.

Patient satisfaction with care surveys.

The Annual Report of the health Service recorded that in 1993/94 93% of the patients were satisfied with their care. In the following year 96% of patients were reported as being satisfied.

In the 1995 State Health Department Patient Satisfaction with Care Survey this Health Service had an average patient satisfaction score of 4.6/5 indicating that most patients were very satisfied with the Health Care Service.

Staff opinion survey.

To identify the needs of its staff this Health Service was proactive in conducting a survey of staff opinions about their work at the Health Service. Forty one percent of the staff offered the questionnaire answered it. Respondents reported higher levels of intrinsic and extrinsic satisfaction with work factors than did Public Servants who answered the same questionnaire. However the Health Service Staff scored higher in the areas of work fatigue and burnout than did the compared Public Servants. Recommendations made by the Researchers were for improved management training and improved management practices.

Hospital five.

Research and Quality Projects.

All departments had a documented list of goals to achieve the quality of their service. Next to each goal were strategies to be used to achieve each goal and the possible completion date for each project. Quarterly reports on achievement of these goals were

If a staff member noticed a problem that could be solved by quality activity research the person completed a research request form with the following headings:

Problem
Objectives of the study
Standard
Element
Criteria
People involved
People informed
Study method
Study parameters
Signed. Date.

When answering question ten of the research interview employees reported the following research activities and quality projects as being recently completed.

Research activities described were:

- a trial of wound care products.

Finding of this research resulted in a patient wound care manual being written for staff to use to provide patients with the best possible wound care.

- research on the safest ways to move and use food and other trolleys.

Findings of this research were used to write a safety policy and procedures so that staff injuries should not occur due to using or moving trolleys.

- work practices which could be improved by the use of computer technology.

Based on the benefits identified by the research project. work practices were changed to use computer technology for hospital records. analysis of services provided and service costs. This was stated to have improved staff work efficiency and effectiveness.

- product usage.

This included identifying medical practitioners preferred products for use and stock levels needed for each product in each ward and department. This enabled the stores to reduce the number of goods suppliers needed, to carry only the stock required for current work and to save money by not having unnecessary stock. Following this research stores were also able to be proactive with supplies as they were able to purchase the products that medical practitioners and others would need for their daily work.

- survey of staff needs.

Results of this survey were used by enterprise bargaining teams to sort out a workplace employment "package" for each area (eg. for nurses, for domestics). People in each designation of employment were involved in deciding their conditions of, and payment for, services. Respondents described this as producing a high level of staff satisfaction with employment at the hospital.

Many small projects, under the heading of quality activities were described by respondents as having been conducted in their departments over the last 2 years. The major project described by respondents was a survey throughout the organisation to decide which type of quality program was best to implement to provide customers with the highest standards of care. The outcome of this project was the current hospital quality activity program.

Other projects included:

(1) having pilot teams whose task it was to identify who their customers and suppliers were and key processes which link them to each group. Findings from this research enabled employees to be more customer focused and to develop better communication with suppliers.

(2) an exploratory study on how team work could be used to improve communication and co-operation. The outcome of this research was the use of improved teamwork in providing customer service.

(3) how quality activities could be used to produce a cultural change so that all employees were customer focused. Findings from this research produced the slogan "YOU make the difference". Concentration on the importance of each person enabled all employees and volunteers to be part of a culture of continually working to the highest standards of service known. It also was stated to have resulted in a lot of praise for work well done.

(4) questionnaires to staff to identify ways that staff thought services could be improved. Outcomes of this research produced cost saving and more effective customer services. For example, when asked by staff, many of the patients did not want to be woken up at 6.30 am for a cup of tea. What most patients preferred was to have their hot drink with their breakfast, and to have their breakfast at 7 am instead of 7.45 am. These changes were made. Patients were also provided with hot drinks by staff at non-set times if they requested a drink.

Another example was that staff found some patients wanted their private laundry washed by hospital staff. A flow chart detailing a system for meeting patients' private laundry needs was developed and successfully implemented.

(5) reasons for identified deficits in audit results. Reasons for problems with compliance were researched and identified. Based on the findings work processes etc. were changed to make achieving standards easier.

(6) patient surveys. Results of these were acted on as appropriate to provide patients with what they liked. The questionnaires used were reviewed annually and changed

according to patient ideas. Patients were involved in deciding what questions were to be asked in their survey.

(7) collection and analysis of statistics on service usage. Results of this data analysis were used to give praise to departments that produced excellence in service and to identify ways to improve.

(8) identifying and trialing new work practices and products. Following research through trialing, some new ways of performing work practices, or some new products, were identified as more effective and efficient than the present ones. These were adopted and used in the hospital. Trials of other work practices, or products, were identified as not as good as the ones currently in use. In this case there was no change to current practices or products used.

Hospital six.

Research and quality activity projects

Research activities described as being recently completed were:

(1) Post operative hypothermia.

Results of this research conducted by nurses changed medical practice to ensuring that patients were kept warm when operated on. Patients' temperature was maintained at 36 degrees Centigrade or above through the use of space blankets post operatively. Patients were not returned to the ward for nursing care unless their temperature was within normal limits. The change in work practices in the management of the patient's temperature had reduced the incidence of post operative patient cardiac arrhythmia, hypoxia and drug reactions.

(2) Contracting out building services.

Following this research appropriate building and building maintenance services were contracted out instead of being performed by hospital maintenance staff. This enabled more cost effective use of employee time and resources.

(3) Immunisation.

Community nursing was involved in supplying data to the National Health and Medical Research Council on the number and percentage of school aged children who were fully immunised when they commenced school. This research had not yet been completed at the time of the interview.

(4) Training needs analysis.

The Staff Development Coordinator conducted regular surveys to identify employees training needs. Based on the survey results appropriate employee education programs were arranged and delivered.

(5) Health Department patient satisfaction with care survey.

The main dissatisfier identified by this survey was the waiting time for service. A research project was subsequently conducted to identify the causes of patient service delays.

(6) Trial of wound care products.

Results of this nursing research identified appropriate dressing products to suit particular wound care needs. Following this research nurses were encouraged to use the most appropriate dressing identified for each type of wound.

(7) Rostering review.

Results of this research changed management shift rostering practices to include more employee participation in roster writing.

(8) Competency review.

The competency of staff in using technical equipment was reviewed. Following this research education to appropriate staff was provided.

(9) Effectiveness of Patient Controlled Analgesia (PCA).

Results of this nursing research showed that PCA produced the most patient satisfaction with pain relief as the person did not have to wait for staff to provide medication for pain control. It was also identified as cost and time effective. Doctors were informed of the research results and have since increased the appropriate use of PCA for patient pain control.

(10) Pharmacy product review.

Pharmacy reviewed the cost of products used and stocked. Following this research the variety and quantity of products used and stocked was reduced resulting in a more cost effective management of supplies.

(11) Service waiting times.

Patients were asked to complete a survey on the amount of waiting time they experienced before receiving care. Results of this research were used to identify causes of delays and to implement strategies to provide patients with a more efficient health service.

(12) An evaluation of the effectiveness of patient use of
prescribed medication.

A telephone survey was conducted by nurses after patients left the hospital to evaluate the effectiveness of sedatives and other medication in assisting patient management of, or recovery from, illness. Results of this research were used by medical practitioners to improve the prescribing of drugs to provide improved patient care.

(13) Occurrence of injuries due to drug and / or alcohol abuse.

This survey was undertaken in conjunction with the Drug and Alcohol Authority. In this community the most commonly occurring problem was identified as respiratory arrest due to heroin overdose. Following the research there was a change in rehabilitation practices to include more support for heroin addicts.

(14) Accidents in the community.

Community Health Nurses were undertaking this research to identify the most common causes of accidents in the Health Service's local population. Following the research completion it was anticipated that preventative strategies would be publicised and implemented for the most common causes of home and leisure accidents.

(15) Food Service.

Catering staff conduct regular surveys to identify patient food requirements. Following the last survey menus were changed to include a greater variety of food choices. For example, vegetarian meals were included as a choice for each meal.

(16) Engineering.

This department kept records of the number of requests that it received and the type of work requested. If there were frequent requisitions for a particular piece of equipment etc.. it was evaluated if it was more cost effective to replace or repair it. New purchases of equipment were often made on the basis of this research.

(17) Treatment of childhood asthma.

A variety of treatments for childhood asthma were trialed and evaluated to identify which treatments were most effective. Results of this research were presented to the Medical Advisory Committee and the protocol for the management of paediatric asthma was changed to make it more effective.

(18) The effects of sedatives on children about to be sutured.

A nursing staff phone survey, conducted after children received suturing, identified that some sedatives produced hallucinations and nightmares following administration. It was also found that less sedatives needed to be given. Following this research medical practice was changed to only administer sedatives to children if it was not possible to perform suturing without its administration to calm the child. When given, small amounts of sedatives, which were identified to have the least chance of side effects, were administered to the children prior to suturing.

(19) Equipment.

Occupational Therapist regularly conducted product reviews to identify if new work related equipment was available on the market, and if it better met the needs of their clients than existing equipment. Equipment was changed if research indicated that there was a better product on the market.

(20) Service.

On going research was conducted by Occupational Therapist using patients' notes to identify the types of services that patients required and to improve occupational therapy services available to clients and potential clients.

Hospital seven.

Research and quality projects.

Research activities described as recently completed were:

(1) A theatre utilisation review. This resulted in a relocation of times and lists to make theatre use by surgeons more effective.

(2) An analysis of patient waiting list data. This had resulted in more efficient patient admission and discharge practices and theatre scheduling of patient operations.

(3) A retrospective study of security incidents that happened over the last 12 months. Need for improvements were identified and implemented through consultation with appropriate people and committees.

(4) A student's Master's Research Project had been conducted on maternity patient's expectation of pain in child birth and if the pain was as bad as the patient expected. Results of this research were not known to the respondent.

(5) A variety of products available for stoma therapy and for wound care were trialed and evaluated. Results of this research were published in a journal and won a camera as the prize for the Journal "Best Article" Award.

(6) Products research. The Cleaners' Manager had evaluated the usefulness of all the cleaning agents used and reduced the variety of products used to a minimum. This had saved considerable money on stores purchase and ensured that the cleaners always had the best product to use for effective cleaning.

(7) Patient Hydration Research. A fluid balance chart was kept for a week to record the fluid intake, out put and bowel function of patients with dementia. It was identified that many of the patients had insufficient fluid intake and most had constipation. These patients were then given a 300ml. Glass of freshly squeezed orange juice before breakfast, their mid day and their evening meal. As an evaluation of the effectiveness of this intervention a fluid balance chart was again kept for a week for the same patients. All patients in the second study were found to be well hydrated with good urinary out put, improved skin turgor and regular bowel actions.

(8) Causes of staff absenteeism from work over the last 12 months were reviewed. The results of this research were not known by the respondent.

(9) The Anderson Report. This report was commissioned by the Minister for Health to evaluate the savings that could be made by outsourcing non core business activities in this and two other health services. For this health service the report recommended contracting out building related services (building management, construction, operation, maintenance, repair, replacement, gardening and grounds maintenance, security and cleaning services). Results of this research produced uncertainty of continuing employment for people working in these employment positions in this health service.

(10) Gardening research. In an effort to conserve water and its cost to the health service, the gardening department had trialed using mulch and using wood chips to evaluate which was better at reducing the need for plants to be watered in the hot summer months. It was found that wood chips were better to conserve water. This was subsequently used and the health service had a reduced water bill.

(11) This health service had a higher than average cost for the provision of patient care. To justify that their work practices were cost effective a working party had been formed to research and produce a report on "Price Gap Adjustment for Metropolitan Non Teaching Hospitals." The research was undertaken by the relevant Health Service Managers and Finance Managers.

The report identified that case mix funding was not an effective way to provide funds for health services. Besides the patient's medical diagnosis many factors impacted on health care costs. These included the provision of

- geriatric care. These patients usually had a longer hospital stay than younger patients.
- casualty services. These patients usually had a shorter stay.
- care for patients with multiple medical conditions. This often prolonged hospital stay.

- Socio-economic factors. People on low income often had poor nutrition and took longer to recover from medical conditions.
- non in patient services. For example, the provision of incontinent pads for home care use.
- health care to private patients. There was a higher return to the health service on cost recovery from these patients.
- expenditure on building alterations, maintenance and equipment purchases. These vary from year to year and often the cost depends on the size and age of the health service.
- research and education costs.
- laboratory and specialist services.

This report was with the Health Department and the researchers were awaiting feedback.

Quality Activity Projects included:

- (1) A survey of staff requirements from the Engineering Service. Improvements required by staff were implemented if finance was available for the suggestion.
- (2) An evaluation of the effectiveness of the documentation required on patient information recording charts in the day procedure unit was conducted by the unit staff. Results, and suggestions to make the documentation more effective, were given to the Quality Activity Committee. Forms were changed to improve the usefulness of the information recorded about each patient.
- (3) An evaluation of the effectiveness of health service employees' cleaning practices. Improvements were made as appropriate.

(4) Quality Assurance audits, patient satisfaction with care. General Medical Practitioners' satisfaction with health care facilities and staff satisfaction surveys had all been conducted to evaluate services provided and staff work practices. Appropriate action was taken to rectify any deficits identified and to improve services. Work practices were said to be changed in consultation with staff.

Customer needs research.

Each department conducted its own Patient Satisfaction with Care survey on a six monthly basis. The questions in this survey were:

1. Were you treated courteously on arrival?
2. Did the hospital environment have an acceptable standard of cleanliness?
3. Were you treated with respect?
4. Were you made to feel comfortable?
5. Were you given sufficient information that you were able to understand regarding your condition and treatment?
6. Were the explanations given and the arrangements made, sufficient for your ongoing care?
7. Would you recommend this hospital to a family member or friend?

All questions required a "Yes" or "No" answer. Patients in every ward and department generally reported 100% "Yes" answers to these questions. At the time of the research it was planned by the health service staff to provide feedback to patients via the in house television program network on patient satisfaction survey results.

The health service had Customer Council Meetings to look at customer needs. Council Members were potential or actual health service customers, staff and general medical practitioners. The Council was developing a "Disability Plan" to rid the health service of as many as possible physical and mental barriers to the provision of a high standard of service.

It was also planned by the Quality Activities Co-ordinator to use focus groups for customer feed back on services provided. Past patients and community members would be invited to a morning or afternoon tea to discuss health service provision of care.

Members of this health service were encouraged to undertake quality activity projects. The Quality Activities Co-ordinator had a written guide-line of ten points which needed to be considered before undertaking an approved project. The main factors to be considered included:

- relevancy to current key departmental issues.
- project outcomes should improve services to external customers.
- the need for the project should be agreed to by management staff, and
- the project should produce an improvement opportunity.

This health service had a variety of innovative research projects undertaken which had the potential to be of value to other health services.

Hospital eight.

Research and Quality Activity Projects

When answering question ten of the research interview employees reported the following research and quality activity projects as having been recently completed.

- Mental Health research.

This research had been conducted in conjunction with the University of Western Australia through the appointment of an Associate Professor of Psychiatry whose work was funded jointly by the Health Department and the University. No details of projects conducted were available, but this organisation's mental health care was acknowledged as a centre of excellence. Many difficult cases were referred to here for specialist

- Gerontology research.

1. A research project had been conducted in conjunction with the Office of Senior Services. It researched the stress levels of relatives of people with Dementia before and after attending a counselling group and being educated on how to deal with the demented relative. Results of this research were not yet known.

2. A survey was also conducted of 300 aged care clients to identify their presenting symptoms, services provided and the outcome of their hospital care. At 6 months post discharge it was found that 8% had died, 16% were in hospital, 2% were living in a nursing home, 5% were living in a hostel and 45% were living at home. The respondent did not know how results of this research were used.

3. "Acceptability of Meals on Wheels in the Health Service Region. An evaluation of the determining protocol for screening elderly at nutritional risk."

Results of this research were not known by the respondent.

- Staff development research.

A staff needs analysis for orientation was conducted. This research resulted in the development of an orientation program for theatre staff.

- Psychopharmacology.

Details of this research were not known by the respondent.

- Epidemiology.

Details of this research were not known by the respondent.

- “The influence of ethnicity on secular trends in the incidence of proximal femoral fracture in Australia.”

The respondent did not know more than the title, and the fact that this research was being conducted.

- Catering efficiency research.

This research had been conducted by a consultant. It resulted in major changes in catering practices and loss of staff jobs in the department.

- “Researched patient functional scales before and after early discharge planning is introduced.”

The respondent did not know more than the title of this research and the fact that the research had been conducted.

This Health Service had an Ethics Committee that was established in 1994. Seventeen research projects had been approved by the Ethics Committee over the 12 months prior to this research. Tertiary, community and health service research activities were encouraged by the committee to improve their client services.

Seven of the respondents (35%) said that they had been involved in quality activity surveys. These included:

- Clients satisfaction with their education while in the hospital.

Results showed that clients wanted more education. This is now provided.

- Breast feeding survey.

A survey was conducted of mothers whose infants had been born in the health service Maternity ward. Of 43 mothers surveyed 4 weeks post discharge 25% we still breast feeding their infant. Eleven mothers were surveyed at 3 months post discharge and 74% stated that they were still breast feeding their infants. The respondent said that

there were no changes in practice following this research and breast feeding of infants by their mother was still strongly encouraged by health service staff.

- An audit on how well patient care was documented.

The respondent did not know the results of this audit.

- Client satisfaction with care.

The respondent did not know the results of this survey.

Customer Needs Research.

Specific patient/client satisfaction surveys were conducted twice per year. Eighty two percent of patients surveyed expressed satisfaction with care. Over the 1994/95 financial year 11 patient compliments had been received, and 9 patient complaints. All patient complaints were acted upon and resolved.

The organisation also had a Customer Council that looked at improving services to patients, visitors and staff. This Council was composed of members from a variety of areas of the health service.

APPENDIX I

Supplier customer relationship.

Supplier Customer Relationship.

Hospital one.

The hospital was beginning to involve sub-contractors and suppliers in its quality program. Before an external contractor was allowed to supply services to the hospital the Hospital Administration Staff asked to see a record of the contractor's quality activities file to judge if the organisation had a high enough standard of service to be used by the hospital.

Hospital two.

Some suppliers, such as the Pharmacist from the Regional Health Care Center (who conducted the medication chart audits) and the Local Supermarket Owner who supplied food to the hospital (and was a Board Member who reviewed audit results) were involved in the hospital's quality activities.

Hospital three.

The health service was beginning to involve sub-contractors and suppliers in its quality program. Contract staff, such as allied health professionals and visiting medical practitioners were encouraged to have input into developing a quality health service.

Hospital four.

Health Service product suppliers were generally not involved in the Health Service quality activities.

Hospital five.

In this organisation suppliers were considered as important and part of the quality activities program. Long term, mutually beneficial contracts were obtained between the hospital and its service and goods suppliers.

External service providers, such as the physiotherapist, had been awarded a continuing contract of service for many years and were very much involved in the hospital quality, health and safety programs. To enable products to be easily available for hospital staff members use the main goods suppliers kept a stock of their products available in the hospital store so that these products could be supplied promptly when needed. The hospital also considered staff as suppliers and customers of service.

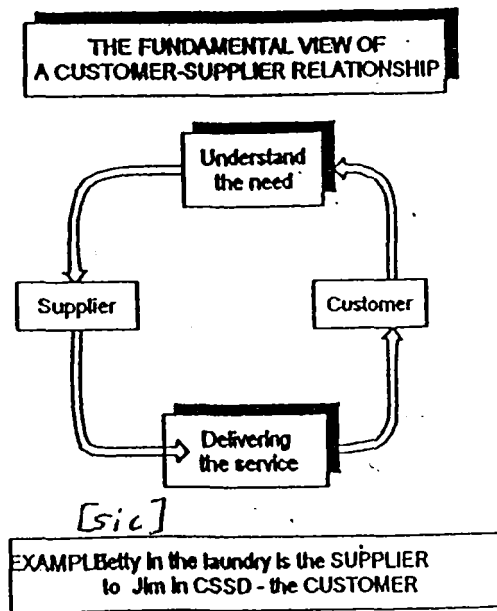


Figure 4

This model from the "Quality Management Programme" (1996. p.30) shows that the organisation recognised the necessity for the supplier to fully understand the needs of the customer to provide appropriate service that would delight the customer. A very important supplier customer relationship was the one between the hospital staff and the patients.

Hospital six.

Suppliers were required to meet their legal requirements under Section 23 of the Western Australian Occupational Safety and Health Act 1984. These responsibilities were as follows. To ensure that all plant and equipment purchased by the health service was safe for use and that employees were educated to use it correctly. To make sure that all relevant supplies had Material Safety Data Sheets. that the supplies were transported correctly and that health service employees were educated on the correct use of the product.

Hospital seven.

Suppliers were generally not involved in the hospital's quality activities.

Hospital eight.

Hospital personnel answered evaluation forms on suppliers' products when asked. This allowed the suppliers to improve their products and services.

APPENDIX J

Patient numbers & service costs.

Patient numbers and service costs.

Hospital one.

This information was not available to the researcher.

Hospital two.

For the 1993/94 financial year the hospital service costs were \$914,620. Hospital service costs for 1994/95 were \$837,802. Savings were made by staff encouraging patients who were well enough to be nursed at home. (with follow up care provided by hospital staff either through home visits or out patient clinic services), to be cared for by family or friends at home.

For 1993/94 the Hospital cared for 279 in patients (2,705 days) and 1,413 out patients. During 1994/95 patient numbers were 242 for in patients (2,314 days care) and 1,786 for out patients. The number of in patients cared for over the last year had decreased but out patient numbers had increased. All people requiring health care were cared for as the care was needed. There was no waiting list.

The average length of stay for hospital patients in 1993/4 was 9.5 days. In 1994/5 it was 6.33 days. When well enough patients were encouraged to go home and complete their recovery at home with follow up health care provided by hospital staff. Over the last financial year hospital staff had provided 660 hours of home care to clients.

Hospital three.

In 1993/94 the hospital cared for 4,540 in-patients. It was funded for the care of this number for the following financial year but had an increase of 637 (14%) in-patients (5,177 patients cared for). Funding for the increase in-patients was provided by the Health Department from the additional through put pool of funds. The average cost per in patient in 1993/94 was \$1,460.44. In 1994/95 it was \$1,384.27 (↓\$761.17). In 1994/95 twenty-six surgeons performed 1,510 operations in 1,092.78 hours.

Out patients cared for in 1993/94 were 8.956. The number decreased to 8.387 (↓569 [6%]) in 1994/95. The average care cost per out patient in 1993/94 was \$22.73. In the following financial year it was \$26.24. As out patient numbers had decreased the cost of their care had increased.

