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Emily J. Carmona
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**REASONS WHY PATIENTS ATTEND AN
EMERGENCY DEPARTMENT**

BY

EMILY JANE CARMONA RGN

**A Thesis Submitted in Partial Fulfilment of the
Requirements for the Award of**

Bachelor of Nursing with Honours

at the School of Nursing, Edith Cowan University

Date of Submission

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ABSTRACT

The traditional role of emergency departments (ED) is to provide emergency and life-saving treatment to accident victims (Catchlove, 1974). These departments provide a unique service to the Australian community, as medical treatment is available without medical referral or appointment. However, attendance patterns suggest that a high proportion of members of the public seek treatment for non-urgent conditions at these departments (Bain & Johnson, 1971; Starr, 1973). The purpose of this study is to update existing information about attendance patterns by describing the current use of one teaching hospital emergency department. A descriptive study design using a quantitative approach was used to describe attendance patterns and identify the reasons why patients choose emergency departments to meet their health care needs. Pender's Health Promotion Model (1987) provided the framework and guidance for the study. One hundred ambulant adults were conveniently sampled following a nursing triage assessment. The data was collected over a one week period using a validated questionnaire. Prior to data collection, a pilot study was conducted using 10 participants who met the same criteria used in the main study. Descriptive statistics and cross-tabulation were used to analyse the data. Two open-ended questions were analysed by content analysis. The findings of the study indicate that attenders at the emergency department were predominantly young (under 29), male, and low income earners. The majority of attenders presented as ambulant cases with minor injuries or illnesses and did not require hospital admission. Participants chose the emergency department to meet their medical needs because of their perception of its usefulness to them. Thirty percent of participants gave convenience-related reasons as their main reason for attending the emergency department. These reasons included the emergency department's proximity to either the place of residence, the occurrence of the injury, or the work setting; 24 hours access, no appointment system, and a free service. The study found that for most participants the

decision about which medical care service was more appropriate to meet their needs, was dependant upon more than one factor. However, in most cases there was a dominant factor which motivated the participant to attend the emergency department. The study revealed that a substantial proportion of participants were lacking in general knowledge about the range of services provided by GP's during and after surgery hours. The researcher suggests that an increase in public education about the role, scope, and availability of GP's may encourage the public to seek medical assistance from their GP. The implications for the study focus on education of members of the general public about the role and scope of the emergency department and alternative medical services. The implications for nursing is the introduction of a new role for nurses, that of the nurse practitioner in the emergency department. This nurse would have the appropriate skills and training to treat patients who attend the emergency department with non-urgent minor injuries. The introduction of a nurse practitioner to the emergency department would reduce the waiting times, and free resources necessary for treating patients with more urgent or severe illness or injury.

DECLARATION

" I certify that this thesis does not incorporate, without acknowledgement, any material previously submitted for a degree or diploma in any institution of higher education and that, to the best of my knowledge and belief, it does not contain any material previously published or written by another person except where due reference is made in the text".

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CHAPTER ONE

INTRODUCTION

The following study describes the attendance pattern at one Perth teaching hospital's emergency department and investigates the reasons why patients use emergency departments to meet their health care needs in preference to other medical services.

1.1 Background

Historically, the function of casualty departments was to provide medical care to those patients who could not afford a doctor of their own (Blackwell, 1962). However, casualty departments have more recently been described as centres that provide emergency and life-saving treatment to accident victims (Catchlove, 1974). In Australia, these departments provide a unique service to the Australian community, in that medical treatment is free and available without medical referral or appointment.

It has been demonstrated in both Australian and overseas studies that a high proportion of members of the public seek treatment for non-urgent illness and injury at these departments (Bain & Johnson, 1971; Dixon & Morris, 1971; Starr, 1973). These presentations have been identified as being more appropriate for treatment by General Practitioners (GP) (Blackwell, 1962). In the U.K, in a bid to change the practice of non-urgent attendance at these busy departments, the Platt Report (1962) (cited in Lewis & Bradbury, 1982) suggested changing the name casualty to that of accident and emergency (A&E), hoping that the community would have a clearer idea of the type of work for which these departments had been specifically designed. Most casualty departments in Australia followed their British counterparts and adopted the Platt recommendation. However, in 1984 the newly formed Australasian College for Emergency Medicine felt that the name accident and emergency no longer accurately

described the function of the department. It was agreed that the term emergency department (ED) was more appropriate for a department which provides treatment ranging from minor injuries to life-threatening conditions (Epstein, 1991).

Hospitals and GPs have repeatedly attempted to clarify their respective roles and responsibilities through public education (Farmer, 1984). However, high attendance rates in emergency departments for non-urgent minor injuries and illnesses suggest these efforts have been unsuccessful. This misuse of emergency facilities remains a cause of concern, as such improper use may impede the care received by those in more urgent need.

A review of Australian and overseas literature examining the use of emergency departments identified that a wide variety of factors influence patient attendance at emergency departments (Davies, 1986; Dunoon, 1978; Singh, 1988; Walsh, 1993b). There is however, only one recent Australian study which reports the reasons why people attend emergency departments (Macklin, 1992).

1.2 Significance of the Study

This study fills the gap in current knowledge by updating existing information about emergency department attendance patterns at one public hospital emergency department, and by identifying factors which influence attendance. Information obtained from the study will also assist in identifying educational needs of the local community towards the use of emergency departments.

1.3 Purpose of the Study

The purpose of this study is to describe the attendance pattern at one Perth teaching hospital's emergency department and investigate the reasons for attendance by non-ambulance patients.

1.4 Research Questions

1. What are the attendance patterns of patients at one Perth teaching hospital's emergency department?
2. What are the factors which influence patients to attend an emergency department?
3. Why do patients use emergency departments in preference to alternative medical services?
4. Are patients aware of any alternative medical services where they can receive medical care?