The Finance Manager verbally reported that the length of hospital stay for patients in the hospital's top 20 diagnostic related groups was shorter in the second year than the first financial year. Patients were discharged home sicker and quicker in an effort to become more cost effective. For this reason good discharge planning, with follow up home care by a Silver Chain Nurse if appropriate, was required. The cost of care for the top 20 diagnostic related groups of patients was not available to the researcher. At the time of the research hospital patients had to wait 3-9 weeks to have physiotherapy service. Antenatal classes did not have enough room for all the customers who wanted to attend. Other services did not have a waiting list.

Hospital four.

For 1993/94 the Health Service cared for 7.245 in patients and 56.935 out patients. During 1994/95 patient numbers were 7.645 in patients (↑400) and 56.961 out patients (↑316). The average length of stay for patients in 1993/94 was 4.36 days. In 1994/95 it was 4.23 days.

Service costs.

	1993/94	1994/95
Average bed occupancy rate	86.5%	88.6%
Average cost per occupied bed day	\$459.71	\$469.86
Average cost per patient treated	\$2,004.33	\$1,986.55
(Includes in and out patients)		
Average price per diagnostic related group	Unknown	\$1.803
Average diagnostic related group weighted index	Unknown	0.81

Information on the total Health Service running cost per financial year was not available.

Some executive staff members were working 12 and more hours per day but were still not able to complete the extra work that they had to do now that the Health Department had restructured and had delegated work. (which was previously done by Health Department Officers). out to them.

Hospital five.

For 1993/94 the hospital cared for 5.858 in-patients and 372 out-patients. During 1994/95 patient numbers were 5.502 for in-patients and 394 for out-patients. The average length of stay for surgical patients was 2.5 days. For Medical patients the average stay was 5 days.

At the time of the research the hospital had no record of the diagnostic related groups of patients cared for. However a Case Mix Funding Co-ordinator had been appointed and the hospital would have this information in the future.

The hospital service costs for 1993/94 were \$7.769.864. Service costs for 1994/95 were \$8.431.002. The increased cost for the second reported financial year was due to inflation, depreciation of assets and interest.

Hospital six

For 1993/94 the Health service care was provided for 7.500 in-patients, 31.582 out-patients, 24.254 accident and emergency attendances, 4.708 operations, 22.535 community health service client contacts, 3.305 mental health service clients and 1.124 aged care assessment team clients.

During 1994/95 patient numbers were 7,519 in-patients (♀19), 29,059 outpatients (♂2,523), 23,926 accident and emergency attendances (♂428), 4,220 operations (♂488), 25,759 community health service client contacts (♀3,224), 4,159 mental health service clients (♀854) and 1,182 aged care assessment team clients (♀58).

Diagnostic related group numbers were not available for 1993/94, but were for 1994/95. For this Health Service the average length of stay for in-patients was 3.5 days. This was 0.4 days less than the average length of stay for Health Department patients for all other State Government hospitals.

The hospital service costs for 1993/94 were \$15,549,284 and for 1994/95 were \$16,005,948. During 1994/95 \$335,636 had been spent on capital works projects to improve the Health Service premises and to purchase new equipment.

The Diagnostic Related Group Average Weight (measure of average cost of hospital treatment), for this Health Service was 0.7773. The average for all other West Australian Hospitals was 0.8904. This showed that the cost of treating a patient in this Health Service was less than average.

The average cost of admission per in-patient to this Health Service's hospital was \$1,784 in 1993/94 and \$1,725 for 1994/95. Peer group hospitals (5 other large country hospitals) average cost per in-patient per admission was \$2,549 (♀\$765 to this Health Service's patient cost) in 1993/94 and \$2,526 (♀\$801 to this Health Service's patient cost) in 1994/95. Separate costs were not kept for outpatient services as no fees were raised against public or private patients who attended any of the out patient clinics.

For in-patients a daily bed fee was paid by private patients. This contributed to the cost of services required to provide health care to them. Public patients were not charged as their health care costs were paid by the government through Medicare. For 1994/95

private patient fees did not meet budget estimates as there was a shift of patients changing from paying private health insurance to Medicare coverage. In 1994/95 funding for Veteran Affairs patients ceased to be paid to the hospital.

As well as being provided with an operating budget by the Health Department, the hospital was given donations, amounting to \$38,027 in 1993/94 and \$159,215 in 1994/95, by community sources. The hospital also had money in trust funds that had been left to the organisation for improving patient care by community people who had died.

Hospital seven.

In 1993/94 in patient numbers were 7,698. In 1994/95 the number was 7,932 (↑234). Out patient numbers for 1993/94 were 48,320. For 1994/95 they were 50,672 (↑2352). The number of domiciliary care patients in 1993/94 was 6,432. In the following financial year it was 6,666 (↑234).

Cost of patient care for each diagnostic related group at this health service was generally higher than in other government hospitals. The reasons for this were that many patients cared for by this health service were elderly and had multiple illnesses. Diagnostic related groups did not take the patient's age or other patient medical conditions into account when costing care. The finance manager did not have the exact figures for service costs etc available to provide to the researcher.

Hospital eight.

For 1993/94 the Health Service cared for 5,484 in patients and 32,145 out patients. During 1994/95 patient numbers were 6,053 (↑ 569) for in patients, 38,319 (↑ 6,174) for out patients and there were 832 urgent cases who had to wait longer than 30 days for admission to the hospital. At the end of the 1994/95 financial year there were 1,102 people on the waiting list for admission to the hospital for health care. In 1994/95 the

hospital had treated 191 in patients and 6300 out patients over and above the contract funded level. The average length of stay for the top 20 diagnostic related groups was 3.12 days.

For the 1994/95 financial year the hospital bed occupancy rate was an average of 78% of beds occupied. Theatre operating occupancy rate was 100%. The total cost per patient bed day was \$521.55.

The average diagnostic related group weight index compared to peer group hospitals was. Peer Group 0.816. this organisation 0.901. The average cost of patient care till discharge compared with peer group hospitals was. peer group \$1928. this organisation \$2129 (↑ \$210).

Hospital service costs for 1993/94 were \$16,333,011. Service costs for 1994/95 were \$16,292,895 (↓ \$40,116). Savings were made by employing less nursing staff members.

APPENDIX K

Waste management.

Waste Management.

Hospital one.

All Health Service waste was sorted into biomedical and non biomedical for disposal. All rubbish bins were emptied at least daily. Non Biomedical rubbish was disposed of through council facilities. Biomedical waste was disposed, as per the legal requirements, by a contractor. There was no recycling or selling of waste. During the surveyed period the premises always appeared to be clean and tidy with no rubbish evident in inappropriate places.

Hospital two.

Hospital waste was collected weekly by the Shire and taken to the local rubbish tip.

Hospital three.

Waste was collected by the local council. The health service had tried recycling appropriate rubbish, but found recycling was unfinancial, with the exception of office paper. To reduce the production of waste non disposable products were used where possible. Throughout the survey period the premises appeared to be clean and tidy with no rubbish evident in inappropriate places.

Hospital four.

The Health Service Manager decided to bring in recycling of as much 'rubbish' as possible due to the following motivating factors:

- Burning rubbish cost \$2 per kilogram in gas and maintenance costs.
- People living in the area were likely to go to the media about the environmental pollution caused by the Health Service burning rubbish for 4 to 8 hours per day.
- With the coming changes in Environmental Pollution Regulations related to the ban on incineration of rubbish the Health Service would be receiving large fines for non-compliance.

- The Health Service's City Council was introducing a user pay fee for rubbish removal, instead of the previously charged nominal fee.

A project team consisting of a Total Quality Management Facilitator, a Team Leader (the Health Service Engineer), a Registered Nurse, Wardsmaid, Orderly and Mechanical Fitter was formed. Helpful advice was also provided by a member of the Health Department's Central Office. To implement effective rubbish management the team met for an hour each week, then took the team ideas back to discuss with their co-workers. A service provider for rubbish recycling was decided upon, recycling bins were introduced into appropriate Health Service areas and Rubbish Management Policies and Procedures were written and implemented. Staff members were educated on rubbish management.

Prior to the change in rubbish disposal procedures 56 tones of rubbish were deposited annually by the Health Service in a land fill site and 18 tones of rubbish were incinerated. After the change 43 tones of rubbish were deposited in land fill, 14 tones of clinical waste were disposed of as per Environmental Protection Regulations and 17 tones of rubbish sold as recyclable materials annually by the Health Service. No rubbish was incinerated. The Chairperson of the Rubbish Management Committee said that the Committee's success was due to:

- “1. Lack of involvement by administration.
- 2. The complete process was worker driven.
- 3. The faith placed in the team by the Management.”

Hospital 5.

There were no special procedures for waste management. All rubbish bins were emptied at least daily. Rubbish was disposed of through council facilities. There did not seem to be any recycling or selling of waste. During the surveyed period the

premises always appeared to clean and tidy with no rubbish evident in inappropriate places.

Hospital six

A paper recycling program was commenced in 1989. High grade paper. (approximately 600 kilos annually). was sold to a local recycling agent who forwarded it on to Austissue. Hospital newspapers were sold to Grass Growers Pty. Ltd. who pulped it, seeded it and used it for erosion control, stabilising sand dunes and for spray on lawn. The Medical Safework Program was used to manage biomedical waste.

Hospital seven.

This health service had two waste management staff. Employees at this health service were also very active in the Hospital Environmental Awareness Link organisation. Waste minimisation and recycling were very strongly encouraged and rewarded with praise. Members of this health service held educational sessions for other hospitals' employees to learn cost effective waste minimisation strategies from them as they were innovators and leaders in this field.

Hospital eight.

Waste Paper was recycled by the Health Service. In the 12 months prior to the research 4.700 kilograms of paper had been recycled. Rubbish bins were emptied at least daily. Rubbish was disposed of through council facilities. During the surveyed period the premises appeared to be generally clean and tidy with no rubbish evident in inappropriate places.

APPENDIX L

Occupational health and safety practices.

Occupational Health & Safety practices.

Hospital one.

The hospital had an "Occupational Health. Fire and Safety Audit" which included 15 questions.

- Two questions identified if staff were using correct personal protective equipment in their work.
- One question checked if staff had attended a "back care" lecture in the last 12 months.
- Eight questions checked fire safety knowledge of staff and if there was safe access through the buildings and exits if a fire did occur.
- Two questions checked staff knowledge of cardio pulmonary resuscitation.
- The last question checked if the brakes were applied to all patients' beds and if the bed winding handles were folded away.

The hospital also had an audit that included 14 questions on staff infection control practices.

The hospital had elected Occupational Safety and Health Representatives and an Occupational Safety and Health Committee. This Committee reviewed all staff and visitor injuries that occurred on the premises.

The Staff Development / Quality Coordinator conducted lectures on Occupational Safety and Health for staff. The Human Resource Manager kept records of injury and compensation statistics. The Maintenance Staff worked well to maintain a safe premises. Top Management provided funds for occupational safety and health needs as appropriate. For example, a hood to cover the printer had recently been purchased and installed to reduce the noise from this machine to a level acceptable to the staff working in the area.

Occupational Health, Safety and Rehabilitation Statistics.

	1993/94	1994/95
Total injury claim numbers	3	6
Loss time injury numbers	2	4
Non-loss time injury numbers	1	2
Injury frequency rate per million hours worked	22	45
Total hours worked	136.056	133.438
Workers Compensation hours	216	175
Employee incident rate	2.8%	5.7%
Cost per \$100 of wage roll	35 cents	33 cents
Rehabilitation success rate	100%	100%

Sick Leave Statistics.

Sick leave taken in 1993/94 by employees was 3.8% (5.170 hours) of total hours worked by employees (136.056 hours). In 1994/95 this had decreased to 2.8% (3825 hours) of total hours worked (133.438 hours).

Hospital two.

The hospital elected Occupational Safety and Health Representatives played a major part in promoting a safe and healthy work environment. work premises and safe staff work related behaviour. A Registered Nurse, who was also an Occupational Safety and Health Representative, was designated as the Occupational Safety, Health and Rehabilitation Co-ordinator for the hospital.

A Cleaner, who was an Occupational Safety and Health Representative, conducted monthly specific hospital environmental inspections, and 3 monthly safety inspections, copies of which were documented in the Health Department of Western Australia Occupational Safety and Health Manual.

The National Safety Council of Australia (NSCA) had provided training to hospital staff on occupational safety and health. The hospital had 3 Safety Procedure and Training manuals from the NSCA which were well used. NSCA educators had taught employees how to use the 5 Star Rating System Audit. This audit was conducted once a year by Occupational Safety and Health Representatives.

Records of all safety and health inspections and audits conducted were kept. All had results of 95-100% compliance. Records of all staff occupational related accidents were kept by the nurse in charge of Occupational Safety, Health and Rehabilitation. There had only been one staff injury reported in the last 2 years. No rehabilitation was required for this injury.

An occupational safety and health report was given by occupational safety and health representatives at each weekly hospital staff meeting and at the monthly Hospital Board meeting. For any occupational safety or health problems identified finance was allocated and the problem rectified. Staff aimed to be proactive in making the workplace and work processes safe. For example, for each patient admitted a nursing care plan was written. Part of this care plan documented safe work procedures to be used when caring for the patient.

An example of this was when a patient required assistance with moving the correct way to provide this assistance was documented in the care plan. For patients who required a lifting hoist to move them the lifting hoist was fixed to the patient's bed. All nursing staff had been trained in how to use the over bed lifting hoist and used the lifting hoists as appropriate to move patients. Patients stated that they felt very comfortable being moved in the hoist slings.

Staff seemed to have enough time to complete work safely, helped each other with work related tasks as appropriate and have good communication about work related matters.

In the hospital there was enough room to move safely to complete work related tasks. The correct tools to complete work safely were also provided.

Members of the town Fire Brigade had organised fire safety for the hospital. They had installed safety features that included fire-walls, fire doors, smoke detectors, fire extinguishers and fire hoses. Fire fighter had trained all hospital staff to identify any fire hazards and to take action to control the risk of the identified hazard causing an explosion or fire. Staff training had also been provided by the Fire Fighters for use of fire blankets and other fire extinguishers, the correct procedures to follow in the event of a fire and how to evacuate all people out of the hospital safely if a fire occurred. Annual inspections and fire safety lectures were provided by local Fire Brigade Members at the hospital. All staff members were required to attend the lectures.

Mock fire drills were held regularly by the Fire Brigade at the hospital. Procedures to follow in the event of a fire were clearly documented, framed and displayed on the hospital walls in all patient areas so that patients also knew what to do if a fire occurred. With the involvement of people from the town, hospital staff had also held mock disaster response training. Procedures to be followed in the event of a variety of emergencies were framed and displayed on walls in patient areas.

Occupational Health, Safety and Rehabilitation Statistics.

	1993/94	1994/95
Total injury claims number	0	1
Loss time injury number	0	1
Non-loss time injury number	0	0
Injury frequency rate per million hours worked	0	Unknown
Employee incident rate	0	Unknown
Cost per \$100 of wage roll	0	Unknown
Number of days lost due to injuries	0	7

Rehabilitation success rate

No rehabilitation required.

All records of the missing data were kept by the Regional Health Center and not available from hospital staff. Regional Health Center staff refused to provide this information to the researcher.

Sick Leave Statistics.

This information was kept at the Regional Health Care Center and was not available from hospital staff. The regional center staff refused to provide this information to the researcher. The Director of Nursing verbally reported that the hospital employees generally enjoyed good health and that sick leave for staff was minimal.

Hospital three

In 1994 the health service had changed from managing its own occupational safety and health practices to contracting out this service management. Improved occupational safety and health practices had resulted in a saving of \$70,000 per annum in workers' compensation premiums. A budget of \$6,000 per annum was allocated for occupational safety and health improvements. The occupational safety and health service contractor was unable to provide some of the data asked for by the researcher. This made it difficult to compare previous injury records with current ones.

The health service did not have its own occupational safety and health manual, but did have copies of the Health Department Occupational Safety and Health Manual available for use in the workplace.

The hospital had occupational safety and health representatives. These people were organised into two star teams. Both teams were responsible for identifying workplace hazards, assessing the risk of these hazards causing harm and organising for the

provision of appropriate hazard control measures as appropriate. An external safety and health consultant was used for the provision of expert advice as needed.

The occupational safety and health committee provided monthly reports to the health service Board of Management. This report included any occupationally related accidents that occurred. The hospital Quality Matrix included plans for the Occupational Safety and Health Committee Members to be provided with appropriate education and to have an external review conducted of staff occupational safety and health practices.

The General Manager showed concern for providing the best workplace conditions for his staff. If any staff were injured and required rehabilitation he personally kept in contact with the staff and provided encouragement for their recovery progress. He was also concerned that with the continual demands of the Health Department for increased efficiency and the additional staff workload, which was not supported by an increase in resources, a real risk existed for staff to succumb to ill health caused through stress and burnout.

Occupational Health, Safety and Rehabilitation Statistics.

	1992/93	1993/94	1994/95
Total injury claim numbers	210	190	189
Loss time injury numbers	12	3	?
Non-loss time injury numbers	?	?	?
Injury frequency rate per million hours worked	6.61	12.53	24.5
Total hours worked	211.944	239.305	?
Employee incident rate	5.71	1.57	?
Average days duration	59.44	7	?
Severity rate	25	0	?
Cost per \$100 of wage roll	?	?	1.66

Compensation premium rate	?	?	4.2
Rehabilitation success rate	?	?	100%

Sick leave statistics

Sick leave taken in 1993/94 by employees was not recorded. In 1994/95 this was 2.8% of total hours worked.

Hospital four.

For this Health Service manual handling injuries were the most common cause of work days lost due to occupational injury. In 1993/94, 2.603 days were lost and in 1994/95, 416 days were taken as sick leave due to manual handling injuries. Workers' Compensation premiums for this Health Service had risen between 1993/94 and 1994/95 by \$161,200. The information for this section was provided by the Nurse Manager for Admissions and Workers' Compensation.

The Health Service had Occupational Safety and Health Representatives and an Occupational Safety and Health and Safety Committee. The Chairperson of this Committee was the Administration Co-ordinator.

Health Promotion.

Health promotion activities were aimed mainly at members of the population living in the Health Service District. Activities included:

- A display on methods of skin cancer prevention at the Aquatic Centre.
- A presentation on the effects of drugs to a ladies' Guild.
- A presentation on health promotion to a Seniors' Friendship Club.
- A health promotion display at the local shopping centre.
- "Respect yourself Campaign" conducted at the local High School.
- Presentation of lectures on AIDS/HIV and Hepatitis to TAFE students.
- Quit Campaign.

- Presentation of baby bibs to 32 mothers whose babies were born during QUIT week.
- Three hundred and twenty QUIT kits were distributed to local government offices, public libraries and work sites.
- One hundred and twenty five people had their lung function tested at the local shopping centre during QUIT week.
- A Health Education Officer provided Community Service Nurses with lectures on how to plan, evaluate and write project proposals for health promotion.
- Diabetes week. Community Nurses set up a display at the local shopping centre on "Diabetes – Know the Risk" and provided free blood sugar level checks to members of the community.

Health promotion strategies were orientated towards external customers. No health promotion strategies were specifically for health service staff.

Occupational Health, Safety and Rehabilitation Statistics.

	1993/94	1994/95
Total injury claims number	Unknown	Unknown
Loss time injury number	62	38
Non-loss time injury number	Unknown	Unknown
Injury frequency rate per million hours worked	42.02	28.69
Employee incident rate	15%	10%
Cost per \$100 of wage roll	\$1.23	\$4.43
Number of days lost due to injuries	2728	813
Average lost time rate (severity)	4.45	5.78
Rehabilitation success rate	Unknown	21.4% (3/14)

Sick leave statistics.

Absenteeism due to sick leave information was not available.

Hospital 5.

Management commitment.

The Administrator (Chief Executive Officer) had the ultimate responsibility for occupational safety and health in this organisation. \$10 million had just been spent to provide the best buildings and equipment for the hospital. The Administrator promoted occupational safety and health by encouraging all employees to be responsible for their own safety and health and for the safety and health of others in the workplace.

Employees were trained and encouraged to identify hazards and to assess the risk. Any hazards that could not be controlled by employees immediately were reported to management who would rectify the hazard through repair, alteration, substitution or elimination.

The Hospitality co-ordinator stated that the hospital's mission was lived by the management staff as they provided a high standard of occupational health and safety to all. This was achieved through having an open door policy, being genuinely concerned about staffs' welfare and asking how they were if they thought staff may have a problem, sending cards for staffs' birthdays, if they were away sick, for congratulations on success, marriage, etc., following up any complaints with appropriate action, encouraging staff to use all their abilities and developing staffs' skills.

Management were always willing to support and help staff if they had a crisis or became distressed. The hospital had a fund for buying presents for employees if they were leaving or had a crisis. Staff members were also given presents for work well done.

Regular hazard identification, risk assessments and hazard control strategies were expected to be performed by management staff. Records were to be kept of these and

filed in an appropriate place so that they could be easily accessed by WorkSafe Western Australia Inspectors and by company personnel.

Management were responsible for, (in consultation with their department employees), developing safety policies, safe work procedures and documenting these for inclusion in the hospital manuals. Managers also had the responsibility for regular and continuous assessment of work practices, supervision of staffs' work, ensuring that all staff members were trained to work safely and for conducting staff performance appraisals at the required intervals.

Positive Performance Indicators used for occupational safety and health in this organisation included management commitment, policies and procedures, consultation, hazard identification, risk assessment, risk control, training and health promotion.

Policies and procedures.

The organisation had safe workplace, work process and employee behaviour policies. (Management, the Occupational Safety and Health Committee and Employee responsibilities were clearly defined). Management staff had their names included in the organisational chart in the hospital policy manual. The policy manual also had a section on how employees were to treat and care for visitors to the premises. All policies were authorised by the Hospital Board of Management.

The procedure manuals were very customer focused with the customers being the treating medical practitioners and their patients. For all patient care areas, from the operating theatres to the wards, each doctor's requirements (standing orders), for their work related needs and for their patients' care were documented for staff use when delivering care. The hospital also had an Infection Control Manual and a Wound Care Manual.

Consultation.

The organisation had Occupational Safety and Health Employee Representatives and an Occupational Safety and Health Committee. The Director of Nursing was the Chairperson of this committee. This demonstrated top management commitment to employee health and safety. The committee met monthly to discuss occupational safety and health matters. Committee members were sent to regular educational sessions to keep up to date with the latest occupational health and safety practices.

Using their knowledge of occupational health and safety these people dealt with any health and safety matters which were brought to their attention by members of the organisation. These included the review of any accidents or incidents related to safety or health, reporting these to management quarterly and being actively involved in the processes of hazard identification, risk assessment and control to facilitate the achievement of a safe work place, work practices and employees who were able to work safely.