1.5 Definition of Terms

For the purpose of this study, the following definitions were used:

1. Emergency Department - is defined as an area of a hospital designed, equipped, and staffed to provide treatment to patients suffering from acute or urgent medical conditions (Epstein, 1991).
2. An emergency - refers to "any trauma or sudden illness that requires immediate intervention to prevent imminent severe damage or death" (Nurse's Reference Library, 1985, p. 1).
3. Perceived emergency - "any condition that - in the opinion of the patient, his family, or whoever assumes responsibility for bringing the patient to the hospital - requires immediate medical intervention" (Nurse's Reference Library, 1985, p. 1).
4. A General Practitioner (GP) - is a medical doctor working in the community who is legally able to treat illness or injury.
5. Triage - refers to "the sorting process used in emergency departments to classify patients into categories according to the urgency of their medical needs" (Nurse's Reference Library, 1985, p. 10).
6. Urgent/Major injuries - refers to presentations at an emergency department in need of immediate care (Green & Dale, 1992).

7. Non-urgent/Minor injuries - refers to presentations at an emergency department not in need of immediate or urgent care (Green & Dale, 1992).
8. Low income earners - people aged fifteen or over with an annual income of \$12,000 or less (Australian Bureau of Statistics, 1991b).
9. High income earners - people aged fifteen or over with an annual income over \$50,000 (Australian Bureau of Statistics, 1991b).
10. An alternative medical service - refers to other medical services (excluding emergency departments and GP services) which meet the health needs of patients. Some examples include locum medical services and 24 hour clinics.

1.6 Organisation of the Thesis

Chapter two contains a review of the literature related to the study. Australian and overseas studies exploring attendance patterns at emergency departments are described, highlighting the increased use of departments for non-urgent injuries. The review also describes the influential factors suggesting why patients attend emergency departments. The chapter is concluded with a brief summary. Chapter three describes the conceptual framework that has been used to guide the study. The model is based on the Health Promotion Model by Pender (1987). Chapter four is concerned with the methodology, including the study's design, setting, sample, data collection methods, and limitations. Data analysis and presentation of the results are described in chapter five. Chapter six discusses the study's findings. Chapter seven contains the study's conclusions, recommendations, implications for nursing, and recommendations for future research.

CHAPTER TWO

LITERATURE REVIEW

This chapter discusses the literature that is currently available concerning attendance patterns, and the factors which influence patients to attend emergency departments. The chapter concludes with a summary of the literature reviewed.

In 1962, Blackwell reported that traditionally the function of casualty departments was to provide medical care to the poor. Catchlove (1974) described casualty departments as centres that provide emergency and life-saving treatment to accident victims. Bain and Johnson (1971), Dixon and Morris (1971), and Starr (1973) demonstrated that a high proportion of members of the public sought treatment from these departments for non-urgent illness and injury which could be effectively treated by GPs.

In order to reduce the number of non-urgent attenders at these departments, hospitals and GPs have attempted to clarify their respective roles and responsibilities to members of the public. This has been attempted through public education and by adopting recommendations for changing the name "casualty department" to "accident and emergency department" or "emergency department" (Platt Report, 1962; Epstein, 1991). However, high attendance rates at emergency departments for non-urgent minor injuries and illnesses suggest these efforts have been unsuccessful.

Up until 1990, the number of new attenders at emergency departments rose steadily. In his U.K. study, Singh (1988) reported that the number of new attenders seen in a London region rose by 36% between 1968 and 1981. In Australia, other researchers have found similar patterns (Catchlove, 1974; Starr, 1973; Trinker, Gunter, Ewing, Best, & Yeatman, 1975). Interestingly, in Western Australia current health statistics show that attendance rates at emergency departments have decreased

since 1988 (Fremantle Hospital Annual Report, 1991-2; Royal Perth Hospital Annual Report, 1991-2). This decrease appears to have occurred for a variety of reasons including changes to Medicare, and hospital charges for pharmacy items (Coleridge, Cameron, White, & Epstein, 1993). However, Singh's U.K. study showed that there are an increasing number of people attending emergency departments with non-urgent medical conditions and minor injuries. This appears to be consistent with current Australian trends (Dunoon, 1978; Starr, 1973; Trinker et al., 1975).

2.1 Attendance Patterns

Attendance patterns vary according to the time of day and the day of the week (Dixon & Morris, 1971; Williams & Pottle, 1989). Williams and Pottle (1989) and Walsh (1990a) found weekends were the busiest times whereas Trinker et al. (1975) showed demand was highest on Mondays. Coleridge et al. (1993) examined attendance patterns over a one year period at a metropolitan hospital emergency department in Melbourne. They reported that the daily attendance figures peaked towards the end of the week with the highest number of attendances on Sunday and Monday. These researchers suggest that the increased number of attendances on Mondays are probably because of the "hangover" from the weekend. Other studies show the majority of patients attend during daylight hours (Coleridge et al., 1993; Trinker et al., 1975), with the morning being the busiest time especially between the hours of 9 a.m. and 10 a.m. (Coleridge et al., 1993; Dunoon, 1978; Starr, 1973; Trinker et al., 1975). These researchers suggest this is perhaps as a result of people waiting overnight before attending the emergency department. Coleridge et al. (1993) also examined monthly attendance patterns and found little or no seasonal variation.

2.2 Age

Cited literature reports that emergency department attenders are predominantly from the younger age groups (Macklin, 1992; Singh, 1988; Trinker et al., 1975;

Walsh, 1990a). In a retrospective study examining 2,000 emergency department attenders, Walsh (1990a) reported that 59% of the sample population were represented in the 16-29 age groups. Other researchers have also reported that these age groups are over-represented in emergency departments (Macklin, 1992; Singh, 1988; Trinker et al., 1975). Singh (1988) and Trinker et al. (1975) report slightly lower figures, 43.5% and 44% respectively. The discrepancy in these figures may be due to the smaller sample sizes in the latter studies.

The New South Wales Department of Health examined outpatient and emergency department services provided by 13 hospitals in Sydney (Macklin, 1992). Macklin reported differences in the age profile of ambulatory patients presenting to emergency departments and patients presenting to GPs. Twenty-six percent of patients who presented to emergency departments were in the 15-24 year age group. Eleven percent of patients in the same age group presented to a GP's surgery. This age group comprises 16.6% of the general population. In comparison, patients aged between 65-74 years were under-represented in the emergency department (4.3%) and over-represented in general practice (11%). This age group comprises 6.6% of the general population. Macklin suggests that older people who are more experienced with the health system are more likely to consider alternative medical services if they feel they are appropriate for their problem.

2.3 Gender

The literature reports that a higher percentage of males present to emergency departments than females (Coleridge et al., 1993; Walsh, 1990a). Coleridge et al. (1993) examined attendance patterns at an emergency department in Melbourne. These researchers examined monthly patterns over a one year period and reported that 55% of attenders were males and 45% were females. This higher percentage of male attenders occurred in all age groups under 45 years of age, however, attendance figures were highest in the 16-25 age group. These findings are congruent with

previous findings. Walsh (1990a) reported that male attenders at an emergency department in the U.K. outnumbered female attenders by almost 2:1 in all age groups.

2.4 Non-Urgent Attenders

Many studies have highlighted the increased use of emergency departments for non-urgent illness or injury (Bain & Johnson, 1971; Dixon & Morris, 1971; Starr, 1973). Estimates of non-urgent attenders vary from 14% (Worth & Hurst, 1989) to 78% (Davies, 1986). In a retrospective study examining attendance patterns at a London hospital, Davison, Hildrey, and Floyer (1983) reported that 39% of 587 attenders did not have urgent problems. Myers (1982) using a similar study design, reported that 54% of 1,000 attenders seen at an outer London hospital were non-urgent and could have been adequately managed by a GP.

The variation in figures for non-urgent attenders has demonstrated how researchers' opinions may vary about the definition of non-urgent. Driscoll, Vincent, and Wilkinson (1987) and Walsh (1990b) suggest this is because some criteria used to define "non-urgent" involved a degree of subjective judgement. In a retrospective study with a sample of 2,000 emergency department attenders, Walsh used trauma injuries over 48 hours old as a definition of non-urgent, and identified 27.5% of attenders as non-urgent. Walsh did admit that some data was incomplete, hence the findings may be unreliable. Davies (1986) reported a higher percentage of non-urgent attenders. He examined the records of 92 patients seen at an outer London hospital and made a judgement about the merit of each case, concluding that 78% of attenders could have been adequately treated by a GP.

In addition, researchers have found differences in how health professionals and members of the public interpret non-urgent cases. By using specific criteria, Driscoll et al. (1987) demonstrated that 55% of a sample of 835 people were considered appropriate attenders. However, there was an incongruity in patients' and health professionals' perceptions of what constitutes urgent and non-urgent. When attenders were asked if they considered their problem urgent, 21% of those who did were

considered by the health professionals as non-urgent, and 14% who did not consider themselves as urgent, were regarded as urgent by the health professionals. Bain and Johnson (1971) found similar results in their study of 3,622 attenders at a Canadian general hospital. However, these researchers did not state the assessment criteria used in their study.

The different interpretations of non-urgent used by researchers, health professionals, and the public suggest that it would be difficult to get consensus between the groups about a definition, and which presentations should be seen at an emergency department.

2.5 Reasons for Attendance

A variety of reasons suggesting why patients attend emergency departments have been identified in the literature. The main reason relates to the patient's perception of their illness (Davies, 1986; Singh, 1988; Trinker et al., 1975). Other reasons have included patients' perceptions about the severity of their condition (Davison et al., 1983), and if they feel their problem requires special investigations or treatment (Fry, 1960; Wilkinson et al., 1977). Also considered by patients was the suitability of their problem to be treated by a GP (Davies, 1986; Davison et al., 1983; Wilkinson et al., 1977).

Other reasons frequently cited for attendance have been grouped under the heading of convenience. This includes the department's proximity to either the place of residence, the occurrence of the injury, or the work setting (Wilkinson et al., 1977), no appointment system (Dunoon, 1978), 24 hour access (Fry, 1960; Trinker et al., 1975), a comprehensive range of services in one location (Macklin, 1992), and less waiting time (Davies, 1986; Fry, 1960). Wilkinson et al. (1977) did not support this last finding, as their study showed 71% of participants anticipated a longer wait in the emergency department.

Another reason cited in the literature is the patient's belief that hospitals offer a higher standard of care than alternative medical services (Macklin, 1992; Trinker et

al., 1975; Walsh, 1990b). Macklin suggests this belief may exist because hospitals provide both a wide range of services and highly skilled practitioners.

2.6 Advice and Attendance at the Emergency Department

Walsh (1993b) interviewed 200 attenders who presented at an inner city hospital in the U.K. Participants were asked if they had sought advice from someone about their complaint before attending the emergency department. The study identified significant differences in male and female responses. Walsh found that males take the initiative to self-refer to the emergency department whereas females are more likely to seek advice from health professionals before attending the emergency department. Walsh suggests that this is because females need someone's approval that they are taking an appropriate course of action. Similarly, Walsh found that females are twice as likely to attempt to see their GP before attending an emergency department.

2.7 The General Practitioner

Singh (1988) reported that accessibility to a GP was a determining factor for self-referral. Results of his study showed one third of patients were unaware of after hours facilities. The researcher suggested that patients need to be educated about primary care services. Other researchers (Davies, 1986; Worth & Hurst, 1989) have made similar suggestions. A similar pattern was found in an Australian study by Trinker et al. (1975). The researchers reported that 25% of 200 attenders stated that the lack of after hours services by GPs was their main reason for attending the emergency department. The study found that some participants registered with GPs had not tried to contact their GP to determine their availability after surgery hours. The researchers suggest that participants who did not try to contact their GP demonstrated a lack of confidence in their GPs ability, or their suitability to treat the problem.