There was also appropriate consultation between management and employees about any work place health or safety issues as it was recognised by management that employees often knew their work processes, people and the work place best. Employees were involved in choosing appropriate work place equipment for their area of work. Staff members were encouraged to report any ideas for improving their work place or processes and to be involved in implementing them. Hospital safety and health policies, procedures and training were developed through consultation between senior management, departmental managers, Occupational Safety and Health Representatives and Occupational Safety and Health Committee Members.

Hazard identification, risk assessment and control.

Employees were taught this at orientation and were encouraged to have on going experience using these skills. An example of the teaching of these processes was part of

the manual handling training program. With Manual handling employees were taught to identify risks using a safe manual handling checklist. This list was used to teach employees to assess the task, the object to be moved, movements they would need to make, posture required, work place layout, the work environment and individual factors specific to what was to be moved.

Following this employees were taught to assess the risk of the task causing an injury using the headings of:

- (1) characteristics of load and equipment.
- (2) work environment and layout.
- (3) working posture, positions and actions and
- (4) work organisation.

The third work sheet used when teaching combined the three tasks of hazard identification (problem), risk assessment, and risk control. This was used to teach participants to progress from identifying hazards to controlling them. The fourth work sheet contained a flow chart that educated employees about how to control risks using the hierarchy of hazard control measures. It provided practical examples of how this could be accomplished. The work sheet also had areas for comments as to why each strategy should, or should not, be used and the information to return to evaluate the effectiveness of the hazard control strategies once they were implemented.

When controlling hazards employees were taught to identify short term (low cost) strategies which could be implemented immediately and long term solutions which could be implemented in a planned manner as appropriate. The Manual Handling Code of Practice was used. Employees then practiced identifying hazards in their work place and finding effective ways to control them. For example, it was identified that bending down frequently to wind up beds, to make them the correct height for bed making and patient care, was causing staff back ache. As a control measure for this hazard the

hospital purchased electric beds. These were used for appropriate patients to make their care less stressful for staff attending to their needs as the height of the electric beds was adjusted by the push of a button at an easy to reach height.

Audits were also used for hazard identification and to ensure compliance to hospital established standards. Hospital health and safety audits included:

- Fire safety (staff training audit [5 questions (q.)], protecting patients from accidents or injury in the event of a fire [4 q.], fire alarm system [4 q.], fire extinguishers [6 q.], fire hose reels [5 q.], fire hydrants [3 q.] and exit signs and evacuation routes [7 q.]).
- Work processes (administration of intravenous medications [14 q.] and administration of drugs [8 q.]).
- Hygiene (infection control [7 q.], food handling practices [13 q.], cleanliness of kitchen [16 q.], kitchen hygiene practices of staff [8 q.], changing of patients linen [10 q.], office cleanliness [5 q.], endoscopy unit cleanliness [6 q.], pathology unit cleanliness [6 q.], patient rooms cleanliness [9 q.], general ward cleanliness [6 q.] and bathroom cleanliness [6 q.]).
- Protecting patients from accidents or injury (ward care [11 q.] and post operative observations [4 q.]).
- Electrical safety [8 q.].
- Flammable liquid and gas safety [3 q.].
- Handling and storage of schedule 8 drugs [7 q.].
- General maintenance [7 q.].
- Security procedures (ward [4 q.] and general premises [8 q.]).
- Emergency procedures [9 q.].

At the completion of staff conducting audits the findings were summarised. appropriate actions recommended and appropriate people informed of the audit results. The auditor

also recommended when a follow up evaluation should be performed. Frequently on audit reports praise was written for work well done.

In addition to audit reports the hospital had accident injury / incident report forms for staff, patients or visitors to complete if an accident occurred. Managers, safety and health representatives and safety and health committee members were reactive to these accidents and implemented appropriate actions to help prevent them occurring again.

Training.

Staff members were provided with occupational health and safety training at orientation. All staff, including short term contract workers, were provided with 2 day's orientation. On going education was also provided to staff to keep their safety and health knowledge current. Safety training was considered particularly important if a new piece of equipment was introduced into the work place, if new chemicals were purchased or if work processes were to be changed to make them safer.

When new staff commenced work, after their orientation, they were buddied with experienced staff members, many of whom had been given preceptor training to enable them to provide an effective work place orientation, teach safe work practices and to provide supervision of work as needed.

Health promotion.

Staff health and safety responsibilities were included in employment contracts for all employees. Management in turn listened to what staff said. If there were any problems such as air conditioning temperature or a flickering light, these were attended to promptly and work place conditions made healthy.

There was regular servicing and maintenance of all equipment. Appropriate equipment to protect staffs' health, such as lifting hoists and electric beds, and appropriate personal

protective equipment, such as disposable gloves to use when hands come in contact with blood, were provided.

Food was used well in this organisation to promote health. Morning and afternoon tea were provided for staff at no cost. Tea consisted of a drink(s) and food that was usually baked on the premises. For educational sessions all meals were supplied free to the participants. At meal times staff and volunteers ate in the dining room where healthy food was served attractively and supplied at subsidised (below cost) prices. The Hospitality Co-ordinator said that, "No one goes without anything." A good physical environment, good equipment, good food and good training for staff and volunteers was supplied at this hospital. Staff areas had the same high standards maintained as patient areas.

Occupational Health, Safety and Rehabilitation Statistics.

	1993/94	1994/95
Total injury claim numbers	11	19
Loss time injury numbers	6	13
Non-loss time injury numbers	5	6
Injury frequency rate per million hours worked	24.6	49
Employee incident rate	3.4%	7%
Cost per \$100 of wage roll	71 cents.	\$1.04
Rehabilitation success rate	100%	Nil required.

All employee injuries for the 1994/95 financial year were minor and none required rehabilitation.

Sick leave statistics.

Sick leave taken in 1993/94 by employees was 2.8% of total hours available for work. In 1994/95 this had decreased to 2.4%.

Hospital six.

Occupational health, safety and rehabilitation information was supplied by the Engineer who was also the Chairperson of the organisation's Occupational Safety and Health Committee. The Engineer said that the Occupational Safety and Health Committee had not met for the last 6 months, but he had organised monthly inspections of the premises and rectified hazards as they were identified.

Occupational health, safety and rehabilitation statistics.

	1993/94	1994/95
Total injury claims number	85	105
Loss time injury number	11	23
Non-loss time injury number	74	82
Injury frequency rate per million hours worked	Unknown	40.6
Employee incident rate	Unknown	6.5%
Cost per \$100 of wage roll	Unknown	Unknown
Number of days lost due to injuries	341	141
Rehabilitation success rate	Unknown	Nil required.

In the 1994/95 financial year no employees who were injured required rehabilitation. The major cause of time lost from work was due to manual handling injuries. In 1993/94 sick leave taken by employees due to manual handling injuries was 93 days. In 1994/95 there were 87 days sick leave taken due to manual handling injuries.

Sick Leave statistics.

There was no record available for sick leave taken for the 1993/94 financial year. For the 1994/95 financial year sick leave was taken for 2.74% of the total hours available for work.

Hospital seven.

Occupational safety and health for this organisation was co-ordinated through the Engineering Department Head. He was also an Occupational Safety and Health Representative for Management. Occupational Safety and Health had a high profile in this organisation. On the first day of orientation all new employees were provided with a lecture by an Occupational Safety and Health Committee Representative. This Representative provided new employees with an over view of how occupational safety and health was promoted in this health service.

Information was provided on the Health Department's responsibilities, the Hospital Management's responsibilities and employees' responsibilities. The names and contact phone numbers of the hospital's 25 Occupational Safety and Health Representatives were recorded in the orientation handbook as information for employees to continue to refer to. New employees were also taught what to do if they discovered a fire, dispute settling procedures and universal precautions against infection. During the second day of orientation nursing staff were taught how to move patients using a variety of manual handling practices. Prior to the research employees from the Health Department Occupational Health Unit had provided lectures and a workshop for Managers and Occupational Safety and Health Representatives on using effective occupational health and safety practices.

The organisation also had an Occupational Safety and Health Committee whose members made recommendations for improving organisational safety and health practices and reviewed any reported incidents and injuries to ensure that appropriate follow up action was taken. Members of this committee had also been involved in writing and implementing the organisational occupational safety and health policy. Committee members had also been involved in working with management to produce an Emergency Procedures Manual for use in the health service. The Manual contained general information on what needed to be done in an emergency situation. It also

contained specific information that described what staff needed to do in the following situations:

- Fire
- Cardiac Arrest / Medical Emergency
- Bomb threat
- Internal emergencies
 - Electrical Failure
 - Medical gas failure
 - Communications failure
 - Hazardous substances incident
- Personal threat. eg robbery. violence.
- External emergency
 - Cyclone / storm
 - Earthquake
 - Counter disaster. eg airline crash
- Evacuation.

At the end of each section there was a questionnaire for staff to use to check that they understood and knew the emergency procedures described in the section.

Prior to the research the Occupational Safety and Health Committee had held a very successful 'Safety week' promotion in the organisation. Areas particularly highlighted by the week's display, lectures and workshops were safe manual handling practices and the importance of ergonomic factors to providing a safe workplace, work processes and people safety. A high number of health service staff attended this promotion.

Some staff interviewed in this health service said that they were scared to speak up about occupational safety and health issues because they may be seen as trouble makers and loose their job.

Occupational Health, Safety and Rehabilitation Statistics.

	1993/94	1994/95
Total injury claim numbers	?	?
Loss time injury numbers	56	55
Non-loss time injury numbers	?	?
Injury frequency rate per million hours worked	28.67	38.87
Employee incident rate	5.67%	7.87%
Cost per \$100 of wage roll	?	?
Rehabilitation success rate	?	?

Health service staff was unable to provide all of the above information to the researcher.

Sick Leave Statistics.

Sick leave statistics were not available from this health service.

Hospital eight

Occupational health and safety was managed by the Fire Safety Officer. The health service had elected occupational safety and health representatives. Most health and safety problems were identified by these representatives and it was these individuals who implemented hazard control solutions where possible. Only about half of the organisational safety and health problems had been resolved due to lack of finance to implement appropriate solutions.

The Fire Safety Officer was also a member of the Health Service Staff Development Team, and the Convenor of the Emergency Procedures Committee. Emergency procedures were very well documented for this organisation in the Emergency Response Manual. This manual also included procedures to be followed for emergency incident debriefing. Next to each phone there was short emergency procedures for easy use in the case of a fire, armed hold up, bomb threat or medical emergency.

This organisation had Fire Orders which were colour coded pink, orange, blue, purple and white according to the specific area the evacuation procedures were documented for. The orders had been written in conjunction with the Fire Brigade and met Australian Standards requirements. The orders documented the duties of specific staff in each area the event of a fire. The hospital had clearly labelled fire fighting equipment and exits. Assembly areas to go to in the event of a fire were clearly sign posted. The name of the area fire safety warden on duty for each area for each shift was clearly displayed.

Occupational health, safety and rehabilitation statistics.

	1993/94	1994/95
Total injury claims number	176	218
Loss time injury number	28	19
Non-loss time injury number	148	199
Injury frequency rate per million hours worked	55.11	38.32
Employee incident rate	10.14%	7.54%.
Cost per \$100 of wage roll	Unknown	Unknown
Number of days lost due to injuries	47	422
Rehabilitation success rate	Unknown	Unknown
Cost of injuries per \$100 of wage roll and rehabilitation success rate were not known, but a record was kept of the number of days lost due to occupational injuries. The major reasons for the rise in days lost from work due to injury were days off following assault injuries rising from 15 days in 1993/94 to 148 days in 1994/95 and time off following manual handling injuries rising from 18 days in 1993/94 to 228 days in 1994/95.		

Sick Leave Statistics.

Absenteeism due to sick leave for total hours worked was 2.24% in 1993/94 and 2.88% in 1994/95.

APPENDIX M

Staff education practices.

Health Services Staff Education Practices.

Hospital one.

On employment at the hospital all staff were provided with orientation by the Staff Development / Quality Coordinator. New staff members were provided with a booklet that described the services provided by the hospital. conditions of service. staff responsibilities and expected staff work related actions.

Lectures provided to new staff at orientation included:

- Overview of Staff Development function.
- Fire Safety Protocol.
- Overview of Occupational Safety and Health.
- Manual Handling.
- Infection Control practices.
- Continuous Quality Improvement.
- Cardio Pulmonary Resuscitation.

It was compulsory for all staff employed at the hospital to attend the lectures on Fire Safety. Manual Handling and Cardio Pulmonary Resuscitation annually. These lectures were provided biannually by the Staff Development Coordinator.

Other educational sessions which had been held recently included:

- In service discussions / talks on various subjects.
- Clinical meetings delivered by Medical Staff.
- Talks on Occupational Safety and Health issues.
- A mock evacuation.
- Four diet related lectures provided by the Perth Diet Clinic.

Formal staff training needs were assessed annually by the Staff Development Coordinator. Staff members' suggestions on educational topics they would like to have information provided about were encouraged. All education provided was evaluated by session participants at the end of the training / education session, or through staff self-appraisal. All in service training was fully resourced by the organisation.

As part of its involvement in helping the community the hospital provided opportunities for students to have work experience there. The Work Experience Student Program was reviewed monthly by the Staff Development / Quality Coordinator, the Maternity Clinical Nurse Manager, a designated Enrolled Nurse and the Catering Supervisor. Improvements in this program were made as opportunities were identified. Apprentice training was also conducted by the hospital catering department.

Hospital two.

The Director of Nursing was the Staff Development Co-ordinator. At hospital meetings staff decide on the topics that they would like further education about. Monthly in service sessions were then held on staff decided topics. If hospital staff had expert knowledge on the decided topic they present the educational session. If the staff did not have the expertise outside consultants were employed to provide the education.

On the hospital nurses station noticeboard were flyers for conferences, seminars and work related educational courses. Hospital staff members were encouraged to attend external lectures, seminar presentations and courses to gain the knowledge needed to provide the best possible health care. For example, most of the Registered nurses who were permanent employees of the hospital had attended an X-Ray Technician's Training Course and were certified as competent to take X-Rays.

When new staff commenced work at the hospital, as well as being given orientation lectures and documented duty statements, work procedures and policies, they were buddied to work with experienced staff. This had several advantages. It required existing staff to have a high standard of practice to teach new staff. It also meant new staff were assisted and supervised in their work until they felt confident. New staff members were made to feel very welcome and encouraged to suggest ways that work processes could be improved.

Another method of education in this hospital was the provision of Journals and books related to health care so that staff were able to keep up to date with the latest knowledge available. Staff members were also encouraged to photocopy any service-related articles or information they read and to bring the information to work for discussion and reading by other staff. It was noted that there were files of such educational material kept in the hospital staff library in the Nursing Station area. The hospital also had videos for staff to watch. These included clinical education and occupational health and safety training videos.

All training and education was fully resourced by the hospital. Evaluation of education was through verbal feedback and the improvements in service that resulted from the provision of education.

Hospital three.

A registered nurse was employed three days per fortnight as the Staff Development Nurse. A full day of paid orientation lectures was provided for all staff new to the health service. All nursing staff members were expected to attend annual lectures on cardio-pulmonary resuscitation, infection control documentation, back care and manual handling.

Formal staff training needs were assessed every second year. Study days were held monthly on topics of staff interest and on topics decided by the Staff Development Nurse in collaboration with Clinical Nurse Specialist and the Director of Nursing. Guest speakers were sometimes used to provide staff education. At the end of each educational session evaluation forms were given to all attendees. These were then collated. The information provided was used to make changes or improvements to educational sessions as appropriate.

Hospital four.

The hospital provided orientation lectures for new employees. An assessment of staff training needs was conducted annually by the Staff Development Co-ordinator. Staff in-service training costs were paid for by the Health Service. Evaluation of the training effectiveness was by a review of staff accident / incident records.

Staff training that had been conducted over the previous 12 months in the Health service included:

- Cardio pulmonary resuscitation
- Manual handling
- Fire safety
- Intravenous therapy administration
- Use of Patient Controlled Analgesia
- Management of aggressive / difficult patients
- Continuous improvement skills
- Diabetes education
- Wound management
- Ethical issues

Hospital five.

Formal staff members training needs were evaluated annually. This hospital provided many work related education programs that included:

- General orientation
- Work based orientation
- Quality Management
- Hospital wide computer use skills
- Customer focused Infection Control Awareness
- Medi watch
- Hazard risk identification, assessment and control
- Manual handling
- Fire Safety
- Occupational health and safety
- Communication workshops
- Facilitator workshop
- Team work workshop
- Enterprise bargaining workshop
- Case Mix funding for nursing and office staff
- Food handlers' workshop
- Chemotherapy
- Palliative care
- Safe equipment use (for new and existing equipment)
- Wound care
- Cardiac and pulmonary resuscitation workshop
- Theatre workshop
- Asthma
- Preceptors workshop
- Depression
- Parkinson's Disease

- Free Tram Flaps
- Legal issues.

Of all the education programs one of the most popular was the interpersonal skills training program taught by the Hospital Chaplain. The training program was run for staff, hospital volunteer workers and any other interested people. The program had 6 modules. (1) Understand your self. (2) Expressing your feelings. (3) Listening to others. (4) Conflict resolution. (5) Confrontation and negotiation. (6) Being assertive.

This educational program, like those listed above, grew out of the expressed education needs of staff working in the hospital. In this hospital staff development helped to meet staffs' needs so that they could provide their customers with improved service.

All staff orientation programs, workshops and inservice education was evaluated by the participants. Feedback was used constructively. Staff training for all the above was fully resourced by the hospital.

Casual pool staff members were rostered to perform employees' work while they attended educational sessions. This ensured that the remaining employees were not overloaded with work and a high standard of customers care could be continue to be maintained.

Hospital six.

Formal employees' training needs were documented annually. Staff development programs conducted at the Health Service over the last 12 months included:

- Orientation to the Health Service for all new staff.
- Compulsory Annual lectures on fire safety, manual handling, and for nurses, annual demonstration of cardio-pulmonary resuscitation competency.

- Critical incident stress debriefing.
- Security training.
- Wound management.
- IV. study days.
- Ear health.
- Documentation.
- One day critical care course which included recertification for defibrillation.

At the end of each educational program an evaluation form was completed by participants to enable continuous improvements in the delivery of staff education. All training was fully resourced by the Health Service.

Staff had also attended a Burns Management study day at Royal Perth Hospital and the Margaret Beard Memorial Nursing Conference. A RHSET Grant had been won by the Health Service to provide a Train the Trainer Course for Cross-Cultural Training. The hospital had a satellite link to Westlink and other distance education programs. The Internet was used to provide staff with up to date information and education programs were available to staff through the Internet.

Hospital seven.

On employment at the hospital all staff members were provided with a one day orientation. except nursing staff who had a two day orientation period. Orientation lectures were co-ordinated by the Staff Development Co-ordinator with orientation information provided by key hospital staff. A member of the Administration. Personnel. Staff Development. Security. Engineering. Infection Control. Occupational Safety and Health Representative. Quality Activities. Physiotherapy and Nursing Management Departments all provided new employees with information relevant to their future work at the health service.

The health service also provided all new employees with a very comprehensive 27 page orientation book that documented the information provided in the orientation sessions and which could be used as an ongoing reference for key work practices. Staff development lectures were held regularly on employee requested topics. Staff and guest speakers presented lectures and workshops. All educational sessions had participants complete an evaluation of the session at its completion. Feed back from participants was used to improve future educational sessions to make them as relevant to staff's needs as possible.

Hospital eight.

The hospital provided orientation lectures for all new health service employees. Training needs for staff were identified through a needs survey conducted by Heads of Departments and through staff performance appraisals. Staff inservice costs were paid for by the Health Service. Legal requirements of education, such as fire drills, correct methods of manual handling and competency in dealing with cardiac arrests, were met. Training provided was evaluated at the end of the training session. Responses were generally favourable.

The Health Service had also provided 5 education sessions of 2 hours each to nursing homes. Cardio pulmonary resuscitation updates to 12 medical practitioners, teaching sessions and phone consultancies to country hospitals. 6 week work experience placements for Kalgoorlie College students. 40 student work experience placements for Curtin University Nursing students, and education sessions in tertiary institutions, other city hospitals and for the Ministry of Education. Health promotion lectures were held on a monthly basis for patients and staff. For example, during AIDS week lectures had been provided by community people for patients and staff to attend.

APPENDIX N

Publications.

Health Service Publications.

Hospital one.

The organisation had a hospital wide **policy manual** for all staff to use. There were **written procedures** for work related tasks. These were kept in files that were easy to access by the staff performing the tasks. All staff had **written job descriptions**. The hospital also had glossy **promotional pamphlets** to advertise the wide range of health care services that it had available for customers.

Hospital two.

The hospital had a nine-page **patient information book** that was given to all patients on admission. This publication documented a "welcome", procedures to use to obtain information from staff about health care, patients' rights and responsibilities, pre-admission information, what patients were required to bring into hospital with them, a description of general rules and services and details of how to become involved with providing voluntary services for the hospital. The publication ended with a list of the seven serving town members on the Hospital Board.

In the hospital patient and visitor reception room there was a display rack with many **publications promoting good health practices** for community use. These publications were from government organisations and were available for people to take home and use.

The hospital also had a **policy manual**, **written job descriptions** and **duty statements** for each shift for all staff, and well **documented work procedures** that were kept in files at the relevant workplaces. All Policies were written and authorised by the Board of Management of the hospital. Job descriptions, duty statements and work procedures were written by the staff members employed at the hospital who were involved in doing the described duties.

Hospital three

The organisation had a hospital wide **policy manual** for all staff to use. A copy of the policy manual was available in each ward and department. There were **written procedures for work related tasks**. These were kept in files that were easy to access by the staff performing the tasks. All staff had **written job descriptions**. The health service had its own **newsletter** to keep staff informed of what was happening.

In the hospital reception area, near the front door was a rack with many leaflets on. Hospital patients and visitors were encouraged to take these to use the provided information to improve their health care. Some of the **leaflets** were:

- the health service **customer charter**. This leaflet described the services provided by the organisation, staff's commitment to customer service, customers' rights and responsibilities and the ten areas where the health service was located.
- a description of the Parenting Program offered by the health service, how to enrol and where it was located.
- a description of the free continence management service offered by health service people.
- "Introducing your hospital pharmacist". This leaflet described how patients could make the best use of the services that the hospital pharmacist was able to offer.
- Health Service Social Work Service. This leaflet described the range of services offered by the hospital social worker, how to contact the social worker to use the services provided and where the social worker's office was located.
- Silver Chain Services. This leaflet described how to contact the local Silver Chain Nurse and the range of services that she and the organisation provided.
- Stress and Cancer. Introducing the Cancer Foundation of Western Australia. These two leaflets described how the Cancer Foundation could help people with cancer and their carers.