Myers (1982) examined the differences in workload of an emergency department and one GP practice. He reported that 47% of 150 participants felt that their GP could not provide the type of treatment or investigation they required, therefore, they attended the emergency department because the hospital offered a wide range of specialised services at one location. Myers found evidence which supported participants' beliefs that GPs provided a limited range of services. The researcher reports that some GPs tended to avoid undertaking minor procedures on a regular basis. These minor procedures included suturing and lancing as well minor surgical procedures. Myers concluded that if patients are to be encouraged to seek medical assistance from their GP for minor injuries, it is essential that GPs are both accessible and motivated.

Lewis and Bradbury (1981) surveyed attenders at 19 emergency departments in different suburbs of an industrial city in the U.K. Their findings showed that GPs were viewed more as diagnostic agents than treatment agents, and that attenders presented to the emergency departments because they required medical attention with the emphasis on treatment. The researchers also found that patients make a diagnostic appraisal of their condition before attending the emergency department suggesting that they attend for confirmation of diagnosis, and treatment.

Blackwell (1962) examined 200 attenders at a inner city London hospital and reported that a variety of factors influence patients' decisions about how appropriate their complaint is for treatment by a GP. These include the patient's perception about the nature of their injury or illness, the patient's personality; their faith in their GP's ability and capabilities; and accessibility, and available facilities.

Davison et al. (1983) found that people who were not registered with a GP used the emergency department more frequently, suggesting that the emergency department was used as an alternative to a GP's surgery. The reasons given for this were multifaceted. Davison's study focused on attendance patterns at an emergency department in an inner city London suburb, and he suggested that socio-economic factors may have contributed towards this trend. Wilkinson et al. (1977) suggest that

geographical mobility and age are also related to the likelihood of people being registered with a GP. These researchers found that people who frequently moved geographical location and those in the younger age groups were less likely to be registered with a GP. Mathers and Harvey (1988) offer an alternative explanation. They suggest that the younger age groups may not be registered with GP's because they are generally healthier and consequently use fewer services.

Whitfield and Bucks (1988) report a lack of consensus among GPs about the range of services they should be providing, and according to Myers (1982) many GPs avoid undertaking minor procedures. Green and Dale (1990) suggest that guidelines should be developed which include a range of baseline services that GPs should provide. This would provide the public with a clearer idea about the range of services available at GPs surgeries.

2.8 Delay in Attendance

Patients are more likely to attend the emergency department within the first two hours of the onset of their injury or illness if they feel their condition is an emergency which requires urgent treatment (Walsh, 1993a). Lewis and Bradbury (1981) reported that 32% of patients presented to the emergency department within an hour of sustaining their injury, 42% presented within 24 hours, and 26% delayed attending for more than 24 hours. The study found that the patients who delayed attendance at an emergency department did so because they believed that their medical condition would improve over time. The researchers suggest that these delays in attendance by patients indicate that the urgency element implied in the name emergency department is not well understood by the public. Bellavia and Brown (1991) report similar findings. Their study examined 200 attenders at a inner city hospital in the U.K. They found that 65% of participants attended the department within 24 hours of sustaining their injury. The researchers were surprised at the high number of attenders (35%) after 48 hours of sustaining their injury and suggest that some of these patients were perhaps inappropriate attenders.

2.9 Place of Injury

A national survey examining injuries resulting from accidents (Australian Bureau of Statistics, 1990) reported that a significant proportion of injuries occur as a result of accidents in the home or place of work. This is congruent with the findings of Lewis and Bradbury (1981) and Worth and Hurst (1989). Lewis and Bradbury (1981) examined attenders at 19 emergency departments in an industrial city in the U.K. Of the 2,428 reported injuries, 31% occurred at home, and 22% at work. The researchers found that women were more likely to sustain injuries in the home and men were more likely to sustain injuries at work.

2.10 Socio-Economic Status

Some studies have shown that socio-economic status and finances are contributory factors in determining the use of health care facilities (Myers, Loy & Nolan, 1981; Trinker et al., 1975). These studies report that over half of emergency department users are from the lower socio-economic groups. Myers et al. (1981) examined the records of 200 attenders at an emergency department in Sydney. They reported that 57% of their sample population were earning less than \$150 per week. Of these, 43% stated their main reason for attending the emergency department was because they could not afford to pay for a consultation with their GP. Trinker et al. (1975) and Dunoon (1978) made similar observations regarding socio-economic status. However, the reasons cited by these researchers for attendance, were for convenience-related reasons and expectations of treatment rather than cost factors. Dunt, Oberklaid, and Temple-Smith (1988) confirm the findings of Trinker et al. (1975) that economic factors are not predominant when determining choice. To explain this trend, they suggest that people may unconsciously understate the importance of cost factors.

Macklin (1992) examined the attendance patterns of ambulatory patients at 13 hospitals in metropolitan and non-metropolitan areas in Sydney and found similar

patterns regarding socio-economic status. The researchers interviewed 1,417 patients about their reasons for attending the emergency department. The results confirmed findings from previous studies that low income earners were over-represented in the sample population compared to the general population, since 22% of the sample were earning below \$12,000 compared to 6.2% of the general population. In 1991 Deeble reviewed the cost of medical services under the current Australian Medicare agreement and reported that over 35% of general practice surgeries required immediate payment by the patient at the time the service was used. In comparison, the services provided by emergency departments are free of charge, and Macklin (1992) suggests that this may account for the high numbers of low income earners who attend emergency departments.

2.11 Health Care in Australia

Health care in Australia is currently financed through two components of Medicare.

1. Medical Medicare - "The Commonwealth government provides fee-for-service reimbursement to medical practitioners for primary care provided in community settings. The remaining services are charged to the patient at the Medicare Benefit Schedule (MBS) with the patient seeking 85% reimbursement from the government" (Macklin, 1992, p. 23).
2. Hospital Medicare - The Commonwealth government partially funds state public hospitals and health services. The Medicare agreement requires that "care and treatment is available to all eligible persons". This includes the services provided by outpatient and emergency departments (Macklin, 1992, p. 24).