Hospital four.

This hospital had **policy** and **procedure manuals** that were updated every one to two years. The organisation had a nursing **newsletter** that was published fortnightly and contained information about nursing activities. A **quality activities newsletter** was also published. This newsletter explained the theory behind, and benefits of the Health Service being accredited by the Australian Council on Health Care Standards. It also explained to Health Service employees what they needed to do to prepare for accreditation.

A **customer service charter** was published by this Health Service. It described customers as people who lived in the surrounding community, the types of services which were available to these people, the organisation's philosophy, goals and values, complaints procedure, and how the organisation was committed to providing quality care.

The organisation also published an **information directory**. This stated how customers could be involved in improving the quality of their health care, what their rights were, and how the organisation demonstrated its commitment to quality service. The information directory was kept in the bedside locker of all patients. This 16 page Hospital Patients' Guide, as well as providing comprehensive information about the health service, contained advertisements by local traders. For example, Pizza Hut, Target Chemists. It demonstrated a close link with the local community as the traders who advertised in this publication also paid the printing costs for this information directory.

Hospital five.

This hospital had both **policy** and **procedure manuals**. In all other health services the procedure manuals were written with the information needs of the employees performing the work in mind. In this hospital all procedures were written to enable employees to meet the requirements of the treating Medical Practitioners. Each Medical Practitioner had his or her own preferred procedures documented for the provision of care for their patients. As the information in the procedure manuals was used by the Medical Practitioners as **standing orders** for patient care this saved the Medical Practitioners writing time and facilitated a high standard of patient care. The hospital also had documented employee **job descriptions**.

For prospective customers Hospital five had a glossy **promotional booklet** about the services offered at the hospital. On admission to the hospital as an in patient customers were given an **information booklet** about the hospital that included a patient satisfaction with care survey form for the patient to complete before leaving the hospital.

On admission all in patients were also given **post cards** with a picture of a view of Perth scenery that could be seen from the health service grounds. The post card had information about the hospital on the back along with the hospital's name. The post cards were used as a health service marketing tool.

Another marketing tool was a **bookmark**. The bookmark had a scenery picture as background and included the words of the health service's mission and values on the front. The bookmark was supplied to employees, patients and visitors to reinforce the importance of the hospital's mission and Christian values.

Hospital six.

This health service had **policy** and **procedure manuals** but they had not been updated since 1991. To keep staff informed with what was happening in the organisation the health service had a **newsletter** that was called the "Grapevine." Pharmacy produced its own newsletter that was provided to customers to keep them up to date with drug information. The hospital also had a **patient information directory** that provided patients with a guide to the availability of health care services, and a **customer charter** that informed customers about their rights and responsibilities.

Hospital seven

All staff had written **job descriptions**. The organisation had a hospital wide **policy manual** for all staff to use. There were **written procedures** for work related tasks. The health service policies and procedures were all documented according to the Australian Council on Health Care Standards recommended format. Each policy was signed by the person authorising the use of the policy. All policies recorded the date that they were first written and the date of their last revision. All had been revised within the last 12 months.

Health service documented policies and work procedures were kept in files that were easy to access by the staff performing work tasks. The health service had 41 copies of the policy and procedure manuals. As well as having manuals located in each department the health service also had appropriate manuals located in the health service library and in the Doctors' Lounge for Visiting Medical Practitioners to access.

The health service had a leaflet that described its **customer charter**. It described who the customers were, the services offered by the organisation and the health service commitment to its customers. Also available for patients was Medicare Public Patients' Hospital Charter that was produced by the Health Department. It documented the rights of Public Patients and how these patients should make a complaint if wished.

The organisation also had its own **newsletter** called 'Northern Lights'. This publication provided staff, and any other interested people, with information about the health service, relevant events, data and educational matters.

Hospital eight.

Hospital eight had **policy** and **procedure manuals** to guide the work practices of employees. To keep staff informed of what was happening in the organisation the health service had a **newsletter**. The newsletter printed praise for work well done, information on health care services, work that was being carried out by individuals or departments, management reports, safety information, newspaper reports on the services provided by the organisation, educational opportunities, sporting and other community activities available for health service staff.

APPENDIX O

Quality activity practices.

Health Services Quality Activity practices.

Health Service one.

History.

Quality was first introduced into the organisation in 1990 using the Quality Assurance Model. As part of this model audits were first conducted in the hospital in 1990. The Hospital was accredited by the Australian Council on Health Care Standards in 1993. In 1995 a Total Quality Management / Continuous Quality Improvement Philosophy was introduced with the 2 models integrated to form a 7 step improvement process.

The 7 steps used were:

PLAN

1. Identify the problem or opportunities for improvement.
2. Locate possible causes of variation.
3. Analyse to determine major causes.

DO

4. Correct by taking action.

CHECK

5. Evaluate the effect of the corrective action.

ACT

6. Standardise the proposed change to prevent the problem from recurring.

DOCUMENT

7. Document and communicate feedback through a process summary, minutes, graphics, etc. Quality Improvement documentation used had included fishbone diagrams, flow charts and histograms.

Monthly Quality Improvement Meetings were held to review what had been accomplished in the way of improvements and to identify actions that needed to be taken to continually improve health care service.

When a problem or opportunity for improvement was identified a Quality Team of the main stakeholders was formed to identify, implement and evaluate improvement objectives. When the objectives were achieved the team was disbanded. The quality projects undertaken and the improvement strategies implemented were standardised following evaluation. Continuous monitoring was maintained to ensure the improvements were maximised and further improvements made if necessary.

All Heads of Departments were expected to provide feedback monthly at the Heads of Departments' Meeting on the quality activities that had been completed in their department. The hospital had a Quality Trophy. It was presented once each 3 months to the department, or person, who had done the most in the previous quarter to improve the quality of customer service. The Housekeeper / Laundry Supervisor / Purchasing Officer had won the last Quality Award for the excellence of her work. Future quality activity plans included the reaccreditation of the hospital by the Australian Council on Health Care Standards.

Quality Audits, Plans and Actions.

The hospital had regular, planned quality assurance audits of all services. Audits were performed monthly, 2nd monthly, 6 monthly or annually as planned. Plans were documented for several years in advance. After each audit had been conducted, as well as the record of the audit, an audit summary sheet was completed. On each audit summary sheet was recorded:

- the department in which the audit was conducted (eg. maintenance, operating theatres).
- the date of the audit.
- problems identified.
- action taken.
- to whom feedback was given.

- follow up (by whom and when) and
- who the auditor was.

Each audit form had a space for the Quality Coordinator to sign to record that the audit results and actions recommended had been sighted by this person. Most audits identified some problems and the audit summary sheet indicated the action taken to improve the standard of service.

As well as audits the quality activities plan included a schedule for work, such as relabelling the shelves of the main store in August and replacing shower curtains in September. The plan also included planned purchase of new equipment such as installation of a solid system 3 computerised chemical dispenser and high pressure water pump in February, and trial and, if suitable, purchase of a filter fab heat patch machine in April for the laundry.

The hospital also had a Quality Improvement Activities Review Plan in which all aspects of service, and the outcomes of these, were documented to be reviewed at regular intervals. Also documented was who would be responsible for reviewing the activity. For example, the effective use of the Health Service Capital and Operational Budget was reviewed by the Health Care Manager, the Administrator / Director of Nursing monthly. Patient accidents, incidents and complications were reviewed 6 monthly by the Staff Development / Quality Coordinator and the Patient Care Review Committee.

Clinical indicator data was collected by hospital staff for review by the Medical Advisory Committee. Results indicated that there was no hospital acquired bacteraemia during the periods studied and that results of all other indicators were within the threshold limits for private health care facilities where a threshold had been established for an indicator.

Hospital two.

Personnel at the hospital had been told in 1994 by the Regional Director that they had to have quality activities. A Quality Plan had been written to comply with this directive. but the plan was not in current use. The Director of Nursing was the designated Quality Activities Co-ordinator. Audits had been conducted.

Audits completed included:

Audit Compliance Result.

• Patient satisfaction with care surveys.	100%
• Staff satisfaction survey.	90%
• X-Ray service audit	100%
• Cool room temperature	100%
• Infection control audit	100%
• Meals on wheels service satisfaction survey	92%
• Food service satisfaction survey	98%
• Out patient service survey	100%
• Patient care plan audit	100%
• Medical records audit	100%
• Cleaning audit	100%
• Accident and Emergency Service audit	100%
• Laundry service audit	100%
• Medication charts audit	100%

Results of audits were presented by hospital staff at the Hospital monthly Board meeting for discussion and to arrange for any follow up action needed for improvements. Generally the results indicated that there was a high standard of compliance to audited criteria.

Clinical indicator of care records for this hospital were kept by the Regional Health Centre and were not available from hospital staff. The Regional Health Centre staff refused to provide this information to the researcher. However a verbal report from the Hospital Administrator and the Director of Nursing was that at this hospital over the last two years there were no unplanned patient re-admissions within 28 days of discharge. No unplanned returns of patients to the operating theatre during the same admission. No wound infections or hospital acquired bacteraemia.

When quality activity meetings were held all staff on duty were invited to, and attended, the multi-disciplinary meeting. Every item discussed had clearly recorded in the meeting minutes who was to perform the follow up action and by what date the action was to be completed. Meetings were held only when there was a need to conduct a planning activity, or when there were problems to be solved. Quality Activity meetings were not held very frequently. The last recorded one was held 10 months prior to the research.

All visitors to the hospital were encouraged, since 1942, to write their opinion of the hospital and its staffs' service in the visitors' book. All comments recorded were complimentary.

Hospital three.

History.

The health service became involved in quality activities in 1993 when preparing for accreditation by the Australian Council on Health Care Standards. A quality plan was developed. The plan consisted of an introduction that documented the Board of Management Philosophy. This was followed by a description of the health service principles and values, objectives, Quality Activities Committee membership, how the quality activities would be implemented and what the quality activities would be.

The quality activities documented in the plan to be undertaken were the collection of the clinical indicators required by the Australian Council on Health Care Standards and the Health Department State-wide patient satisfaction with care survey. The results of the clinical indicator data collection were not available to the researcher.

In 1995 the health service engaged the assistance of the Australian Quality Council as consultants to assist employees to develop an action orientated 'Quality Matrix'. The top of the matrix had the following headings:

- Leadership and commitment.
- Policy and planning.
- Information and analysis.
- Involvement of people.
- Customer focus.
- Quality process, products and services, and
- Organisational performance.

Each of these headings had a named person responsible for co-ordination. The side of the Matrix had the headings of 'Excellence', 'Achieving', 'Practising' and 'Systems in place'. Underneath all of the top headings were described how all of the side headings would be achieved.

Under the heading of 'Leadership and Commitment' was the aim that this health service would be an International Benchmark for quality in health care. Also documented was that the health service would implement an organisational strategic plan.

The matrix documented the aim of having health service policies and procedures developed in conjunction with service providers and external customers. It also documented how the policies and procedures would be communicated and regularly reviewed. A business plan was to be developed.

Quality Co-ordinating Committee.

This committee was comprised of a Board of Management Member, the Health Service Manager, the Quality Co-ordinator, the Director of Nursing, a Clinical Nurse Specialist, a Medical Practitioner, a Nurse Manager and other staff, consultants and invited guests as considered appropriate. Quality activity meetings were held monthly.

A meeting agenda was provided to all committee members. At the meeting business arising from the previous meeting was discussed. Planning for future quality activities was undertaken. A review of inspection and audit results was performed. Information was provided to committee members about what was happening in relation to quality activities in Australian health services and with quality activities world wide.

Other service improvements were made as the result of community members' suggestions. For example, a wheel chair bound visitor stated that it was difficult for him to visit people in the hospital because he had to negotiate a curb to get onto the footpath to the hospital's main entrance. This problem was overcome by the hospital maintenance employees removing the curb of the footpath opposite this entrance and replacing it with a sloping ramp. The use of the ramp was then trialed and evaluated by the person who made the complaint. He evaluated it and stated that the hospital main entrance was now easy to use for wheel chair access.

Another way that suggestions for service improvements were identified was through customer focused groups. An example of an external customer quality improvement group was the Post Natal Customer group. Patients who had their babies delivered at the health service were invited back for a morning or afternoon tea and encouraged to talk about their hospital stay experience and make suggestions for improvements. Suggestions were acted upon if finance was available.

An internal customer service group that made suggestions for service improvements was the Occupational Safety and Health Committee. Suggestions for improvements by members of this committee were prioritised and made through the use of the occupational health and safety budget funds.

All employees in this health service were encouraged by the General Manager to be involved in conducting quality improvement projects as part of their every day work practices.

Hospital four.

This organisation described its Philosophy as one of *continuous improvement*. Its written positive performance indicators were:

- attendance at Continuous Improvement Workshops by all staff.
- a customer focus (customers were described as clients / patients, visitors, medical practitioners and staff).
- team work.
- quality improvement as an integral part of everyone's work.
- decisions based on facts, not emotions.

Quality Co-ordinator

This person's role was to be available to Quality Team Members to provide them with education, advice as requested, and assistance as needed with quality activities, statistical analysis of data and to assist with quality activity team meetings.

Quality Committee

This committee's role was to develop, implement, co-ordinate, evaluate and report on quality activities conducted at the Health Service. Committee members included representatives from the Medical Advisory Council, Nursing, Administration, Allied

Health, the Clinic, Community Health and Development Centre, Psychiatric Services and the Medical Records Department. Its terms of reference included purpose, objectives, functions, membership, frequency of meetings, accountability and evaluation.

Quality Improvement Teams.

In the Quality Business Plan it was documented that the Health Service would have a variety of quality improvement teams that were appropriate to employees' area of work, for example, Administrative Service, Nursing. Some areas, such as Speech Pathology already had developed and used Quality Assurance Business Plans.

Team Leader. In the Quality Management Plan it was recorded that all Team Leaders would manage their own Quality improvement team by:

- Calling meetings.
- Facilitating meetings.
- Assigning administrative responsibilities.
- Being a contact person for communication between their team, the Health Service Quality Committee and the Health Service Executive Team.
- Keeping team records.

Team Members responsibilities were described as carrying out assigned work as directed by the team leader, and contributing to projects as fully as possible.

Quality Management Plan.

This had been written by the Quality Co-ordinator. It included an objective, criteria and strategies. The strategies were divided into a 14 step quality improvement process to be followed by the Health Service. This plan was then divided into 5 stages:

1. Assess the current quality maturity level of Health Service employees.
2. Develop quality management strategies for the organisation.

3. Involve workplace personnel in decision making about quality activities.
4. Provide staff with relevant education and introduce planned quality activities.
5. Evaluate the effectiveness of the introduced quality activities.

It was anticipated that to go from stage 1 to stage 5 would take about 2 years.

Clinical Indicator results.

These were not available.

Policy Manual.

Section 7 of the Administration Policy Manual described the quality improvement policies for this Health Service. The main headings were:

- Quality Improvement Accreditation Committee Terms of Reference.
- Quality Assurance Program.

Purpose.

Goals.

Objectives.

Organisation of the Quality Assurance Committee.

Data sources for the Quality Assurance Program.

Monitoring of Quality Assurance.

Documentation of Quality Assurance Activities.

Confidentiality of the Quality Assurance Program.

Evaluation of the Quality Assurance Program.

Feedback on Quality Assurance Activities.

Comprehensive information was presented in clear detail under each of these headings.

Award for Excellence.

The Health Care Same Day Surgery team was nominated for the StateWest Group Award for excellence. Documentation of the reason for the nomination included the following statement.

Since the stabilisation of staff into a team for the Same Day Ward 18 months ago, productivity has increased significantly. As an integrated team they make their own staff development opportunities, evaluation of new practices and procedures, and multi skilling in pre-operative nursing to develop their knowledge (StateWest, 1996, P.5).

Hospital five.

Quality Assurance Audits

The hospital had regular, planned 2 to 12 monthly audits for all departments to evaluate their achievement of set standards of customer care which were appropriate to their work place and work processes. The following audit format was used. At the top of each audit was the *standard*, the achievement of which was audited. Questions about the achievement of the standard were answered as *Yes*, *No* or *N/A*. At the end of the set questions there was a section for further comments and to explain *no* answers. At the bottom of the audit the surveyor signed, stated designation and date.

A quality assurance report was then completed. The report had the following headings:

- Problem
- Aspect of care / service being monitored
- Standard criteria used
- Summary of findings
- Conclusion
- People informed
- Action / recommendations
- Follow up / evaluation
- Author of report. Department. Date.

Most audits had 100% compliance to the audited standard.

As well as audits the hospital had customer surveys. Included as a loose page at the back of the information hand book, given to all patients on their arrival in the hospital, was a page with 7 headings under which the patient could write to express opinions about the hospital and staff service. Also included at the back of the handbook were post cards for patients to use and send. All completed patient surveys could either be

left in the survey box in the reception area on discharge, or posted anonymously back to the hospital.

There were also 3 other patient satisfaction questionnaires used to obtain patients opinions about their hospital stay. A 21 question survey, a 23 question survey (both of which had an area at the end for additional comments) and a Catering patient satisfaction survey which asked six questions. (1 on the menu, 1 on service, 4 questions on the food itself), and included a section for any other comments.

Of the 120 questions answered in the last catering survey 118 answers were that the menu, service and food were excellent. The 2 negative answers were regarding toast being cold. Follow up action was that if a patient requested toast, the toast was to be made fresh for the patient on the ward by ward staff. Patients were also given an alternative selection to toast of fresh warm continental bread rolls, Danish pastries or croissants.

There were two types of staff surveys conducted. One survey asked staff to state what they valued in the order that they valued it. Items on the list varied from "providing quality care" to "amount of take-home pay". The other staff satisfaction survey had 38 questions. The main topics assessed were:

- Organisational atmosphere (5 questions)
- Environment and work atmosphere (6 questions)
- Group atmosphere (15 questions)
- Education and training (3 questions)
- Senior management (4 questions)
- Work practices (4 questions).

The questionnaire also had a section where staff could record additional comments.

Clinical Indicator Results.

The percent rate of unplanned readmissions of patients within 28 days of discharge was 0.45%. Unplanned patient returns to the operating theatre during the same admission

was 0.38%. Wound infection on or after the fifth post-operative day following clean surgery was 2.5%. There were no cases of wound infection following contaminated surgery and no hospital acquired bacteraemia.

Thinking of staff as internal customers had produced the following organisational structure diagram. It shows how staff supported each other to better enable the provision of excellence in service to external customers. See figure 5 from the "Quality Management Programme" (1996, p.33).

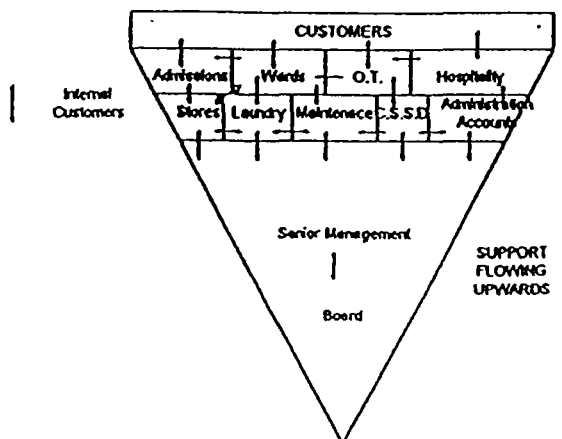


Figure 5

Continuous Quality Improvement.

The staff in this hospital had continually looked for ways to improve services to customers since the hospital was first built to care for sick or injured people who wished to be nursed back to health in a Christian environment. Many service improvements had been implemented over the years, but the central philosophy of a caring Christian health care service had not changed.

In regards to *today's quality management*, staff in the hospital had examined the concepts, potential benefits and the pitfalls of Total Quality Management. They had also considered other forms of quality activities before designing their own Quality Management Program that centred around *continuous improvements*. The Australian Quality Council (AQC) was engaged as a consultant to assist the hospital to develop its own program using the best attributes of a number of quality management processes.

The consultant's role was to develop and deliver to staff appropriate training packages tailored to meet the needs of the organisation. The training was expected to be continued, for as long as it was needed, for one day each month. External suppliers of service (such as medical practitioners, radiology service personnel, pathology service personnel, allied health professionals and hospital goods suppliers), were to be educated to be part of the hospital Quality Management Program. AQC was also involved in facilitating the establishment and operation of pilot quality project teams and in implementing the new quality management plan into the organisation.

Once implemented the program's effectiveness would be measured by the achievement of program milestones, customer (internal and external) satisfaction, efficiency of work processes, involvement of staff in team work management, level of staff morale, number of customers, operating expenses and return on financial investments. Staff members would be recognised and rewarded for improvements made in the quality of their service.

This hospital had also benchmarked its services against that of 12 other Christian Hospitals to compare their service delivery and to learn how service quality could be maximised. Throughout the hospital there was a strong Christian Philosophy with prayer being one of the tools used to provide a high standard of care. Staff had an aim to achieve the world's best practice for their organisation.

For this organisation quality was defined as “what the customer says it is” (“Quality Management Programme”, 1996. p.49). The hospital’s quality management program had an emphasis on research to identify what their customers, and potential customers, wanted. The staff aimed to provide customers with *value added service* which would delight them.

Service provision processes were directed at making it easy for customers to do business with the organisation. In the hospital’s “Quality Management Programme” (1996. p.12) it was described how service should be delivered to meet the needs and expectations of the customers by having service delivery processes which were:

- designed for our customers’ convenience and satisfaction:
- exceed our customers’ expectations:
- responsive to fluctuating volumes of demand:
- flexible and responsive to change:
- efficient, cost effective and easy to understand for both our customers and our organisation:
- adaptable to meet the needs of individual customers:
- Benchmarked with external systems to achieve world’s best practice.

Following customer requirement identification, planning teams were formed to decide how to meet these needs and to evaluate the results of any service changes implemented to meet perceived customer needs.

In quality management, as in other hospital services, there was an emphasis on participative management where all employees were encouraged to take part in the decision making for their area of work. Staff members were taught that ***YOU make the difference.*** Ways to reduce work process errors were sought from staff. A questioning attitude was appreciated with staff encouraged to analyse and improve the quality of services provided through the redesign of the hospital service procedures.

Customer needs research.

Information about customer requirements was obtained from written anecdotal evidence or verbal communication between staff and patients. This information was acted on retrospectively. Customer satisfaction surveys and quality assurance audit results on hospital work processes and outcomes of service were also used to improve service. It was anticipated in the future to also use external surveys of community members to increase the identification of potential customer requirements.

Service Improvement Processes.

The hospital "Quality Management Programme" (1996, p.21) had the following seven step model which staff were encouraged to use by service provider team members for making workplace or work process improvements:

- Step (1)* The team should define its role, its customers, suppliers and service delivery processes.
- Step (2)* Identify problems associated with the processes, prioritise them and select those problems they wish to address.
- Step (3)* Analyse root causes of the problem.
- Step (4)* Generate possible solutions.
- Step (5)* Select a solution and plan for the change.
- Step (6)* Implement the solution and oversee performance through performance indicators and reporting mechanisms.
- Step (7)* Evaluate and secure the gains.

To enable employees to effectively be part of the quality management processes and use quality principles to improve services, a practical employee education program, comprised of 8 educational modules, had been developed. It was designed to match the organisation's culture, language and needs. Workshops were to be conducted to teach each module.

Quality programs cost 1% of the organisation's three year pay roll expenses.

Anticipated benefits of the Quality Improvement Program

Through quality activities the hospital aimed to increase the number of customers as a direct result of client satisfaction and delight. Anticipated financial benefits were improved asset utilisation, reduced operating costs and an improved return on investments. Employees were expected to have more rewarding and more secure jobs, increased morale and increased productivity.

Quality Activities Meeting.

These meetings were held monthly. The meetings were chaired by a rotating chairperson. This helped to develop chairing skills in a wide variety of staff. The meeting that the researcher attended was chaired by a hospital employed maintenance worker. To help develop efficient chairing and effective employee participation skills the meeting also had a Facilitator from the AQC. No copy of the meeting agenda was supplied to attendees. Only the chairperson had a meeting agenda. The meeting was attended by 10 participants.

The meeting discussed ways to improve:

- Patient discharge procedures. Having a discharge room for privacy was the agreed improvement. This was to be followed up by the appropriate manager.
- Computer programs used. The appropriate manager was going to liaise with the computer supplier.
- Set rosters. If problems with hours of work arose managers were encouraged to allow employees of the same designation on the same organisational level to change rostered shifts. For example, A registered nurse, level one, could change shifts with another registered nurse level one, subject to management notification and approval.
- Primary care for patients so that the same staff cared for each patient each day of the stay.

The implementation of all suggested improvements was to be evaluated at the next meeting. Every member at the meeting participated in making suggestions for improvements. Staff gave praise for particular actions by co-workers who had improved customer service. This was documented and thanks were to be sent to the appropriate staff.

The meeting evaluated:

- Changes to admission procedures. For the past 2 weeks surveys had been conducted on admission procedures. Results showed that most patients were attended within 2 minutes of their arrival in the front door of the hospital. Survey answers also demonstrated that patients felt that their hospital care began as soon as they walked in the hospital as they were made to feel important and cared for by the staff service provided.
- Changes in telephone answering procedures. Extra staff had been employed so that office staff could attend a workshop on effective telephone answering skills. Staff who attended the workshop reported an improvement in telephone skills. The use of the person on the other end of the line's name as appropriate throughout the telephone conversation had been particularly successful as it had enabled staff to build up a quick rapport with customers and potential customers.
- Hospital Administrator (Chief Executive Officer). recorded thanks to staff for the improvements that had been made to the hospital grounds, buildings and services provided by staff. He listed specific services and people.
- Effects of changes made by Private Health Funds to patient rebates were evaluated.
- Staffs' perception of management support in making improvements was described as excellent.

- Team flow chart. Following discussion it was documented, (on a sheet of butchers' paper), what the hospital's core business was, who their customers were, and what could still be done to improve service delivery to meet customers' needs and to delight them. On this chart it was also recorded who was to do what to improve services by what date.

The meeting went for 40 minutes. At the end of the meeting attendees reviewed how the meeting procedures could have been improved and gave praise for what had been accomplished well. Meeting attendees were rewarded, not only with the knowledge that their work was recognised as well done and appreciated, but also with a gift of chocolate.

Hospital six.

In 1988 an Operating Theatre Staff Member became enthusiastic about having quality activities for her area. From theatre quality activities were introduced organisation wide.

The Health Service was accredited by the Australian Council on Health Care Standards Ltd. in 1992 for a period of one year. Between the accreditation and the time of this research there had been minimal formal quality activities due to the pressure of work and changes in organisational personnel. It was anticipated that the organisation would apply for accreditation from the Australian Council on Healthcare Standards Ltd. again at a future date. At the time of the research there were no quality activity meetings held at the Health Service.

The main quality activity appeared to be departmental Business Plans. Each of the 3 business plans viewed had the following headings:

- Service profile
- Values
- Vision
- Mission
- Goals
- Description of customers. Customers included the Health Service Executive, clients, patients, significant others, Nursing Units, Community Health Unit, Mental health Unit, Hotel services, General Practitioners, Government agencies including HACC, Social Security, FACS, Homeswest, Schools, Hospitals, Non-government agencies such as Commonwealth Rehabilitation Service, Silver Chain and Tertiary Institutions.
- Environmental scan that included department strengths, weaknesses, opportunities, threats, current resources (human, physical, material and financial) and suppliers. The suppliers included internal suppliers, such as Hotel Services, and external suppliers such as Drug Suppliers. Suppliers were assessed on the timeliness of their delivery of goods and services, accuracy in fulfilling orders or in performing work requested, how flexible and accommodating they were in meeting requests, quality of suppliers relationship with customers, quality of goods supplied, effectiveness of suppliers' communication and achievement of desired outcomes.
- Service response and performance targets. These described what each department needed to do to stay in business and satisfy its customers. The urgency of performing each task was graded as High, Medium or Low. The impact of performing each task was graded the same way.

- **Strategic Plan.** This section described the department's objectives, performance indicators, performance measures and strategies to be used. Each strategy described what actions were required to achieve each desired objective, who was to perform the actions, by which date and how the progress in achieving each objective would be monitored.

The organisation also conducted **audits** to monitor services provided, but no records of audit results were able to be produced by the employees who were asked about them. There were no clinical indicator results available either.

In the Health Department State-wide **Patient Satisfaction Survey** in patients rated the hospital highly by recording that they were over 90% satisfied with their health care. The most commonly identified patient dissatisfiers were the waiting times for service and the quality of service. Over the last 2 years patient satisfaction with care, (using this survey), had decreased by 7%.

Hospital seven.

History.

The present Quality Activities Co-ordinator was not sure when quality activities had begun to be used to improve health care services in this organisation as she had only commenced work in the position in 1994 when the previous Co-ordinator resigned. At the time of research the hospital was in its second three year period of Accreditation status from the Australian Council on Health Care Standards. Quality activities in this health service were focused very much on meeting Australian Council on Health Care Standards audit criteria.

Clinical Indicators and regular audits of services provided were used as a measure of the health service's staff's outcome of care. Clinical indicator results were all within the

Australian Council on Health Care Standards threshold limit values. There were no cases of hospital acquired bacteraemia.

In this health service quality activities were defined as a planned management system using formal monitoring techniques to assess patient care and service criteria in terms of recognised standards. Recognised standards were recorded in the health service's policy manual.

The health service had an active Hospital wide Quality Activities Committee that met monthly for a one hour meeting. The role of this Committee was to provide staff with support, assistance and advice on the development of quality services. It also reviewed audit results and the outcome of any quality activities conducted in the health service. Meetings were very efficiently run with informed decisions quickly made by committee members. These decisions were to be acted upon by employees to improve health care services. The Chairperson was effective in keeping the meeting focused on agenda item issues and problem solving. Quality activities were used by this committee to identify, and find solutions to, any health care service problems.

Heads of all Departments were required to develop 15 month Quality Activity Programs. Each area had its own Quality Activities Representative who was a member of their Departmental Quality Activity Committee.

Departmental Quality Activity Meetings were also held monthly. These meetings reviewed the results of audits or surveys conducted in the department, a monthly summary of any accidents or incidents that occurred in the department and identified ways to improve the department's customer services. Like the hospital quality activities committee meetings departmental meetings also had effective chair people who ensured that departmental quality activities meetings were short and effective. Good ideas were encouraged and implemented.

The work of the quality activities committees was highly valued in this health service. Committee members often came in to attend meetings in their off duty time.

The health service Quality Activities Co-ordinator kept up to date with Australian Council on Health Care Standards requirements by attending this organisation's lectures and workshops. She then conducted monthly in service lectures, workshops and video presentations on improving customer service. The health service workshops were very outcome orientated and were used to develop health service policies, procedures, audits and documentation of service provision which were consistent with the Australian Council on Health Care Standards criteria.

Rotary Award.

A hospital employee had received a Rotary Award for excellent work as a home care equipment installer. He was nominated for the award by health service customers.

Hospital eight.

Meeting Australian Council on Health Care Standards (ACHS) was the corner stone of this Health Service's Quality Activities. Regular monthly Quality Activity meetings were held and minuted. The researcher was not allowed to come to any quality activity meetings as these were considered open to Health Service Staff only. On discussing conducting quality activities with staff, other than the Quality Activities Co-ordinator, many employees spoken to stated that they did not have enough staff to give basic customer care, and consequently had little or no time for quality activities or education activities.

Clinical indicator results demonstrated that the hospital provided a high standard of patient care as only 0.67% of patients were returned to hospital post discharge, 0.64% were returned to theatre, infection rate for clean wounds was 0.5% and for contaminated wounds it was 2%.

APPENDIX P

Premises, work processes and people.

Observations of Health Service Premises,

Work Processes and People.

Hospital one.

Hospital Premises.

The hospital premises were very well maintained and had a high standard of cleanliness. Environmental Service and Housekeeping Audits were conducted monthly to check that all cleaning and maintenance was of a high standard. Any problems identified were rectified.

The hospital had single room accommodation and 4 beds per room accommodation. Oxygen and suction equipment were located next to each bed. The single rooms all had a private en-suite with shower and toilet facilities. The hospital also had a spa bath for patients to relax in. A telephone was provided next to every adult patient bed. Television and radio were also available at bedsides. The hospital had introduced pay video channels that showed the latest movies. Daily newspapers were available to all adult patients.

The management aimed to provide patients with 5 star hotel style comfort. All indoor rooms were well painted and, in the case of some patient areas, wall papered. Furnishings were appropriate and well maintained. Most patient rooms had windows with a view of the hospital gardens. The children's ward had a wide variety of toys for children to play with. All buildings were air-conditioned climate controlled. Temperature and ventilation were kept comfortable. The hospital had a brightly appointed lounge, a sunroom and numerous courtyards for patients and visitors to relax in. Tea and coffee making facilities were available in the lounge room. There was a snack machine in the corridor.

The hospital had adequate storage space for equipment and room to move and work safely in. All floor surfaces were even with no slip or trip hazards observed. The pan and storage rooms were clean and tidy. Linen skips were emptied just before they were full. Adequate equipment for staff to use to provide a high standard of service was purchased and used. For example, IMED pumps were available to regulate the flow of intravenous infusions at a set rate. For example, isolets as well as cots were available for the care of newborn infants.

Fire exits and fire fighting equipment were well labelled. All fire exits were clear and easily opened from the inside of the building. "No Smoking" signs were prominently displayed. All Emergency Power was sign posted. "Danger. High Voltage" signs were displayed where appropriate. Areas of flammable liquid or gas (eg. oxygen) storage were sign posted as appropriate with signs including "DANGER - Flammable Liquid." "NO smoking." "No naked lights."

For customer convenience the Ambulance entrance was well sign posted. The gardens were very well maintained, attractive and had pleasant displays of flowers. Inside and outside building areas were in good condition with no need for repairs noted. The hospital had adequate car parking facilities for staff and visitors to use. For staff security special areas were set aside next to the hospital entrance for evening staff to park their car. At the completion of their duty shift staff were escorted to their car by the security orderly. Also for staff security the automatic doors situated at the front of the hospital were locked between 10.30pm and 6am. Exit through these doors when locked was by pressing a red button located next to the doors.

Work processes.

Generally staff worked together as a team and helped each other when busy. New and inexperienced staff found more experienced staff were willing to provide advice and help when needed. A comment made by one of the workplace managers was that

“Anybody who sees that something needs doing ought to assume responsibility for doing it. Our people shouldn’t need anyone to tell them what to do.” For work processes management generally encouraged teamwork, responsibility and trust. All employees were considered responsible and accountable for their actions.

People.

The central people in this organisation appeared to be the Company Chairperson and the Administrator / Director of Nursing. The Company Chairperson set the organisation’s culture as a caring, but profit orientated one. The Administrator/Director of Nursing ensured that appropriate actions were taken by staff to achieve this culture.

Employees were expected to set their own work related goals and to be responsible and accountable for their actions. They were encouraged to think of everyone who entered the premises as family and treat them with care and consideration. This included all patients, their visitors, staff and anyone else who entered the premises. It was noted that staff members were friendly and greeted each other, patients and the visitors that they met in the corridors of the hospital.

An example of how staff members were treated as family was told by one nurse. The nurse said that when her child was sick with asthma she was encouraged to bring the child to work and have her child cared for in the children’s ward of the hospital so that the nurse could continue working her allocated shifts. The nurse was very grateful for this action as she was able to check on the health status of her child regularly, continue earning money and be reassured that her child had excellent health care.

Because hospital management went out of their way to care for staff, staff went out of their way to enable the organisation to be profitable while still caring for coworkers. For example, when the hospital was busy staff willingly worked over time or extra shifts. This meant that staff who knew the patients continued to care for them. When

the hospital was not busy staff willingly cut down the number of days per week that they worked. This allowed the hospital management to decrease its wages bill without any staff losing their job.

For patients the hospital Chefs prepared "5 star gourmet menus" that offered a changing variety of food every day. A new menu was prepared each day by the Head Chef, in consultation with a Dietitian. Patients were free to choose from a variety of gourmet hot or cold dishes or light snacks. For special occasions, like the birth of a child, special celebration meals were served.

All food was cooked on the premises and any special dietary requirements or requests were accommodated by the chefs who prepared these special meals as required. Food provided to patients for morning tea, afternoon tea and supper was also offered by the staff serving it to visitors. Visitors were heard to remark that if ever they needed health care they would come to this hospital as the food was so good. Staff members were able to purchase meals at the hospital for a \$1 a meal. In the staff orientation book it was documented that staff members were allowed 7 minutes for their tea breaks and 30 minutes for meal breaks.

Hospital staff members were encouraged to be community orientated. In the staffs' room there were several bags of unneeded staff clothes that had been collected to donate to charity. Staff had also encouraged children from the local school to visit the hospital to learn about health care. The local children then felt more at ease when they were admitted to the hospital for needed health care and were quite likely to recommend the hospital as a place for health care to others.

Hospital two.

Hospital Premises.

The hospital premises were spacious with the inside and outside of all buildings well maintained. Gardens were weeded, pruned as appropriate and had an attractive display of flowers in. This hospital had single room accommodation and two and four beds per room wards. A personal patient lifting hoist was attached to the head of the bed for all patients who required assistance with moving in or out of bed.

Work processes.

Most noticeable about the work processes was the way that staff worked together as a team. For example, after a hand over of patient care had been given by night nursing staff to the day care nurses, staff were paired together to provide patient care. This enabled the work to be performed more efficiently, effectively and safely.

Staff had clearly documented policies, procedures and duty statements for each shift for their work. Adequate, up to date equipment was provided for staff to do their work. All equipment was well maintained through regular maintenance programs.

Much appreciated by staff and patients was the fact that all hospital meals were prepared and cooked on the premises. The kitchen staff served the meals to the patients and hospital staff. Meals were personalised to customer's individual requests and needs. Kitchen staff received feedback about each meal when they collected the dishes after each meal. Morning teas afternoon teas and suppers served to patients, visitors and employees were usually sandwiches. The kitchen staff aimed to provide "healthy" food for all meals.

Staff made use of any free time to proactively prepare for future work. For example, when patient care was completed nurses packed and sterilised dressings for hospital patient care.

People

Central to the running of this organisation appeared to be the Director of Nursing and the Hospital Administrator. They both worked together to provide a high standard of service.

Money for staff wages came from the Health Department. Finance to purchase equipment and for premises renovation appeared to be raised by the hospital staff, volunteers from the town and local businesses. For example, the hospital staff had recently had a garage sale of unwanted equipment to raise money to buy new equipment. They had also had a "bed push" through the town streets and along the main highway to solicit money from the public to up grade the hospital premises. The "bed push" had raised a large amount of money.

Another example, the Town Ladies Axillary Service had raised the money to buy most of the beds, and much other equipment, for the hospital. All of the equipment purchased by donors was marked with a small gold plaque that had engraved on it a description of whom had donated the money to buy the equipment.

While the researcher was at the hospital the Director of Nursing decided that one of the hospital operating theatres should be made into another out patient room as the hospital was dealing with more out patients and people requiring first aid, than people having operations performed. This would allow faster out patient and emergency service. The Director of Nursing rang the Manager of a local mining company about the idea. He immediately offered that his company would pay the \$5,000 that was required for the renovations as his employees used the hospital for first aid, in patient and out patient care. This verbal agreement was to be formalised in writing so that the renovations could be contracted out to a town building company.

Hospital three

Hospital Premises.

Grounds were well landscaped with planted flowers and trees and natural bush. There were quiet areas in the garden in which seating had been provided for patients to relax and enjoy the scenery and native birds that frequented the grounds.

The hospital premises were well maintained and had a high standard of cleanliness. On going painting of buildings and other maintenance work was evident. The Health Department had provided the health service with \$380,000 to upgrade the buildings, improve air-conditioning and to purchase equipment. In addition to this \$25,000 had been allocated by the Health Department for specific project work. It was anticipated that the health service would be building new operating theatres, a new birthing site, a central supply department and a medical centre.

The hospital had two and four beds per room accommodation. Patient rooms appeared to be clean and comfortable with all necessary medical patient care equipment provided at the bedside. Patient care equipment, such as IMED and syringe driver pumps, was modern and well maintained. There appeared to be adequate storage room on each ward for the patient care equipment. Pan rooms were clean and tidy with linen skips and rubbish bins emptied as necessary.

All inside floor surfaces were even with no slip or trip hazards observed. Some of the outside bitumen areas had pot-holes and an uneven surface. The hospital had adequate car parking facilities for staff and visitors to use.

Work processes.

Staff aimed to work as effectively as possible, but sometimes, they stated that there was not enough time to get everything completed in the work hours available. To overcome this staff said that they had learnt to prioritise to complete the most important tasks first.

Teamwork was used by staff to assist the less experienced staff to learn from more the more experienced staff.

Employees seemed to care about each other. For example, the ward clerk said that when she returned from holidays everyone welcomed her back and made her feel that her work was important and appreciated. It was noted that staff frequently praised each other's work when it was well done.

The safety and health risk assessment teams had examined work processes and looked at making jobs as safe as practicable. Safe work practices were written into the health service policies and procedures. Educational sessions on safe work practices were also provided to staff.

People.

Many of the health service staff lived in the health service districts and had worked at the health service for many years. Senior staff acted as preceptors for newer staff. Staff members were generally considered by each other and by the patients to have excellent work practices and to provide a high standard of customer care.

When recruiting staff managers said that they looked for people who were customer focused and who were enthusiastic about working at the health service. All new staff members were provided with a one day orientation for their health service work. Staff members were encouraged to attend conferences to keep up to date with new knowledge in their occupational field. They were then encouraged to disseminate this knowledge to their fellow workers.

The central person in this organisation appeared to be the General Manager. He seemed to know all the staff by name, to genuinely care about them and to respect staff members' opinions on their areas of expertise. Staff and the local community, via

representation on the Health Service Board of Management. were very much involved in making the decisions which affected the effective management of the health service.

For example, three years prior to this research the Health Department wanted to close the hospital. Over 500 local people attended the hospital's Annual General meeting and then lobbied the government to keep the hospital open. Due to this local population support the hospital has remained open and the health service has continued to expand its hospital and community health services.

With the talk by the Health Department of privatising some of the health care services staff were not considering leaving. Instead, if privatising of their jobs were advertised they intended to form their own company and apply to continue to provide their present services. All staff spoken to believed that they provided a high quality of cost effective service which could not be matched by any private company.

The hospital kiosk service was provided by voluntary Hospital Axillary workers who raised money for improving hospital services by selling food, drinks and local craft works. Local community groups were also encouraged to raise money to improve health care services. For example, the Lionesses Club had recently held a fashion parade to raise money for improvements to be made to the hospital's neonatal nursery.

Consideration was also being given to the establishment of a trust fund in which members of the local community could purchase shares in part ownership of the hospital.

Oral communication between staff was encouraged through having regular ward and department meetings, monthly staff meetings, a staff suggestion box and by involving staff in recruitment and health service annual planning meetings.

Hospital four.

Hospital Premises.

Health Service buildings generally appeared clean. As much as possible the grounds were left with a natural bush cover. Some areas, that had been planted with grass, were quite eroded with large bare patches and potholes. In some wards the facilities were bright and spacious and staff reported having enough appropriate equipment for occupational purposes. In other areas staff reported feeling that the facilities and equipment were inadequate for the patient care that they were required to perform. There were pockets of excellence.

Wards had one, two or four beds in each room, depending on the area of care. In the main hospital the beds were height adjustable, but in other areas staff complained that the beds were of a fixed height. This resulted in frequent bending and manual handling injuries when employees were attending patients in their beds.

According to staff the Health Service did not have a regular building and equipment maintenance program. For example, staff said that some of the fly screens had been torn for years and there was no money available to repair them. Employees complained of having to deal with, or get rid of, insects that frequently entered through the torn fly screens.

In some work areas staff members had a book to write occupational health and safety related requests. Staff members spoken to said that they rarely bothered to write in the book when a safety problem occurred as nothing was done about the problem, usually due to lack of finance. For example, over 12 months ago staff had written in the book that they were receiving burns when washing their hands at the ward hand basin as the water was 40 degree Centigrade or above in temperature when it flowed from the tap. The water temperature had still not been reduced. People were still burning their skin.

One and a half million dollars had been allocated for capital works development purposes for the 1995/96 financial year to redevelop the Community Health and Development Centre, and to incorporate a functional training unit into the Health Service. New building work was being funded while existing buildings were not receiving required maintenance.

The Health Service included a farm where young sub-acute, slow stream treatment resistant and other appropriate psychiatric care clients were treated. The farm provided reality-based training for residents. The farm produced and sold for profit eggs, milk, wool, hay, pork, poultry, beef, trout, fruit and vegetables. Areas of the farm had been eroded by wind and water so a 3 year land care program of tree and shrub planting had been commenced.

Work processes.

Staff had documented organisation wide policies and department (eg. Domestic Services, Nursing) procedures in Manuals to guide their work processes.

Most complaints of over work came from the Top Management people. Many employees stated that they did not have adequate time within their duty hours to complete their work processes. If there was not adequate time available services were cut, or eliminated, or employees worked overtime.

People.