Since the introduction of Medicare in 1984, the public is required to pay a set fee for a consultation with a medical practitioner. Patients are often required to pay for these services immediately and apply for a reimbursement of 85% of the scheduled fee (which can be lower than the paid fee) through Medicare at a later date.

An alternative method of payment, for those patients who cannot afford to pay

up front is the bulk-billing system which is provided by some GPs. Cited literature shows that only one study has examined emergency department attenders' knowledge about the bulk-billing system. Myers et al. (1981) examined the attendance pattern at a metropolitan hospital in Sydney, and reported three major impediments with the bulk-billing system. Firstly, there was a lack of knowledge about the bulk-billing system and how it operates, by members of the public. Secondly, one third of the sample population were not aware that bulk-billing was an available option. Finally, they identified that it was the participant's responsibility to inform their GP, before treatment, that they were eligible for bulk-billing. However, many of the participants could not determine their eligibility for the option of bulk-billing because they could not afford to pay to see a doctor. Myers et al. (1981) concluded that participants were not able to make choices about where they received their health care because of limited finances. An unexpected finding from the study was that pensioners and those receiving sickness benefits knew more about the mechanisms of bulk-billing than other groups receiving benefits. The researchers offered no explanation for this finding.

2.12 Insurance Status

Cited literature has shown that socio-economic status and finances are contributory factors in determining the use of health care facilities and that a high proportion of attenders at emergency departments are low income earners (Myers et al., 1981; Trinker et al., 1975). Macklin (1992) reported that 46% of emergency department attenders held health cards compared with 31% of health card holders in the general population. These figures suggest that a higher proportion of lower income earners use the services offered by emergency departments. Macklin's study showed that socio-economic factors play a significant role in determining the public's use of private health insurance funds. Thirty-one percent of respondents had private health insurance compared with 44% of the general population, however 8% of respondents had private health insurance cover and were in possession of a healthcare card. Myers et al. (1981) found similar results although they report that a slightly

higher proportion of participants did not have private health insurance (79%). The main reason given by participants for not having private insurance was that they could not afford it, or they were in receipt of a health benefit card.

2.13 First Time Attenders

The literature reports that some emergency department attenders are not seeking first time medical assistance for their present complaint. Macklin (1992) reported that 48% of respondents had previously seen a GP about their presenting complaint and 35% of these consultations were in the 24 hours prior to the present consultation. Further analysis found that 56.9% of respondents who had seen a GP in the previous 24 hours had been referred to the hospital for further investigations.

Davison et al. (1983) also reported that 20% of their sample population had previously seen a doctor about their presenting problem. The main reason given by these participants for attending the emergency department was to obtain a second opinion about their condition. The researchers state that this is a duplication of medical services as well as an ineffective use of valuable, scarce hospital resources.

2.14 Knowledge of Alternative Medical Services

Macklin (1992) reports that 46.7% of respondents stated that they were aware of alternative medical services they could have attended with their presenting problem. The researcher however emphasises that the question referred to respondents' knowledge of alternative medical services available at that location and time, and suggests that the time of day might have influenced respondents' perceptions about availability of these alternative medical services. Macklin suggests further research may be needed to investigate whether a relationship exists between time of day and respondents' knowledge of availability of alternative medical services for treatment of their presenting problem.

2.15 Summary

In summary, the literature reviewed identified a variety of factors which contribute to high attendance rates at emergency departments, the major factor being overuse of the department by people with non-urgent conditions. Patients choose to attend emergency departments for a variety of reasons. A major reason identified includes patients' perceptions about the roles of the emergency department and their GP, and their GP's appropriateness for the type of treatment required. The literature also identified that socio-economic status and finances are contributory factors in determining the use of health care facilities and that a high proportion of attenders at the emergency department are low income earners. The literature review has identified that while some information is available on attendance patterns in emergency departments, the majority of studies are not recent. Previous studies are from the U.K. and the eastern states of Australia. These studies are also based on retrospective methodologies, however, their reliability may be questioned because of inaccurate or missing data. The lack of local current research emphasises the need to obtain information on present patient attendance patterns in Western Australia. Study findings could be considered when examining the health care needs of the Western Australian community.

CHAPTER THREE

CONCEPTUAL FRAMEWORK

This chapter describes the conceptual framework that has been selected to guide this study. The model is based on the Health Promotion Model by Pender (1987) which is "directed towards increasing the level of well-being of an individual" (p. 57). The model describes the interrelationships that exist between those variables identified from the literature, and examined in this study, which influence patients to attend emergency departments to meet their health care needs.

3.1 Conceptual Framework

The conceptual framework that was selected to guide this study is based on the Health Promotion Model by Pender (1987). "Health promotion is directed towards increasing the level of well-being and self-actualisation for a group or an individual" (Pender, 1987, p. 57). The motivation for health promoting behaviour comes from the individual's desire for growth, increased well-being, and improved quality of life and the model is devised from social learning theory which emphasises the importance of cognitive mediating processes in directing behaviour (Pender, 1987). The model is structured in three sectors.

Cognitive-perceptual factors - are identified as the primary motivational mechanisms for acquiring and maintaining health promoting behaviours. It is thought that each factor exerts a direct influence on the likelihood of participation in a health related action.

Modifying factors - are identified as factors which indirectly influence patterns of behaviour through their impact on cognitive-perceptual mechanisms. The combination of cognitive and modifying factors in turn influence the individual to adopt health seeking behaviours.

Cues to action - are identified as those external factors which may influence the decision making process involved in choosing where to seek medical assistance.

The model was selected as the most suitable framework to guide this study as it describes the interrelationships that exist between those variables identified from the literature, and examined in this study, which influence patients to attend emergency departments to meet their health care needs. A diagrammatic explanation of the model is illustrated in Figure 1.

The researcher identified the major variables illustrated in the conceptual framework after reviewing available literature on attendance patterns and factors that influence patients to attend emergency departments. The researcher categorised the variables as cognitive-perceptual factors or modifying factors. The cognitive-perceptual factors identified from the literature were: patients' perceptions about their injury or illness, type of treatment required, urgency of their condition, availability of GP, and convenience-related factors. These factors have been identified as the primary motivational mechanisms involved when an individual is choosing a health care service appropriate to meet their health care needs. The modifying factors identified from the literature were: socio-demographic factors, interpersonal influences, referrals, request for a second opinion, and socio-economic factors. These factors indirectly influence an individual's behaviour through the cognitive-perceptual factors and are secondary motivational mechanisms. The combination of the cognitive-perceptual factors and the modifying factors directly affect the individual's behaviour to seek medical assistance after selection of the health care service that they perceive to be the most appropriate to meet their health care needs. The health care services identified in this study were: GP services, emergency department services, and alternative medical services, such as medical locums. An individual's choice about where to seek medical assistance may also be influenced by external factors such as media coverage about health issues, health education and knowledge of alternatives.

3.2 Major Variables to be Examined in This Study

1. Presenting illness or treatment required.
2. Urgency of condition.
3. Attitudinal factors - personal recognition of type of services provided by emergency departments and GPs, their suitability for treating the problem, and past experiences with the services.
4. Availability of GP services - patient knowledge of surgery hours and after hours services, and current relationship with GP.
5. Patient convenience - suitable because of location or services provided, e.g. 24 hour access.
6. Circumstantial factors - time of attendance, day of the week, and type of injury.
7. Socio-demographic - characteristics of the human subject that describe the sample; age, gender, occupation, and country of birth.
8. Request for a second opinion.
9. Referrals - GP, or other, e.g. work.
10. Interpersonal influences - family patterns of health care, and interactions with health professionals.
11. Socio-economic factors - relating to both social and economic factors - income, and type of health insurance.

This study examined the interrelationships that existed between the variables identified in the literature and reports the following findings. Those factors identified by the researcher as the cognitive-perceptual factors were the primary motivating factors for most participants when choosing to attend the emergency department. In most cases emergency department attenders gave an identified cognitive-perceptual factor as their main reason for attendance. Those factors identified as modifying factors were regarded as secondary motivational factors by attenders. Some attenders made the decision to self-refer, while others sought advice from health professionals or friends. Seeking advice about attendance for some participants was to confirm that

they were taking an appropriate course of action by attending the emergency department. One variable originally identified as a modifying factor by the researcher was in fact identified by 19% of participants as a primary motivational factor. The researcher therefore suggests that referrals by GPs (or others) are included with the primary motivational factors in the conceptual model.

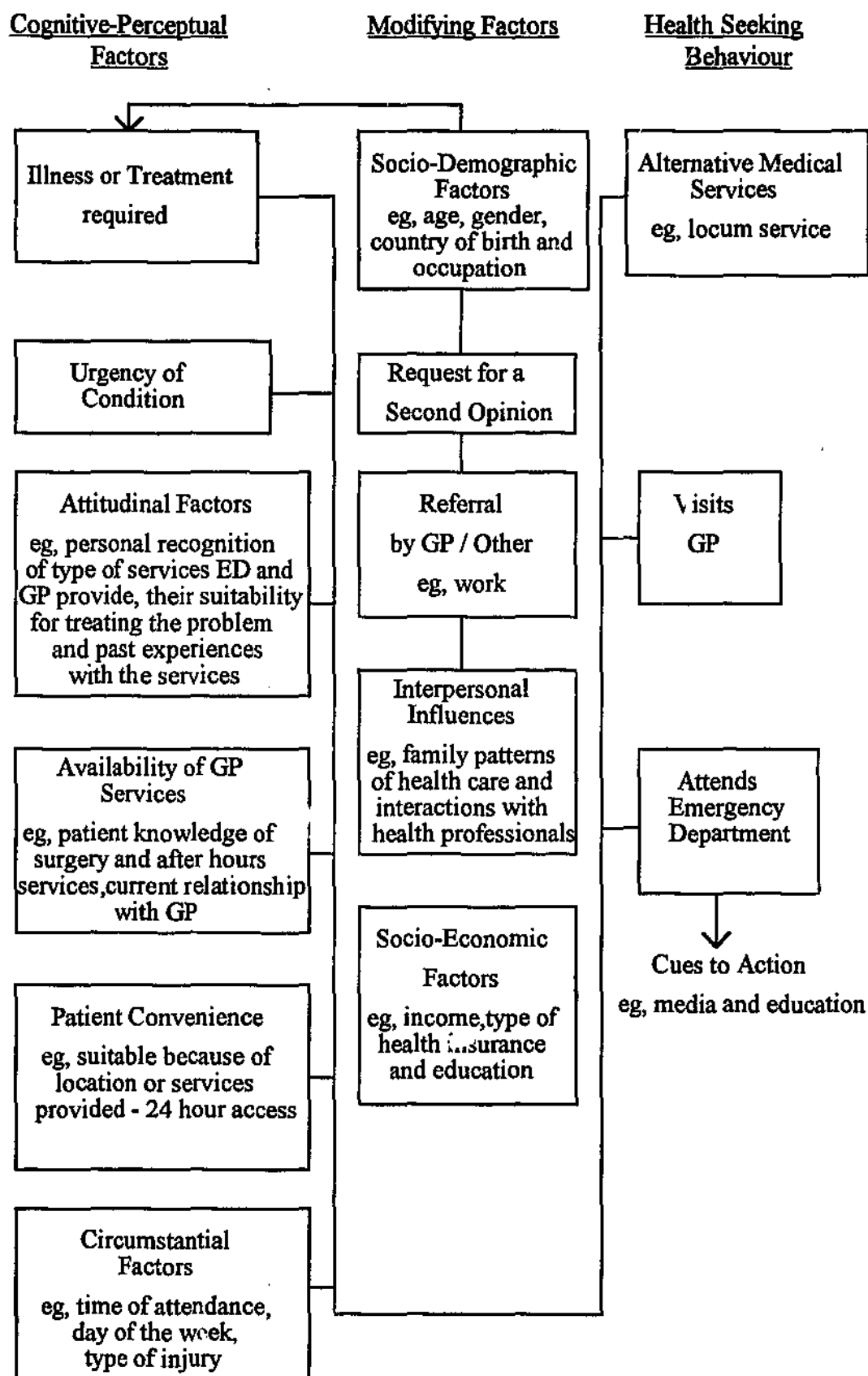


Figure 1. Adapted from Pender's Health Promotion Model (p. 58). The model illustrates factors that influence patients to attend emergency departments to meet their health care needs.