This organisation was controlled through the management practices of the Health Service Manager, who seemed to be severely overworked. Many level one staff at the Health Service stated that, although they had worked at the Health Service for many years, they had never met the General Manager.

Hospital five.

Hospital Premises.

The hospital premises were home like with big displays of fresh flowers in appropriate places. Art works decorated the premises that were clean and well painted. Windows were appropriately placed to allow plenty of natural light into the hospital during the day. Many windows had scenic views. Patient rooms were mainly single or double rooms, most with an ensuite. There were also 3 and 4 bed wards.

In the corridors, rooms and work stations there was plenty of room to move safely. Chairs were conveniently placed in the reception area, corridors and by the medical practitioners' consulting rooms. A water cooler was in the corridor near the main entrance for staff and visitors to access, at no cost, for a drink of water. Machines with supplies of food and drinks for purchase were located near the cooler in the corridor.

Gardens for the hospital were set out like an English country garden with many flowers in full bloom. This provided plenty of colours and made the surroundings pleasant. There were also out door seating areas and a court yard for patients, visitors and staff to relax in.

Work processes.

Staff used the best and safest equipment available. For example, for patients requiring a tracheostomy tube, a \$90 self inflating tube, which would last a month, was supplied rather than cheaper tubes which required staff to insert air into the tracheostomy tube's balloon. If too much air was inserted this could cause pressure in the trachea. If not enough air was inserted into the balloon the tube could fall out and the patient's air way collapse. Having the best equipment helped to provide patients with the best care.

If there were any problems with work processes these were quickly brought to everyone's attention. For example, a staff member had sent their uniform to the laundry

with a biro in the pocket. This biro had leaked causing ink damage to the whole washing load. To ensure that everyone was aware of the problem the laundry staff had a display of the damaged linen in the corridor that only staff used when going to their dinning room for meal or tea breaks.

Each work area also had a communication book for staff to write information about work processes or other work related information. The communication book was read by employees at the commencement of each work shift. The hospital also had a very effective “grape vine” through which information travelled quickly. There appeared to be enough staff to perform the work safely. Staff appeared to help each other with work processes as needed.

People.

The central person in this organisation appeared to be the hospital Chaplain. The organisation’s mission was written around her area of expertise. Her work place, the Chapel, was close to the front door, opposite the reception desk. The Chapel was an outstanding room with beautiful stained glass windows letting in light. The door was always open for patients, staff or visitors to use. Services were held in the Chapel on Sundays and for appropriate occasions. The Chaplain’s office was next to the Chapel so that she was available to help people.

The Chaplain visited patients in the wards and seemed to know not only the patients, but also the staff by name. Throughout the hospital there was evidence of her work with “God’s love for all” being reflected in staffs’ actions. As well as her spiritual work the Chaplain also conducted educational sessions for voluntary hospital workers and on interpersonal skills training. The Chaplain was Editor of the Hospital’s Newsletter. The Newsletter was published second monthly. It described what employees were doing at work and away from work, provided occupational health, safety and welfare information and tips for improving work practices.

In this hospital all staff were taught that they were both a supplier and a customer. This helped staff to supply a high standard of care for not only patients, but also to each other.

Staff members were employed under a work place agreement which had recently given them an 8% pay rise. For shift workers there was 7 weeks annual leave, (instead of the normal 4 weeks), and one accrued day off (ADO) each month. In their work place agreement staff signed that they were committed to improving the quality of service and to maintaining improvements.

Uniforms for office staff were brightly coloured with Aboriginal type designs. Other staff had more traditional designs for their uniforms. Most management staff wore business attire rather than uniforms.

At this hospital employees stated that they aimed, not just to reach standards, but to exceed them. For example, looking at the customer focused actions of nursing staff. For a long-term patient the Clinical Nurse Specialist went out to buy the patient new clothes. Samples of clothing were brought in for the patient to choose what she wanted and felt comfortable wearing. Another example of customer focused care was when a patient accidentally sent his pure wool pyjamas to the hospital laundry, and they shrunk. The Hospitality Co-ordinator heard about this so she purchased, at the hospital's expense, 3 new pairs of pyjamas from Myers to replace the patient's.

As this hospital had an excellent reputation many health care professionals, their family members and their friends, chose to be treated at this hospital when they needed an operation or became sick.

Because they felt such a part of the organisation many employees, when they officially retired, came back to work at the hospital on a voluntary basis. They were then called "Friends of the Hospital". All volunteers received orientation training that included emergency training. These volunteers provided friendship and appropriate assistance for patients and staff.

There were 4 groups of volunteers. One group was the hospital Librarians. They catalogued books and journals and did the general library work. Another volunteer group took a trolley with food, toilet items, etc. around to the patients for them to buy selected items. The third group completed a seven week course, run by the Hospital Chaplain. This course taught volunteers how to listen and to be good hospital visitors. Once trained these people were welcomed into the patient visiting volunteer group. The fourth group of volunteers took the patient library trolley around the wards for patients to select books from to read during their hospital stay.

Hospital six.

Hospital Premises.

The hospital buildings were generally clean and well maintained. Wards had single rooms, rooms with 2 beds and rooms with 4 beds. Telephones were installed at every bedside. A chemotherapy treatment room had been newly set up to treat patients with cancer. To improve staff and patient safety the hospital had 2 Security Rooms for patients to be cared for in if they were detoxifying after substance abuse, or if they were mentally unstable psychiatric patients who needed a secure environment. Corridors were wide and carpeted. In the corridors fire alarms and fire extinguishers were clearly visible and well signposted. Next to them were clear instructions on what to do if a fire occurred. The grounds were generally well maintained. Outdoor areas mainly consisted of grass, gravel and bituminised car parking areas.

Work processes.

Staff had clear policies and procedures for their work processes. These were documented and kept in manuals in each department. Safety procedures, such as what to do if there was a bomb threat or if there was a fire, were also kept in the Boardroom. Many policies and procedures were written in 1991 in time for the last hospital accreditation. They were planned to be updated every 3 years. There was no evidence that any had been updated since 1991. The policies and procedures were written in an outcome-based style. For each area there was a Procedure Manual which contained procedures clearly prescribing the steps to be followed to carry out, or to conform to, the Health Service Policies.

Equipment provided to staff was adequate for effective work performance. For example, the wards had a bath table to be used to move patients to the bathroom so that they could be washed with minimal lifting by staff. This lessened the risk of staff back injuries occurring due to not having to lift immobile patients to bath them.

Staff did not always appear to work safely. For example, nurses had height adjustable beds. Instead of pumping up the beds to waist height, the nurses bent over to make the beds and to perform treatments for patients. The nursing staff appeared to make beds on their own and to work as individuals, rather than working in pairs or as a team to save time.

All staff observed seemed to be very busy with little time available to complete all their work processes each shift. In many areas staff complained that their work-load had increased, while the staff numbers available to perform the work had decreased. These staff reported feeling overloaded and at times "stressed out."

An area where staff appeared to be particularly over worked was the Accident and Emergency Department. Staff in this area said that every week a staff member was

rostered to provide a work related educational session to other staff. Staff would prepare their lectures. in their own time. at home. When it came to presenting the lecture. due to the pressure of work. there was never time for education. Although a staff lecture was rostered for a set time every week. there had not been time for any lectures presented over the last 12 months.

One of the problems staff stated that this department had was dealing with people who were drunk. aggressive or drugged. (for example. with heroin). To allow nurses and others to work safely it was found that there was a need for a security orderly to be based in the department at all hours. In 1993/94 there had been 280 security incidents in the hospital. varying from assaults by patients on staff to theft of property. In 1994/95 security incidents had decreased to 160 incidents for the financial year. The decrease in security incidents was said by employees to be mainly due to the work of the security orderly.

People

The central person in this organisation appeared to be the General Manager. He was new to the job. but had lots of enthusiasm and a vision of how the health service could be improved in a cost effective way.

There seemed to be "pockets of excellence" with some staff highly motivated to provide the best service possible to their customers. In addition to staff employed by the Health Department. the hospital had Hospital Auxiliary volunteers who staffed a hospital based shop and returned the profits of this enterprise to the hospital.

Medical Practitioners were not employed by the Health Department. They worked as independent General Practitioners who used the Health Service facilities. It was poor documentation of care by Medical Practitioners that resulted. in 1992. in the Health

Service being accredited for one year, instead of three years, by the Australian Council on Health Care Standards Ltd.

For the research for this Health Service a Medical Practitioner's questionnaire was not received so valid percent, instead of actual percent, was used to describe the staff answered questionnaire results.

Hospital seven.

Hospital Premises.

The hospital premises were very well maintained and had a high standard of cleanliness. Gardens were attractive. The hospital had adequate safe car parking areas for staff and visitors. Entrance to patient care areas had access for wheel chair bound people. Patient care areas were well sign posted to make it easy for visitors to find their way to where they wanted to go. The hospital had single room accommodation, 2 and 4 beds per room accommodation. Oxygen and suction equipment were located next to each bed. Bathroom and toilet facilities were located in all patient care areas.

The health service generally had enough room to safely store patient care equipment. Patient care equipment was generally modern and well maintained. Most patient care building areas were attractively painted and in good condition, but in some areas there was a need for up grading and minor maintenance work. The hospital had adequate fire fighting equipment that was well sign posted and easy to access.

Work processes.

In some areas staff used teamwork while in other areas people worked as individuals. Many nursing staff reported not having enough time to complete their allocated work in

their duty hours and worked over time. Other designations of staff generally reported enough time to do their work in duty hours.

People.

With Health Department financial reviews, implementation of cost cutting measures and the contracting out of non core services, such as gardening and grounds maintenance, orderly services and catering, some staff felt that their jobs were threatened and were planning what to do if their work position was abolished.

Staff suggestions and innovations in work practices were encouraged. Staff members were also generally praised for work that was well done. Employees at this health service had the highest percentage agreement score in their questionnaire answer results for the following factors. They did not fear failure when trialing new ideas. Their department was able to adapt easily to changes in government policy. They had a job that provided challenging work and that they looked forward to coming to work.

The Director of Nursing was a supportive leader for the nursing service while the General Manager was a leader in encouraging a high standard of work for health service employees.

A person whose work was outstanding in this health service was the Head Gardener. He was always looking for cost-effective ways to provide the best possible service. For example, many of the plants in the garden had come from cuttings of existing hospital plants so that there was no need to spend money on purchasing new ones. Native plants were used as much as possible to provide a pleasant environment as they required less water than many introduced garden plants.

All plant pruning were recycled as compost, with the exception of lawn cuttings. It was found that using lawn clippings produced weeds that then needed to be removed. Lawn

cuttings were autoclaved with heat to kill the seeds and then sold to a buyer for stock and for rabbit food.

To minimise work absences he allowed his employees to work flexible work hours so that they were able to attend dental appointments, etc. He also organised employee social functions, such as a barbecue for lunch, at least once a week. As far as possible Head Gardener ensured that the work environment, work processes and employees work related actions were safe. He had undertaken occupational safety and health training to provide him with skills to be able to do this effectively.

For example, to protect their skin from the sun's rays he ensured that all gardening employees wore a wide brimmed hat, a cotton long sleeved shirt, long pants and sun protection cream on any exposed body parts when working out doors. In door work was organised to be performed for the hottest part of the day and for when the weather out side was wet.

Work experience and training in gardening was provided by the gardener to disabled members of the community so that they could subsequently gain employment in the gardening industry.

Hospital Axillary.

Members of the community, as part of the Hospital Axillary, provided a kiosk food and drink sales service. Profit from this business operation was donated to the health service for the purchase of needed equipment. The Hospital Axillary had 130 members.

Hospital eight.

Hospital Premises.

The health service buildings and grounds were generally clean and well maintained, although some outside areas, such as the ground outside the main building, had pot holes which needed filling to prevent falls. Wards mainly had single rooms and rooms with 4 beds in. Each ward also had a patient / visitor lounge room. There was generally enough space to care safely for patients. Some areas of the hospital were modern and spacious. Other areas had been built in the 1960s.

In the 1990s the type of patients cared for, and the type of care given, had changed from when the old part of the hospital was built. There was insufficient money available to upgrade all the old facilities and equipment used, although facilities and equipment were continually being improved and new facilities had been added.

Hospital Auxiliary Volunteers provided kiosk services and had made a profit of \$10,210 during the 1994/95 financial year. Some of this profit had been spent to improve the Health Service facilities and to buy needed equipment. The hospital did not have enough storage room so wheel chairs and walking frames were stored in the area by the hospital front door. The hospital had a staff library that was kept locked making it difficult to use.

Due to a staff shortage some patient care areas of the hospital were closed even though the hospital had a waiting list of people requiring health care.

Work processes.

The staff had clear policies and procedures for their work processes. The hospital had a Health Service Policy and Procedure Manual and 9 area specific policy and procedure manuals. Other manuals available included:

- Quality activities
- Sexual harassment
- 3 Health Department Operational Instruction Manuals
- Health Department Guidelines
- Infection Control
- Freedom of information implementation guidelines
- Equal opportunity in public employment in Western Australia
- Emergency response manual
- Financial Administration and Audit Act. and
- 14 manuals with committee meeting minutes in.

Staff generally reported feeling over worked. For example, kitchen staff reported having one cook per shift to cook 1,800 meals per day. According to some staff good food was not believed important because management considered that patients did not stay long enough to be affected by the quality of the food.

Employees were also mindful of the current economic climate and some of them were worried about being made redundant, as a cost saving measure, or due to the government push for privatisation where ever possible. At the time of the research tenders were being called for health care services which included catering, cleaning, transport, orderlies, engineering, grounds and gardens.

People

Central to the running of this organisation appeared to be the Health Department and current government policies. Many of the non management employees spoken to stated

that management was isolated from the clinical area and that working within budgetary constraints took precedence over everything else. It was reported that some managers were bureaucratic, dictatorial, rarely consulted employees and rarely gave positive feedback when work was well done. For example, if an employee was known to have eaten a cake left over from the patients' morning or afternoon tea the employee was instantly dismissed. Left over food had to be discarded, not eaten by staff who had missed their morning or afternoon tea break and who were hungry.

The hospital had volunteers that provided kiosk services, assistance in therapy departments, organised the staff library, arranged patients' flowers and transported hospital patients as requested by staff.

The health service had pockets of excellence, particularly in the areas of mental health care, infection control, research and community involvement. Community involvement was facilitated through educational and research activities and by buying locally made goods and services.

APPENDIX Q

Health services' profile.

Health Service Profiles.

Hospital one

Hospital one was a Class A Private Hospital with 57 patient beds. At the time of the research the hospital was accredited by the Australian Council on Health Care Standards.

(a) Services Provided.

The hospital provided care for obstetric, gynaecological, orthopaedic, general medicine, ear, nose and throat surgery, ophthalmology, urology, gastroenterology, plastic surgery, oral surgery, general surgery, paediatric, dental, day and out patients care.

Radiology and pathology services were provided on a contract basis, were located at the Hospital Specialist Center and were available on call 24 hours a day. Dietitians were employed on a contract basis and visited the hospital regularly to provide patient consultations, educational lectures and to regularly perform audits of the hospital catering service. The Physiotherapy, Occupational Therapy and Pharmacy Services were provided to patients on a contract basis. All of these services were provided on a regular basis, and included after hours and emergency service.

Hospital staff were also required to provide health service care to the residents of a Retirement Village located next to the hospital and owned by the same company as the one that owned the hospital. The company also owned the Community Health Care House and the Diagnostic, Specialist Center (Medical and Para-medical Specialist rooms) located next to the hospital and a variety of other enterprises.

(b) Composition of the workforce.

The hospital employed 18 Clerical Staff, 28 Hotel Service Staff (composed of catering, cleaning, gardening, laundry, security and maintenance staff), 60 Nurses and had 100 Medical Practitioners accredited to use the hospital for their patients' care.

(c) **Strategic Planning Statements.**

At the time of the research the hospital did not have a vision statement but did have the following documented statements of organisational purpose.

Mission Statement.

“The Health Service will provide good quality care in a home like environment.”

Objectives.

- To provide best quality health care for patients.
- To provide a safe environment for patients.
- To provide a high level of personalised care for patients.
- To ensure a process of continuous quality improvement.
- To meet the needs of visiting medical practitioners in providing a quality clinical service.
- To operate on a cost effective basis.
- To attract, retain and develop competent staff, who are compassionate and respectful of the needs of patients, relatives and friends.
- To ensure that the facilities are well maintained and up to date with changing health needs.

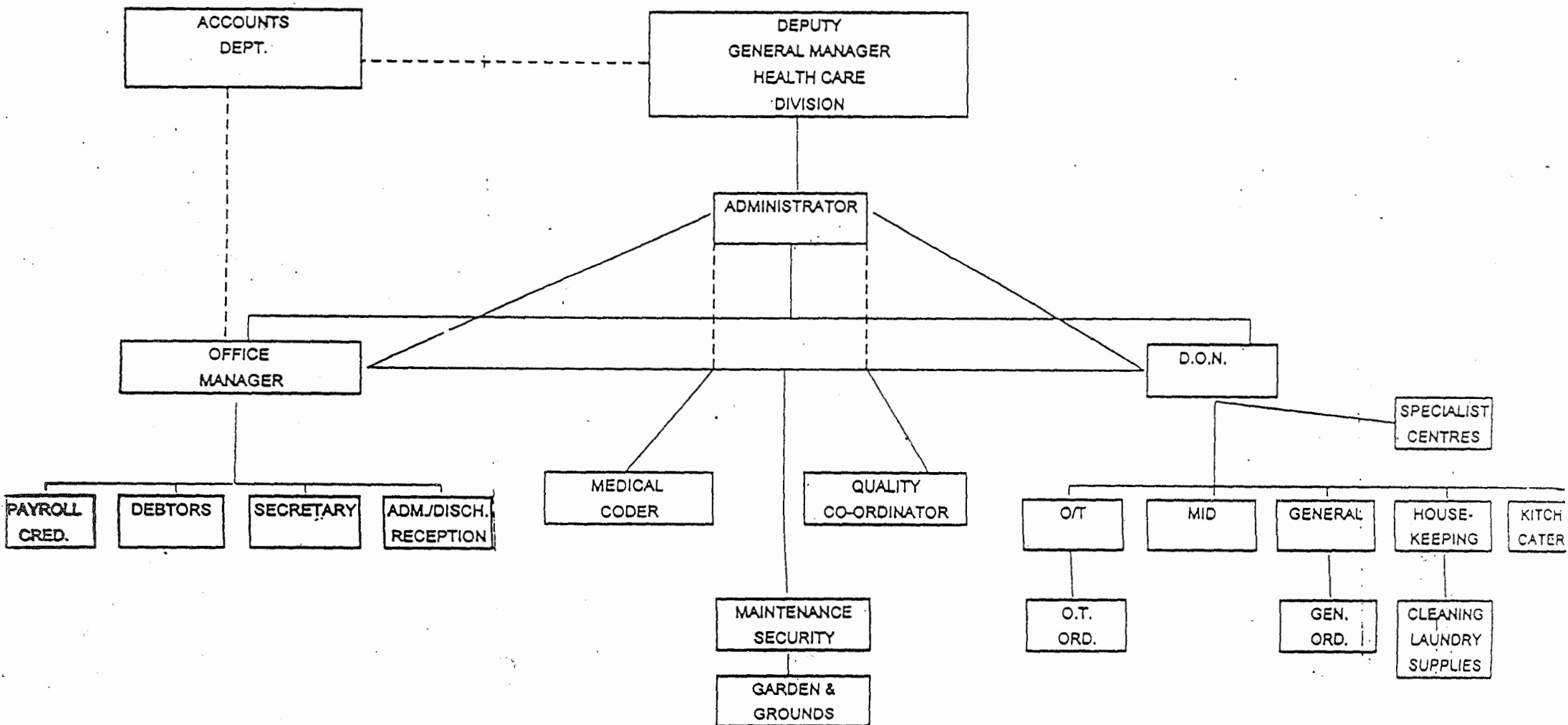
Philosophy.

Staff will pursue the hospital objectives while being mindful that:

- Patients and their families are the focus of care.
- Recognition of dignity, rights and individuality are important ingredients in achieving the best outcome.
- The standard of care will be continuously improved.
- The expertise of appropriate health care disciplines will be used to provide the highest standard of care possible.
- Quality management will be fostered to ensure the best use of resources.
- Staff will be developed to their full potential.
- An environment will be provided which encourages effective, open communication.
- A cooperative approach with other health services is essential.
- The hospital believes in caring for patients, their families and the local community to the highest standards, which are clinically competent, safe, considerate and cost effective.

Based on this hospital philosophy each department had developed its own philosophy statement.

(d) **Hospital Management Structure.**



Staff.

Staff members were recognised by management as being the organisation's most valuable resource. In the organisation's Corporate Report it stated that the organisation employed 330 salaried staff and a workforce of 700 constantly employed sub-contractors.

The organisation was founded 25 years ago. It included 2 private hospitals and a variety of other enterprises. In the Corporate Report all employees who had worked for the organisation for 10 or more years had their photo and name published. There were 3 employees in the 20+ years of service club and 34 employees in the 10+ years of service club.

Management showed a personal interest in staffs' welfare and job satisfaction. All staff employed at the hospital were given a card and either flowers or a basket of fruit from the Organisation's Director on their birthday. At Christmas time all employees were given a ham by the Director. Employees were considered as family to be well cared for.

Hospital two.

Hospital 2 was a Country hospital with 100% patient satisfaction with care recorded on the Health Department State-wide Patient Satisfaction with Care Survey. The organisation was a 17 bed hospital and met the health care needs of a community of 1,500 people. The most common industries in the district were mining and farming. At the time of the research the hospital was not accredited by the Australian Council on Health Care Standards.

(a) Services Provided

Services provided by health service two included medical, paediatric, geriatric and extended care, post surgical, out patient, accident and emergency services, X-Ray and operating theatre services, obstetric care and home care. The hospital cared for private, public, workers' compensation and motor vehicle accident insurance patients. Rooming in (boarding) facilities were available for relatives who wished to assist with the care of patients, such as a father assisting with his sick child's care, or a breast fed baby accompanying its mother in hospital. The hospital also had a Nurses Home in which some employees lived.

(b) Composition of the workforce.

The hospital employed 8 Registered Nurses (3 of whom were Agency Nurses because the town did not have enough resident registered nurses), 4 Enrolled Nurses, 2 Cleaners, 4 Kitchen Staff, 1 Laundry Staff, 1 Clerical Staff and one Administrator (who was also the Home Care [HACC] Co-ordinator).