CHAPTER FOUR

METHODOLOGY

4.1 Research Design

This study used a descriptive design with a quantitative approach. Burns and Grove (1987) state that descriptive studies "provide a picture of situations as they naturally happen" (p. 243). This study identifies and describes attendance patterns and the relationships between the variables described as cognitive-perceptual and modifying factors.

4.2 Study Setting

The setting for this study was an emergency department in a Perth teaching hospital.

4.3 Selection of Survey Sample

Convenience sampling was used to obtain the required sample. A convenience sample is an example of non probability sampling where the collection of data is performed "as the units arrive on the scene" (Leedy, 1989, p. 152). All ambulant adult patients who presented to the emergency department and were triaged were asked to participate in the study. The number of participants required for the survey sample was 100 and data collection continued until the required number was reached. In order to obtain a heterogenous sample, data was collected on a variety of days and at different times. The following cases were excluded from the survey sample:

1. Ambulance and urgent walking cases - because their injury or condition may require immediate medical attention
2. Those below 16 years of age - because they were minors
3. Non-English speaking patients without an interpreter - because they may not

fully understand the reasons for the study or the study questions.

4.4 Instrument

A structured questionnaire comprised of four sections (see Appendix A) was used to obtain the data. The questionnaire contained both closed-ended and open-ended questions. The inclusion of the open-ended questions was to give participants the opportunity to elaborate on any issues that they considered important to them.

The questionnaire was designed by Trinker et al. (1975) and had been used in a similar study conducted in Melbourne. The questionnaire was piloted and tested for reliability and validity by Trinker et al. before being used in their study. Reliability and validity were achieved by the researchers spending time discussing the utility of the questions with patients and staff in an emergency department before developing the questionnaire. Permission was obtained from the authors to use the instrument in this study.

Because Trinker et al's questionnaire was very comprehensive and considered to be too broad for this study, it was modified by omitting some questions considered irrelevant by Trinker et al. Therefore content validity was established by inviting registered nurses working in a variety of areas including education, administration, and clinical practice to assess and verify the questions.

The questionnaire was divided into four sections. Section one contained questions that asked participants about their recent use of outpatient facilities and their knowledge about GP availability and services. Section two asked participants about their attendance at the emergency department. Section three contained demographic variables that might influence attendance at an emergency department. These were age, gender, employment, and income status. Section four focused on the participant's diagnosis and the outcome of their attendance.

Using the same selection criteria as utilised in this study, the questionnaire was pilot tested on 10 participants to identify any potential problems with the instrument.

Consequently, a few minor modifications were made to the format of the questionnaire. The data collected from the pilot study was therefore not included in the data analysis. The researcher noted the time required to complete the questionnaire and whether these participants experienced problems understanding or interpreting the questionnaire.

4.5 Data Collection

The data was collected over a one week period and the collection times were divided into two twelve hour periods, 8 a.m. until 8 p.m. and 8 p.m. until 8 a.m. Of the 100 participants who made up the survey sample, 50 participants were interviewed on weekdays between 8 a.m. and 8 p.m., and 50 participants were interviewed at the weekend between 8 p.m. and 8 a.m.

After registering and being seen by the triage nurse, patients were approached by the researcher who explained the purpose of the study and requested their participation. The researcher emphasised that participation was completely voluntary and assured confidentiality. An interview was then conducted by the researcher with those patients who agreed to participate in the study. The questionnaire was administered and completed by the researcher during the interview. The length of the interview varied with each participant but the majority were completed within fifteen minutes. Each interview was conducted in a private area of the emergency department.

Following the interview, it was necessary to access the treatment cards of some participants to confirm their medical diagnoses. Participants' consent to access their medical notes was obtained before starting the interview and any documentation from previous visits to the department were considered irrelevant to the study and therefore not read by the researcher.

4.6 Assumptions

This study was based on the assumptions that patients responded truthfully to the research questionnaire, and to the best of their ability.

4.7 Limitations

This study was conducted in an acute setting which fluctuated from being extremely busy to very quiet. This constant fluctuation created problems with collection of the data. As only the researcher was collecting data, it was impossible to interview all potential participants, especially when more than one participant was available for interview at the same time. The researcher therefore decided to ask the patient who arrived first to participate in the study. When that interview had been completed, other potential participants who had since arrived were asked if they would be prepared to participate in the study while they were waiting to be seen by a medical officer. This method proved to be quite feasible during the busy periods as participants had to wait for a consultation with the medical officer and were available for interview during this time. During the quieter periods, potential participants were often seen immediately by a medical officer so the researcher did not have the opportunity to conduct an interview. Therefore during these quieter times, patients were asked to participate in the study whenever the opportunity arose, however, some potential participants were missed from the study.

Another limitation of this data collection method was that participants could be called for a consultation with a medical officer or a health professional while the researcher was conducting the interview. When this occurred participants were given the option of continuing the interview after the consultation or withdrawing from the study. Most participants chose to continue with the interview.

Finally, as time constraints and resources limited this study to only examining the attendance pattern at one emergency department, the significance of the study is limited, as the study's findings cannot be generalised and are only applicable to the

population in the study hospital's geographical catchment area and to one week of the year.