The Kitchen Staff, as well as providing meals for hospital patients and staff, also provided "Meals on Wheels" for people in the district who required this service in order to live successfully at home. The town doctor was the medical practitioner for the hospital. A physiotherapist and an occupational therapist employed by the Regional Health Center visited the hospital when required for client care. Due to cuts in funding

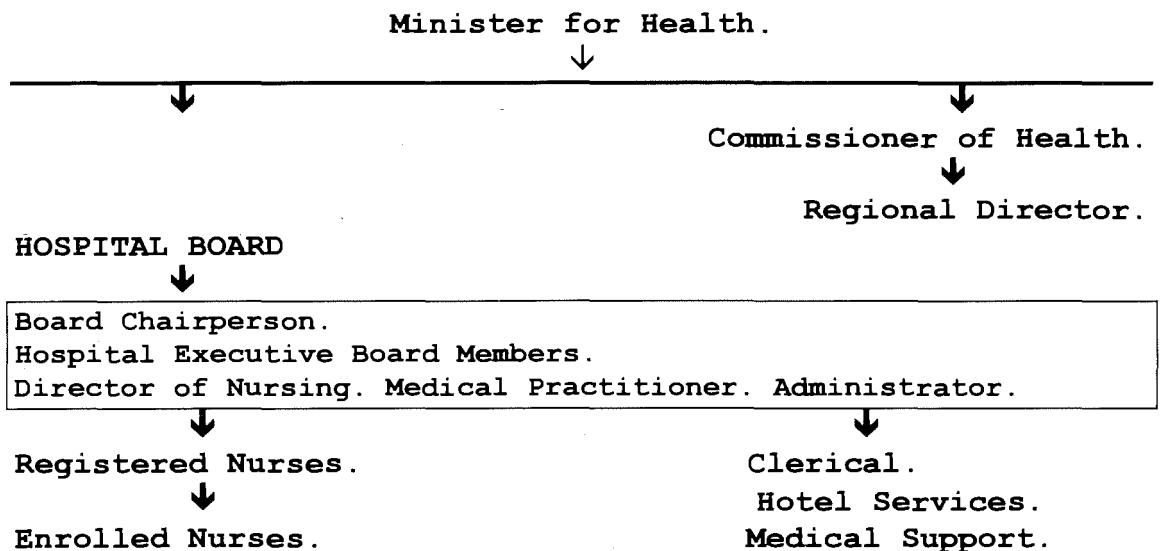
by the Health Department the hospital had recently lost the position of Gardener. The Gardener's work was now done by any of the hospital staff when they had time, which was often before or after working hours.

(c) **Strategic Planning Statements.**

At the time of the research the hospital did not have a vision statement, but it did have a mission statement. The mission statement was:

We will provide a comprehensive integrated and effective health care service that is of the highest possible quality to the people in our district and the surrounding communities.

(d) **Organisational Management Structure.**



This hospital only had a small number of staff so, although the correct number of research questionnaires and interviews were completed for this research project, the employment designations of respondents was not always the same as for larger health services. Included in answering the research questionnaire and in being interviewed at this hospital was an Agency Nurse completing her first shift of work on night duty at the hospital and hospital Board Members.

Hospital three.

Hospital three was a 72 bed Government City Hospital with above 96% patient satisfaction with care recorded on the Health Department state wide patient satisfaction with care survey. At the time of the research the health service was accredited by the Australian Council on Health Care Standards.

(a) Services Provided.

The hospital provided care for obstetric, medical, general surgical, dental, urology, gynaecology, orthopaedic, vascular, plastic surgery, gastroenterology, ophthalmology, ear, nose and throat surgery, and respite care. The Health Service also had responsibility for servicing five Child Health Centers, and for providing nursing staff for one primary school and three high schools.

Services available to the Health Service customers included:

- Social work
- Radiology
- Physiotherapy
- Diabetic education
- Ante natal classes
- Occupational therapy
- Early discharge program for maternity patients
- Community liaison nursing service through Silver Chain
- ECG testing
- Pathology
- Dietetics and nutrition
- Continence adviser
- Pharmacy
- Hospital Auxiliary Kiosk
- Early childhood and school health surveillance

- Development disorders assessment and intervention
- School support and treatment services
- Family support
- Ante and postnatal education and support services for adults with chronic and other conditions.

(b) **Composition of the workforce.**

The Health Service had 123 visiting Medical Practitioners with patient admitting rights for the hospital. Also employed at the Health Service were a General Manager, 120 nursing staff, 40 hotel service staff, 20 clerical staff, five allied health staff and three engineering staff.

The Health Service employed contractors for the following services:

- Physiotherapy
- Lawn mowing
- Mechanical services
- Plumbing services
- Building services
- Radiological services
- Security service.

It was anticipated that in the near future catering, ground maintenance, dietetics and the hotel and linen services would also be contracted out.

(c) **Strategic Planning Statements**

At the time of the research the hospital did not have a vision statement, but was planning to have one. The vision statement was to be decided through a staff competition with all staff encouraged to document and submit to the Quality Activities Committee what they thought the health service vision should be. The winning vision

would then be voted for by health service employees and adopted as the organisation's vision.

The mission statement of the hospital was to:

Initiate the provision of facilities and promotion of the maintenance of the highest level of quality care to support both the physical and mental well being of patients entrusted to its care.

The mission statement of the District Health Service Board was:

To develop the best structure to maintain and improve the provision of the quality and economical health service for the people of the Shire through:

Local decision making;

Integration of Health services;

Enhancing existing levels of service;

Co-existing within the Regional and State framework for the provision of Health Services.

In addition to having a mission statement the health service also had a documented philosophy, principles and values. The health service philosophy was:

We are dedicated to providing the highest quality, compassionate health care to our community. We aim for excellence by identifying and responding to the needs of those we serve.

The health service also had the following principles and values:

1. PATIENTS AND OTHER CUSTOMERS ARE OUR FIRST PRIORITY

We learn about and address the ever-changing needs of our patients and other internal or external customers, and provide the care and services necessary to meet or exceed their expectations.

2. QUALITY IS ACHIEVED THROUGH PEOPLE

People are our most important resource. The work environment is built on mutual respect, trust, learning, co-operation and teamwork to foster the capacity of the individual for self-motivation and creativity.

3. ALL WORK IS PART OF A PROCESS

Work functions are processes that can be continuously improved to benefit patients and other customers.

4. DECISION MAKING BY FACTS

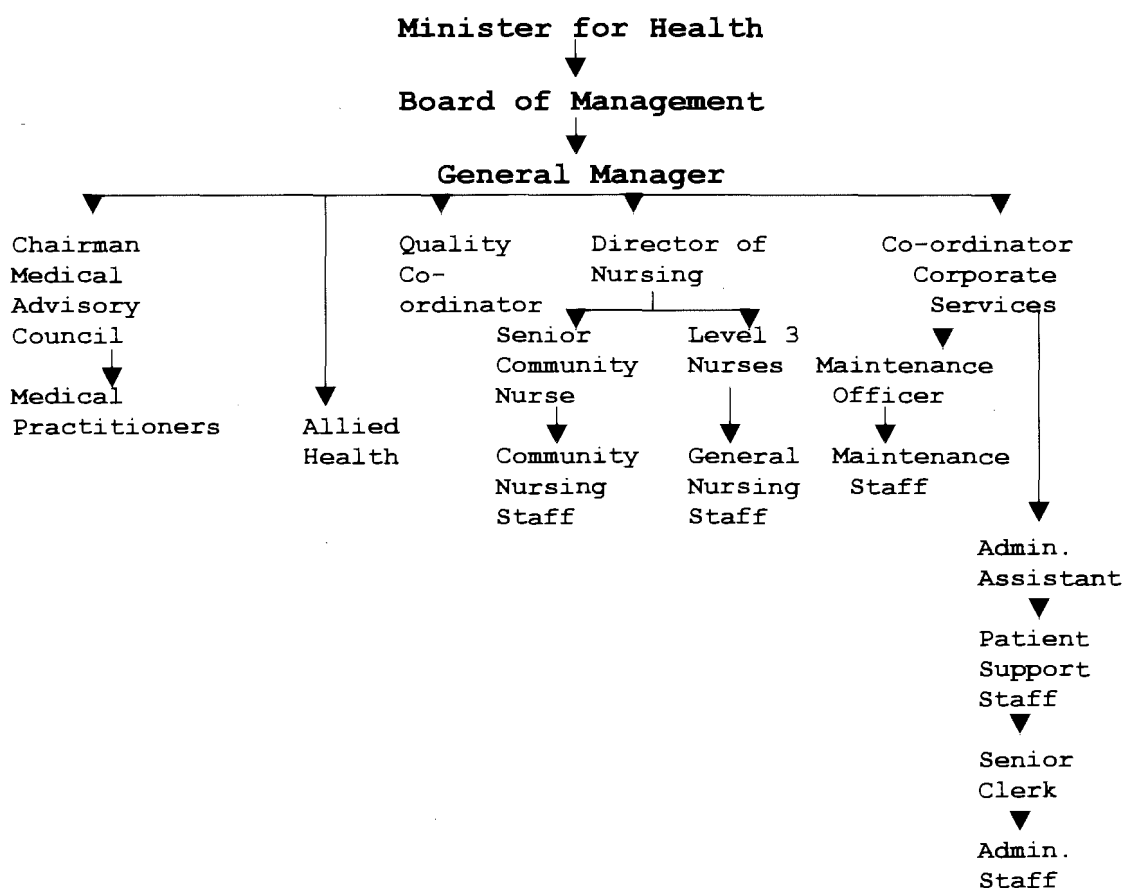
Our decision making processes take into account the Health Service values and the collection and analysis of objective data, thus minimising options and politics in decision making.

5. QUALITY REQUIRES CONTINUOUS IMPROVEMENT

Any process or service can be improved. By commitment to continually improving our service we will satisfy needs, grow as a health service, be recognised in the health care industry, and better carry out the philosophy of the District.

The health service also had a customer service charter that documented the staffs' commitment to providing a high standard of patient services. On this leaflet were also documented patients' rights and responsibilities in relation to the health care provided by the organisation's staff. Customers were documented on this leaflet as people who lived in the suburbs surrounding the health service unit.

(d) Organisational Management Structure.



The health service organisational chart showed that all health service directives came from the Minister for Health. The Board of Management and the General Manager then interpreted these directive and aimed to provide a quality customer health service. Staff work practices were influenced by the policies and procedures developed for this health service.

The Hospital Board was composed of 9 members. Three of the Board Members were voted in at the Health Service Annual General Meeting. A selection panel, consisting of three Board Members and three Community Members, selected the remaining six Board Members. The selection panel ensured that there were Board Members with all the following skills:

- Management.
- Legal.
- Financial.
- Business, and
- Medical.

In the Health Service Annual Report an analysis of its strengths, weaknesses, opportunities and threats was made.

Strengths were identified as:

- Being competitive. This health service was one of the most cost effective in Western Australia.
- Having a reputation for providing personalised attention. The health service had an atmosphere of warmth, friendliness and caring by management and all other employees.
- Having meals freshly cooked and served. Patients continually praised the good taste and high quality of the food. It was considered by the food service staff that the provision of good food made hospital stay more enjoyable and promoted a faster

recovery from surgery and ill health. At a very competitive price the catering staff served nutritional food of good quality.

- Having a good working relationship between the Visiting Medical Practitioners with clinical privileges to the hospital and other staff. Many of the 123 visiting medical practitioners had a keen interest in the business activities of the health service and regularly gave their time to participate in the formulation of health service policies and medical related advisory issues.

Weaknesses were identified as:

- Some parts of the hospital staff considered needed upgrading. These included some of the operating theatres, labour wards, patient bathrooms, ward accommodation, meeting rooms, offices and grounds.
- Needing improved discharge planning.

Opportunities were identified as:

- An aim to become a best practice health service. Funds were being sort to achieve this aim.
- Increasing the number of surgical procedures performed at the health service by 20% and the number of maternity patient admissions by 15%. The health service manager was presenting a case to the Health Purchasing Authority to provide funds to allow for an increase in patient admissions.

Threats were identified as:

- Staff burnout. Staff members were expected by the Health Department to perform more work with less employees and resources.
- Industrial relations. Because of the expectation of an increase in productivity staff were seeking an increase in their salary. The Western Australian Industrial Relations Commission was committed to a policy of only negotiating salary

increases through enterprise bargaining or through workplace agreements. Not all staff wanted to have their pay rises granted through these methods.

- Contracting out non-core services. This had the potential to cause employee stress and give rise to industrial action in the form of work bans or withdrawal of labour.

Hospital four.

Hospital four was a 190 bed Health Care Service that was assessed by the Health Department as having Best Practice in Quality Activities. At the time of the research the Health Service was not accredited by the Australian Council on Health Care Standards.

(a) Services provided.

These included:

- Accident and Emergency
- General Medical
- General Surgical
- Obstetrics
- Gynaecology
- Paediatrics
- Same Day Surgery
- Rehabilitation
- Psychogeriatric
- Psychiatric
- Orthopaedics
- Ear, nose and throat care
- Plastic Surgery
- Ophthalmology
- Radiology
- Urology

- Out patient Services that were comprised of Laboratory services. Occupational Therapy. Physiotherapy. Dietetics. Social work. Clinical psychology. Speech Pathology. Audiology. Podiatry. Medical Imaging (X-Ray and Ultra sound). and Extended Care Services which include In House Assessment. a Day hospital. Restorative and Long term care.
- Community Health Services which were staffed by Community School Health Nurses. Child Health Community Nurses. Aboriginal Health Workers. Podiatrist. Occupational Therapist. Speech Pathologist. Social worker. Dietitian. Physiotherapist. Clinical Psychologist. Medical Officer. Generalist Community Health Nurses. Paediatrician and a Health Education / Health Promotion Officer.

(b) **Composition of the work force.**

In 1993/94 there were 409 full time equivalent staff employed by the Health Service. The following financial year the number of staff employed was 395: a decrease of 14 staff. Most areas had a lower number of staff in the second financial year with the largest staff cuts being in Hotel Service employment. Staffing groups employed by the health service included Administration. General Maintenance. Hotel Services. Medical Practitioners. Medical Support and Nursing.

(c) **Strategic Planning Statements.**

Clearly displayed on hospital notice boards was the Health Service Strategic Plan. The documented health service strategic plan included the following:

Our vision.

We are a dynamic Health Service of exemplary standards responding to defined health needs through the innovative use of individual and collective ability, enthusiasm and our knowledge of, and care for, our community.

Our values.

Our focus is on the customer. We have an ongoing commitment to staff well being, development, care, respect, support and consultation. We are committed to ethical practices. We have an ongoing commitment to

quality, innovation and continuous improvement. We operate as an integrated, effective, efficient and equitable Health Service.

Our customers.

Primarily our clients are residents of the district. Our priorities are in line with Government Health Policy.

People on low income

Families in need

Children and Adolescents at risk

People with severe chronic disease or disabilities and their carers

Aboriginal people's health

People from Non-English speaking backgrounds.

Our Services.

Diagnostic and therapeutic

Rehabilitation

Child development

Emergency medicine Child and adolescent psychiatry

Health promotion and education

Paediatrics

Community organisation

Psycho geriatric

Surgical

Community

Preventative programs

The organisation's strategic plan also contained goals, comprehensive information on how each goal would be achieved, and the expected outcome of achieving each goal.

The organisation goals, achievement strategies and expected outcomes were documented as follows.

"Exemplary standards of health care (a Statewide Benchmark)."

Achieved by:

- Collection and comparison of data and statistics
- Training and development of staff and volunteer carers providing the service
- Consultation with other community groups
- Facilitate staff input process (ownership)
- Evaluate outcome standards
- Quality assurance measures
- Research and development.

Expected Outcomes:

- Accreditation
- Satisfied customers and staff
- Winning and maintaining contracts
- Continuous improvement in quality service

“Management strategy that promotes efficient business performance.”

Achieved by:

- Development of Business Plans
- Selection of skilled Managers
- Training and development of management to accept the vision and standards
- Selecting and disseminating documents
- Management support of staff to improve standards
- Team approach
- Quality advice to Policy Makers on standards
- Maintain awareness of areas / issues relevant to the Health Service.

Expected Outcomes:

- Improved Health Service standards
- Cost effective business operations
- Improved devolution of management responsibilities
- Focus on core business
- Each department possesses and works to a Business Plan.

“Effective marketing and promotion.”

Achieved by:

- Assessment of current profile
- Publicity
- News displays, open days, pamphlets
- Support of specialised community groups, eg. AA, ARAFMA
- Participation in community service professional activities
- Student work experience
- Community education
- Marketing ourselves to funders.

Expected outcomes:

- Use of facilities by customers
- Provision of funds.

“Productive staff supported and developed to their full potential.”

Achieved by:

- Communicating our vision to all staff
- Job description / selection process of staff
- Assessment of current staff skills and knowledge
- Reviewing current staff development needs and providing performance management for career development
- Staff input through open forums
- Evaluation and feedback from internal and external customers
- Attitude survey.

Expected outcomes:

- Responsive, trained and capable staff able to deal with changing priorities
- Cost saving due to reduced turnover and appeals, etc.

“Dynamic, creative, innovative and receptive environment.”

Achieved by:

- Providing awareness of cultural change
- Forums
- Continuous improvement
- Recognition and incentives for contribution of ideas
- Employee of the month
- Monetary grants
- Empower staff to make change within area of expertise
- Mechanisms for receiving ideas
- Vision launch
- Exit interviews

Expected outcomes:

- Culture that encourages expression of ideas, forward thinking, receptive to change
- A place where people like to work.

“Improved knowledge of community health care needs.”

Achieved by:

- Setting up a needs analysis group
- Identifying stake-holders and target groups eg. at risk groups)

- Collecting data via software, questionnaires, door knocks, community review, existing data (ABS Health Statistics) and Epidemiology
- Analysing data
- Compiling data into an information bank.

Expected outcomes:

- Accurate data for improved decision making
- Development of a Health strategy based services
- Projection of trends in utilisation and need of services.

“Enhanced responsiveness to community health care needs.”

Achieved by:

- Reviewing existing programs / outside services
- Resource allocation (redistribution of \$ and staff / physical resources)
- Liaising with other NGOs and GOs (partnership)
- Multi skilling (creativity and innovation)
- Consultation
- Patient Charter
- Change process for clients from demands to needs.

Expected outcomes:

- Reduced ill health readmission
- More community based services
- Earlier discharge
- Responsibility put back to General Practitioners.

“Enhanced community involvement.”

Achieved by:

- Open day
- Health Service staff on local committees
- Use of volunteers
- Phone in day
- Complaints process
- Praise process
- Liaise with other Health Service providers
- Local newspaper articles
- Surveys.

Expected outcomes:

- Aims, services and operations are widely understood by the community
- Closer links and partnerships with the community
- Community accessibility, greater input in determining the services provided.

This organisation's mission was documented as "To detect and treat illness and injury and to provide obstetric care for the people of Western Australia."

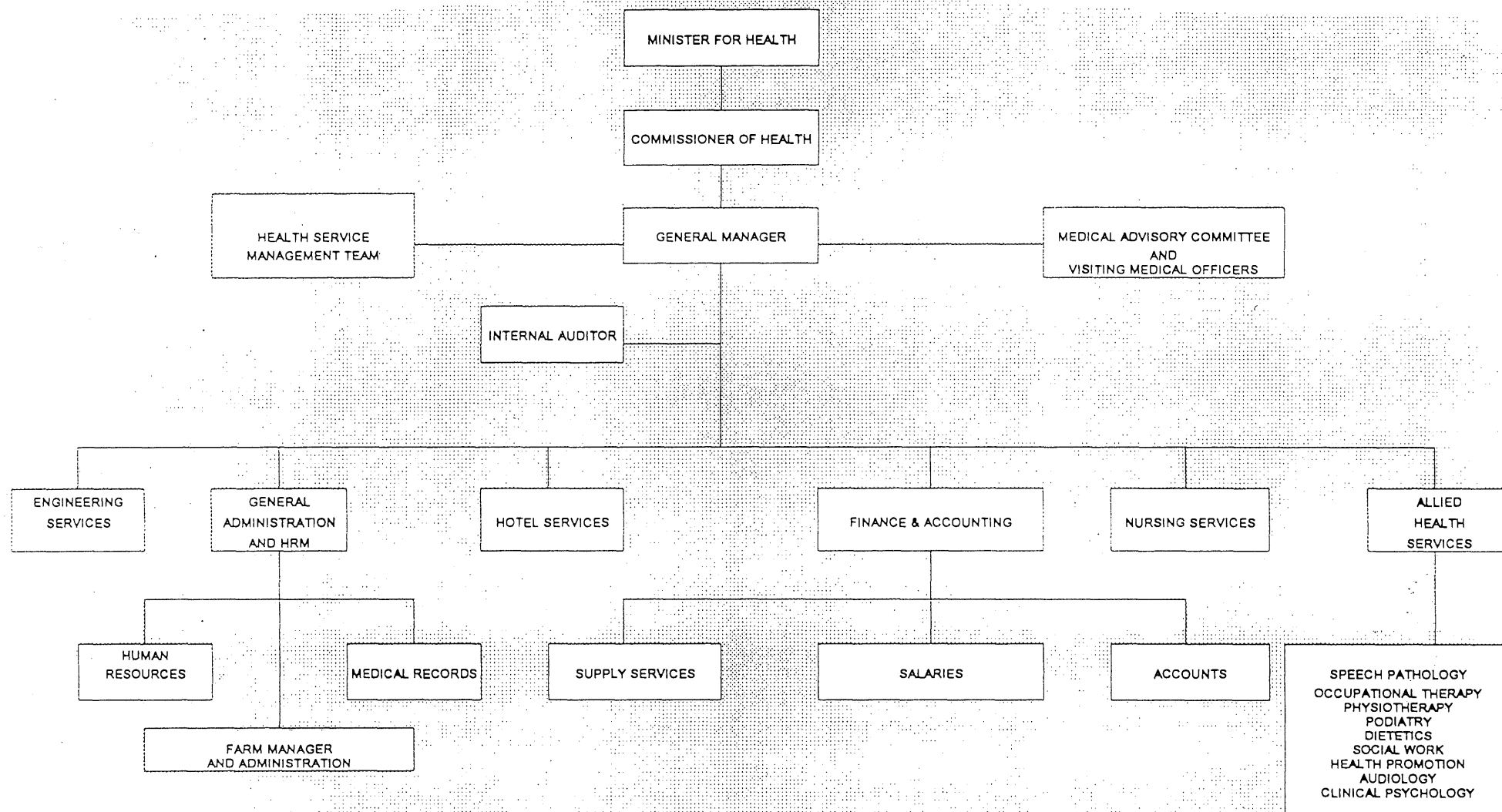
Strategic Plan Achievement

For each of the 8 goals in the organisation's strategic plan the Quality Department had a sheet of paper that was clearly displayed on notice boards to show how it had achieved each goal.

For example, under Goal 1. ("Exemplary standards of health care"), the Quality Department documented the achievement of this standard by writing that 90% of the Health Service staff had attended a continuous improvement workshop. Continuous improvement lectures were included in the Health Service Orientation Program for all new staff, and workshops on this topic were conducted 3 monthly.

(d) Organisational Management Structure.

The organisational chart had the Minister for Health at the top, followed by the Commissioner of Health and then staff employed by the Health Service.



Hospital five.

Hospital five was a 77 bed Private Hospital. At the time of the research the hospital was not accredited by the Australian Council on Health Care Standards, or any other professional organisation.

(a) **Services Provided.**

The hospital had one day surgery ward and two other wards which provided beds for orthopaedic, gynaecology, ophthalmology, plastic surgery, general surgical and medical patients.

(b) **Composition of the workforce.**

Two hundred staff were employed in the hospital. (114 full time equivalents, as some staff choose to work part time.)

(c) **Strategic Planning Statements.**

At the time of the research the hospital did not have a vision statement. The organisation's Mission Statement was:

"Our mission is to provide high quality health care, recognising the physical and spiritual needs of the individual, delivered with respect and compassion reflecting God's love for all."

The hospital also had values that were included on the back of a bookmark along with the mission statement. This bookmark was supplied to, and used by, both staff and patients. The hospital was committed to and promoted the following values.

"*Professionalism* - a demonstration of pride and excellence in the service we offer."

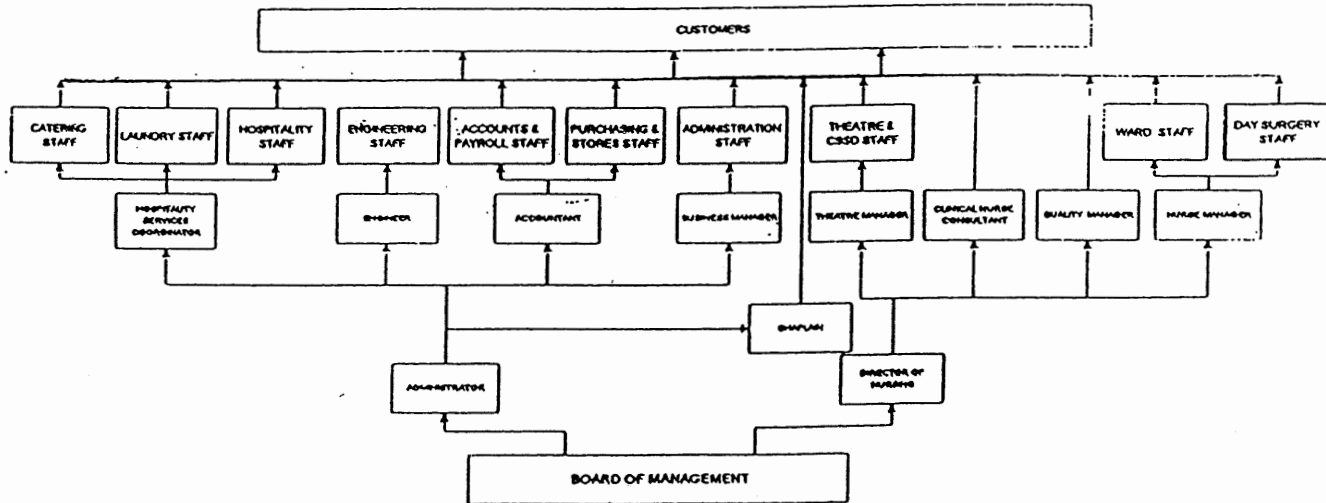
"*Respect* - a recognition and acknowledgment of the uniqueness and value of the individual."

"*Integrity* - a sincere demonstration of honesty and trust"

"Compassion - an attitude of support which conveys a caring expression of kindness, tolerance and tenderness."

"Empathy - an understanding and sharing of another's life experience."

(f) Organisational Management Structure.



This organisation had a participative style of management with employees encouraged to make suggestions and be involved in improving the organisation's service. Staff members were recognised in written, verbal and action form as the organisation's most valuable resource. Throughout the organisation it was aimed to have self-managing cohesive work teams who were flexible and responsive to change. Managers were encouraged to function as coaches and supporters of staff and by their behaviour to demonstrate commitment to internal and external customers.

Staff.

It was recognised in the 1996 Quality Management Program that the staff members were the key to the delivery of quality service to the organisation's customers. Staff members' creative talents were encouraged to be used to benefit the organisation. In the Quality management Program (1996) it stated

Our staffing practices should:

- communicate to staff that they are valued as individuals:
- empower staff to make decisions relevant to the processes in which they participate:
- encourage and equip multi-skilling within a team based environment:
- be based on natural work-based teams throughout the workplace:
- focus on the delivery of service to our customers:
- recognise and reward performance improvement:
- ensure extensive candid and open communication at all levels:
- provide the necessary training to equip staff to deliver a high quality of service:
- be designed to attract and retain high calibre people.

Hospital six

Hospital six was a 90 bed country hospital and the Regional Health Care Centre. For the hospital, the daily average occupied beds were 74.45. (82.7% occupancy rate). This health service had less than 100% patient satisfaction with care on the Health Department State –wide patient satisfaction with care survey. At the time of the research the hospital was not accredited by the Australian Council on Health Care Standards Ltd. or by any other professional organisation.

(b) Services Provided

These included:

The regional hospital which provided the following services:

- Accident and Emergency
- Aboriginal Liaison
- Audiology
- Central Sterilising
- Continence Management
- Day Surgery
- Early Discharge (Follow up care for Maternity and Surgery patients.)
- Endoscopy
- Ear, Nose and Throat care

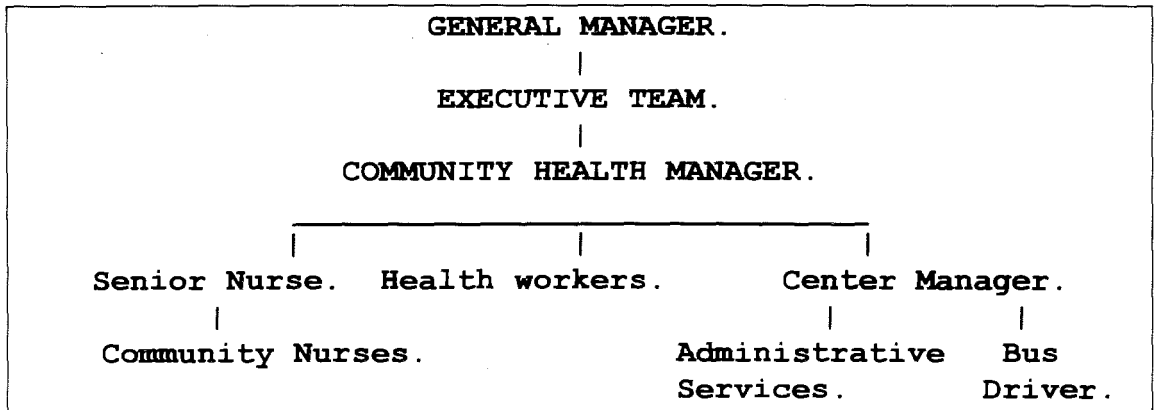
- General Medical
- General Surgical
- Hospital at home
- Intensive Nursing Care
- Obstetrics and Gynaecology
- Occupational Therapy
- Ophthalmic
- Orthopaedic
- Outpatient Clinics
- Paediatrics
- Palliative Care
- Pathology
- Pharmacy
- Physiotherapy
- Social Work
- Speech Pathology
- Support Services.

Community Health Service which provided the following:

- Child Health Care
- Aboriginal Health Service
- Continence Advisory Service
- Customer / Carer Support
- Disease Prevention
- Health Education
- Health Promotion. For example. Scald prevention program. Rural Alcohol Campaign to promote responsible drinking
- Immunisation

- Public Health Issues. For example. Involvement with the young offenders in prison program
- School Health.
- Health Screening
- Monitoring and Detection of illnesses in the Community

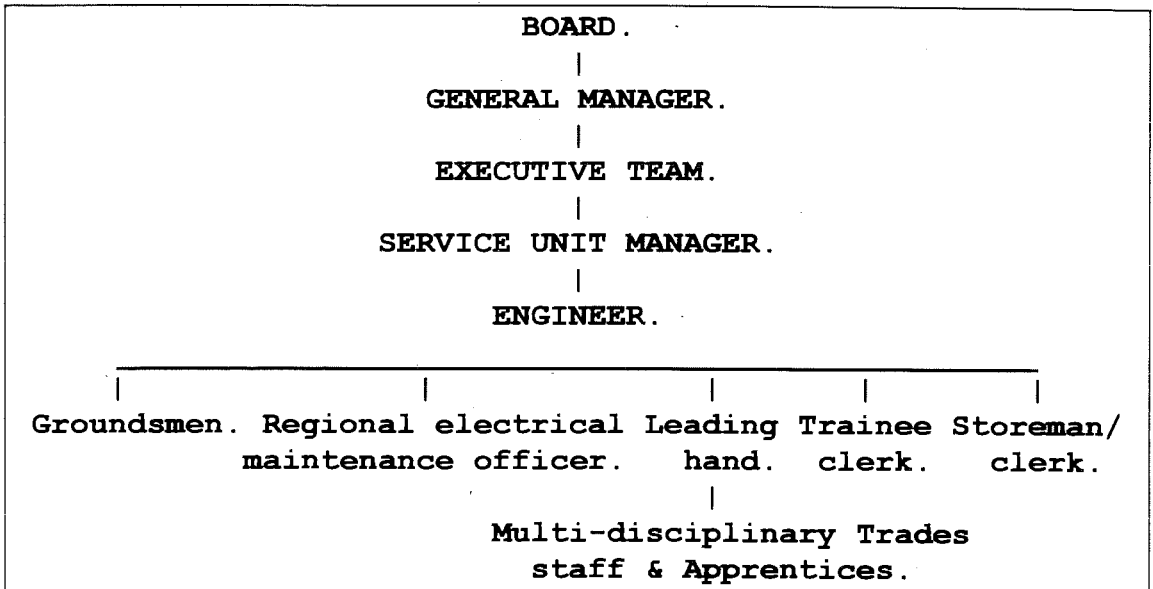
The organisational chart for Community Services was as follows:



Mental Health Services which provided the following for the community:

- Acute In patient Care
- Counselling Services
- Crisis Intervention
- Customer / Carer Support
- Health Promotion and Prevention
- Outpatient Intervention and Follow up
- Visiting Nursing Service to other country towns
- Community Education Groups. For example. Stress management classes for year 11 and 12 high school students. Provision of education programs for staff in local hospitals and nursing homes on the care and management of patients with mental illnesses. Lectures to TAFE nursing students.

Engineering Services which provided maintenance and energy management for the Health Service. The organisational chart for engineering was as follows:



(b) **Composition of the workforce.**

Three hundred and six full-time equivalent staff members were employed by the Health Service. Employees included 148 nurses, 72 hotel service employees, 34 clerical staff, 26 allied health professionals, 19 maintenance employees, 5 managers and 2 contract employees. The total staff number was 420 as some staff worked part time. Medical services were contracted out to General Medical Practitioners on a fee for service basis.

Staff

The organisation's employment policy stated that it supported:

- Equal Employment Opportunity.
- Affirmative Action Programs.
- Staff Development using adult education model.
- Active occupational safety activities which support appropriate legislation.
- Positive Performance Appraisal which encourages career progression and skills acquisition.
- Participatory management with active contributions from employees.

In the year of the research the Commissioner of the Bureau of Reclamation and the Department of the Interior had presided over a 21% reduction in staff that included decreasing senior level management by 50%. Organisational decision making had been moved to lower levels where possible and bureaucratic requirements were greatly reduced.

Strategic Planning Statements.

At the time of the research the Health Service did not have a vision. However three sections: the Community Health Service, Engineering Department and the Clinical Support Unit, had their own visions which were:

- *Community Health Service.*
To be acknowledged by other service providers as a center of excellence in the provision of community health.
- *Engineering Department.*
To be acknowledged by other regional service providers as the center of excellence in the provision of Building and Engineering services.
- *Clinical Support Unit.*
To be acknowledged by our professional peers and other service providers as the center for excellence for the provision of Clinical Support services in a rural and regional center.

Mission Statement.

The organisation had 3 levels of mission statements. Level one was the Health Authority Mission Statement which was:

To work together to achieve optimum quality of life and health status of our communities by purchasing, on their behalf, best value health solutions.

Level 2 was the Health Service Mission Statement which was:

To provide coordinated quality health services that meets the identified needs of the people of (the town) and surrounding region.

Level 3 was the department mission. Only 3 departments were able to produce a mission statement. Department mission statements were as follows:

- Community Health Services Mission:

To provide quality Community Health Services to the customers of ... Health Service, through the delivery of responsive highly skilled and integrated services, making the best use of available resources.

- Clinical Support Unit.

The mission statement for this unit was the same as for community health services, with just the name of the department changed.

- Engineering Department Mission:

To undertake the delivery of quality building and Engineering services, through the efficient utilisation of human, material and physical resources to our customers.

As well as a mission statement each of the above departments also had **Goals** and **Departmental Values** for their services. The goals were described under the headings of "Needs and Outcomes", "Management," "Service Provision," "Health care delivery" (or "Service delivery.")

The values for each of these 3 departments were "Equity of access" (as per Health Department Contract for customers), "Caring for each other." This care was to be given to patients, clients and staff and was to acknowledge these people's rights and responsibilities. "Working together" with customers. "Value for money."

This was to be provided by meeting the Australian Health Care Standards, providing services as per Health Department contract, using resources efficiently within the agreed budget allocation and being accountable in meeting contracted and professional responsibilities. "Responsive to changing needs." This included meeting Health

Department contracted responsibilities. improving work-related skills through education. and enhancing service delivery through the introduction of new techniques and technologies.

In addition to a Mission. goals and values for some departments. the whole organisation had a documented **Philosophy** that stated:

The ... Health Service seeks to provide high quality health care to all people within the (town) and the ... Health Authority. regardless of race. religion. beliefs or financial status.

The ... Health Service assures consumers that we will:

- Provide optimum care through the use of modern health care practices and technology.
- Comply with all industrial standards and requirements within an ethical framework.
- Treat you our consumers with dignity and respect. acknowledging and supporting your personal beliefs.
- Manage all resources to maximise benefits and ensure access to services.
- Support the principles detailed in the Western Australian Medicare Public Patients' Hospital Charter.

Hospital seven

Hospital seven was a Government hospital with 238 beds. It was randomly selected from the city hospitals with less than 96% patient satisfaction on the Health Department State-wide Patient Satisfaction with Care Survey. At the time of the research the hospital was accredited for three years by the Australian Council on Health Care Standards.

(a) Services Provided.

The hospital provided surgical care. medical services. obstetric and gynaecology services. geriatric medicine and extended care. out-patient services. mental health care. rehabilitation services. neuroscience unit. head injury care unit physiotherapy.

pharmacy, occupational therapy, speech pathology, radiology, social work, dietetics, podiatry, pathology and community health services.

(b) **Composition of the workforce.**

The hospital employed 18 Clerical Staff, 38 Hotel Service Employees (composed of catering, cleaning, gardening, waste management and laundry staff), 12 Engineering and Maintenance staff, 12 Laboratory staff, 1 Librarian, 9 Radiology staff, 2 Pharmacist, 86 Registered Nurses, 41 Registered Midwives, 40 Enrolled Nurses, 51 Psychiatric Care Staff, 5 Psychologist, 45 Allied Health Professionals, 4 Central Supply Department staff, 1 Medical Registrar Doctor, 3 Medical Resident Doctors and had 6 Obstetric Visiting Medical Practitioners, 77 Visiting Medical Practitioners and 140 General Medical Practitioners accredited to use the hospital for their patients' care.

(c) **Strategic Planning Statements.**

At the time of the research the hospital did not have a vision statement. Its Mission Statement was as follows.

The aim of the Health Service is directed towards ensuring that service meets community needs within the Health Service District. This is achieved through the delivery of surgical, medical, psychiatric, obstetric, extended care and rehabilitation services. We undertake to deliver the highest standard of care within the available resources.

As well as having a mission statement the health service also had a documented Philosophy and Objectives.

Philosophy.

The aim of the Health Service is directed towards ensuring that the services meet community needs and standards with the application of skill, compassion and dedication. The Health Service undertakes to apply the principles of cost effectiveness, efficiency, accountability and quality assurance in its service delivery.

Recognising the need for co-operative interaction with staff and outside agencies in planning, maintaining and improving Health Services. The unit prescribes to a consultative approach in the development of policies and programs.

Staff were regarded as an important and valuable asset and as such it is held that they be treated with respect for their contribution. Job satisfaction, high morale and motivation are seen as major employee considerations and thus the Health service believes in making the environment conducive to developing staff to their full potential.

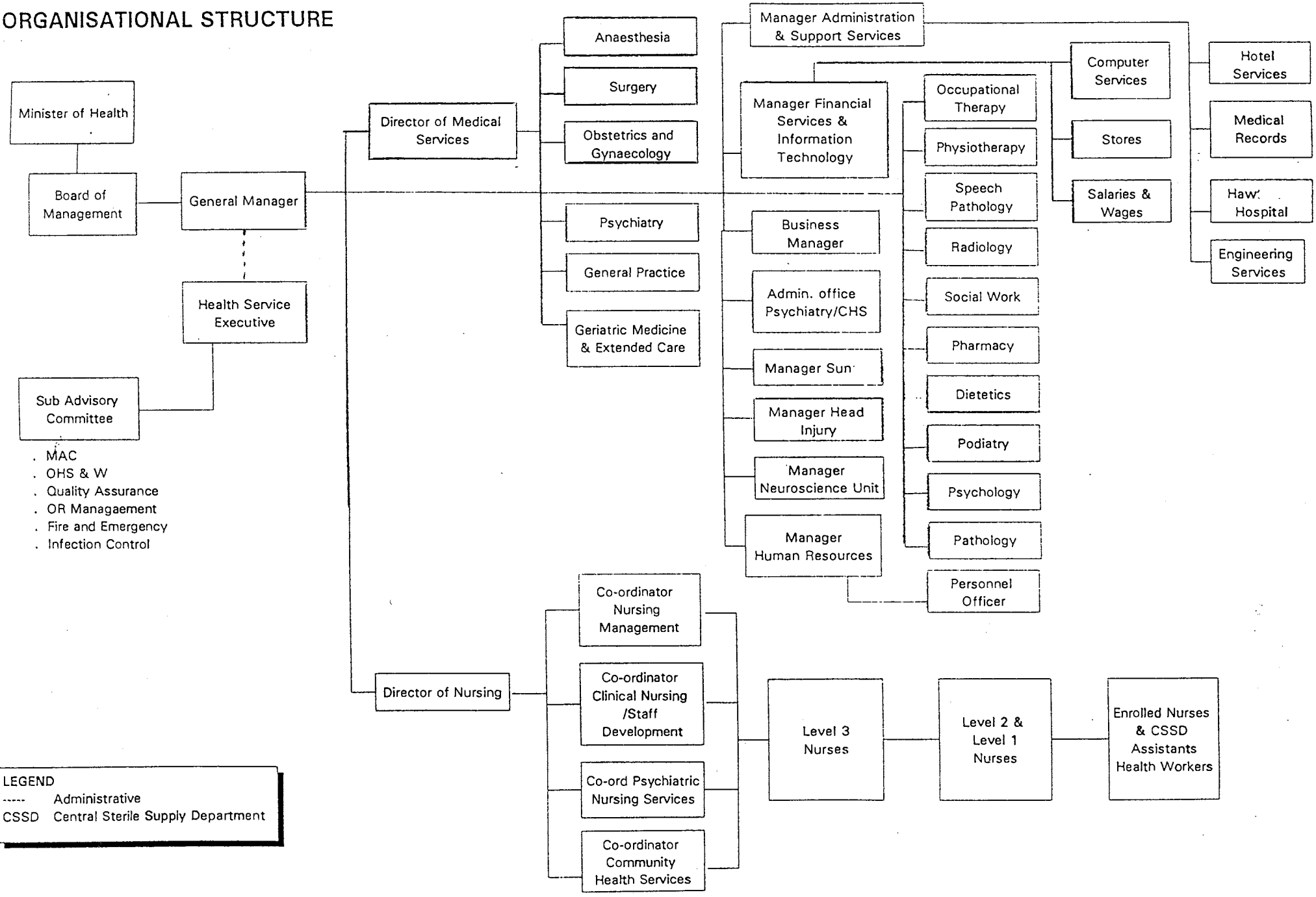
Objectives.

1. To provide accessible and effective health care to those who are in need of it.
2. To ensure that care is provided according to agreed standards.
3. To provide a community focus through greater awareness and participation in local health issues.

Each department also had its own goals, objectives and strategies to be used to achieve the goals and objectives. All of these were focused on providing a high standard of customer service.

(d) **Organisational Management Structure.**

ORGANISATIONAL STRUCTURE



Hospital eight

Hospital eight was 230 bed Government hospital and health care centre that included regional health care facilities. It cared for both public and private patients. It was randomly selected from the hospitals that were not reported by the Health Department to have 'Best Practice' in quality activities. At the time of the research the hospital was accredited by the Australian Council on Health Care Standards.

(a) **Services Provided**

The hospital provided obstetrics, medical, surgical, child and adolescent health care, paediatric, geriatric and mental health care. The health service had Child Health Centres, School Health Services, a Continence Clinic, Physiotherapy, Occupational Therapy, Podiatry and Psychology Services.

(b) **Composition of the workforce.**

In 1993/94 264 full time equivalent staff were employed by the hospital. The following financial year the number of staff employed was 252. There was a decrease of 11 nursing staff between the two years, but most other department staff levels remained unchanged. Staffing groups employed included Nursing, Administration, Medical Practitioners, Medical Support, Hotel Services and Maintenance.

(c) **Strategic Planning Statements.**

At the time of the research the hospital did not have a vision statement. Its Mission Statement was as follows.

The Health Service aims to maximise the health status of our community by the delivery of health care, with skill, compassion and commitment. Services will be accessible, equitable and of a consistently high quality. The principles of cost effectiveness and continuity of care will be applied in the delivery of our services.

The Health Service also had goals which, with the Mission Statement, were clearly displayed on the wall in many parts of the hospital. The goals were to:

- Provide quality client focused health care.
- Provide accessible and equitable health care to the community.
- Provide a flexible and responsive health service to meet changing community needs and expectations.
- Provide a planned, integrated and co-ordinated health service.
- Promote positive health practices through early identification, intervention and health promotion.
- Optimise allocation and utilisation of resources.
- Promote and export quality health services.
- Promote opportunities for clinical teaching and applied research.

(d) **Organisational Management Structure.**