4.8 Ethical Considerations

The proposal for this study was submitted to the Nursing Research Committee at Edith Cowan University, and the selected hospital's Nursing Research and Medical Ethics Committees for their approval regarding the study's ethical implications (see Appendices B & C). The study commenced when approval was granted. The researcher informed all potential participants about the study after they had been seen by the triage nurse. This information included an explanation about the study (see Appendices D & E), its purpose, and the procedures to be used. The researcher emphasised that participation was voluntary, participants had the right to refuse or withdraw from the study at any time, and confidentiality of all information would be maintained (Burns & Grove, 1987). During the data collection, a coding system was used on the questionnaires instead of names, which ensured complete confidentiality and anonymity. Participants were informed that the information obtained by the questionnaire would only be used for statistical purposes and that the completed questionnaires would be locked in a filing cabinet for five years with the researcher having the only key. The questionnaires would then be destroyed.

CHAPTER FIVE

RESULTS

The data has been analysed using the program Statistical Package for the Social Sciences (SPSS, for Windows, Release 5.0). The two open-ended questions were analysed by undertaking a content analysis of themes. The results are presented in four sections, each section relating to a research question.

5.1 Patterns of Attendance

The first research question asked:

"What are the attendance patterns of patients at one Perth teaching hospital's emergency department"?

Collection of the data was undertaken over a one week period in January 1994. During that time, 858 patients attended the emergency department at the study hospital. Of these attenders, 100 comprised the survey sample, representing 11.6% of the total number of attenders.

5.1.1 Day and Time of Attendance

The following results examine the data of the total number of attenders (858) seen at the study hospital's emergency department. As shown in Table 1, Saturday and Sunday had the highest number of patients attending the emergency department, these being 133 and 132 respectively. The least number of patients attended on Tuesday.

Table 1

Attendance Pattern by Day of the Week

Day of the week	Total number of attenders	
Monday	118	(13.8%)
Tuesday	101	(11.8%)
Wednesday	127	(14.8%)
Thursday	129	(15.0%)
Friday	118	(13.8%)
Saturday	133	(15.5%)
Sunday	132	(15.3%)
Total	858	(100.0%)

Table 2 illustrates attendance pattern by day of the week and time. Sixty percent of patients attended the emergency department between the hours of 8 a.m. and 8 p.m. The remaining 40% attended from 8 p.m. to 8 a.m.

Table 2

Attendance Pattern by Day of the Week and Time

Day of the week	Number of attenders between 8 a.m.- 8 p.m.		Number of attenders between 8 p.m.- 8 a.m.	
Monday	73	(14.2%)	45	(13.1%)
Tuesday	64	(12.4%)	37	(10.8%)
Wednesday	65	(12.7%)	62	(18.0%)
Thursday	84	(16.3%)	45	(13.1%)
Friday	64	(12.4%)	54	(15.8%)
Saturday	81	(15.7%)	52	(15.2%)
Sunday	84	(16.3%)	48	(14.0%)
Total	515	(100.0%)	343	(100.0%)

Figure 2 shows that during the week the highest number of attenders presented between the hours of 8 p.m. and midnight. An exception to this pattern was on Thursday when the highest number of patients attended between the hours of 4 p.m. and 8 p.m. Similarly, on Saturday and Sunday most patients attended the emergency department between the hours of 4 p.m. and 8 p.m.

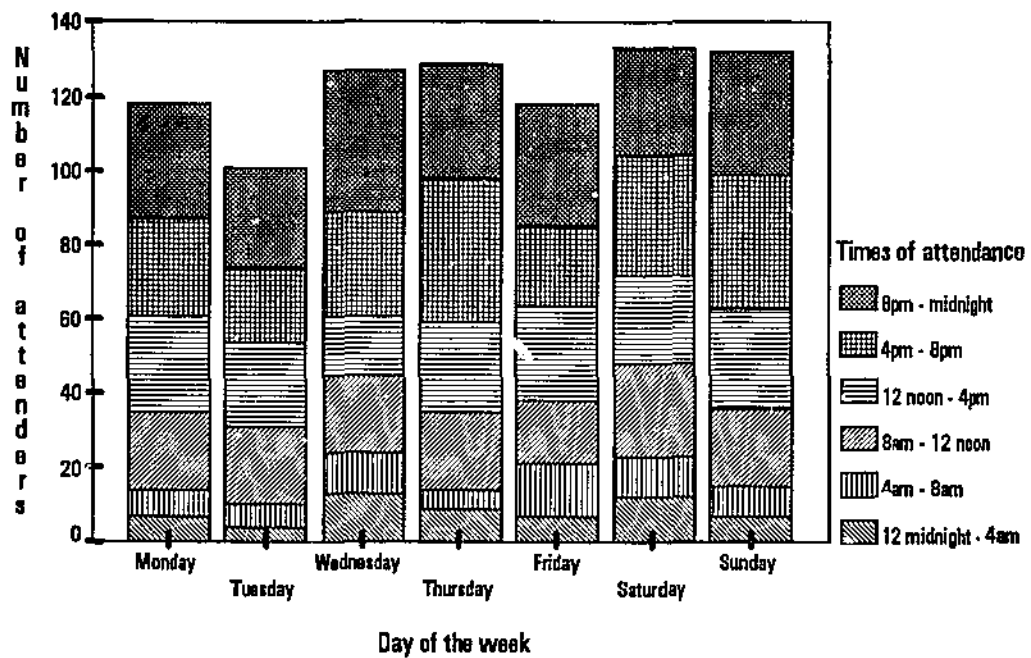


Figure 2. Attendance pattern by day of the week in four hourly time frames.

5.1.2 Characteristics of the Total Number of Attenders

The age of attenders ranged from two months to 94 years, with the mean average age being 37 years. Forty-four percent of attenders were aged under 29 years, 34.2% were aged between 30-59, and 21.8% were over the age of 60 years. Figure 3 shows the total number of attenders by age.

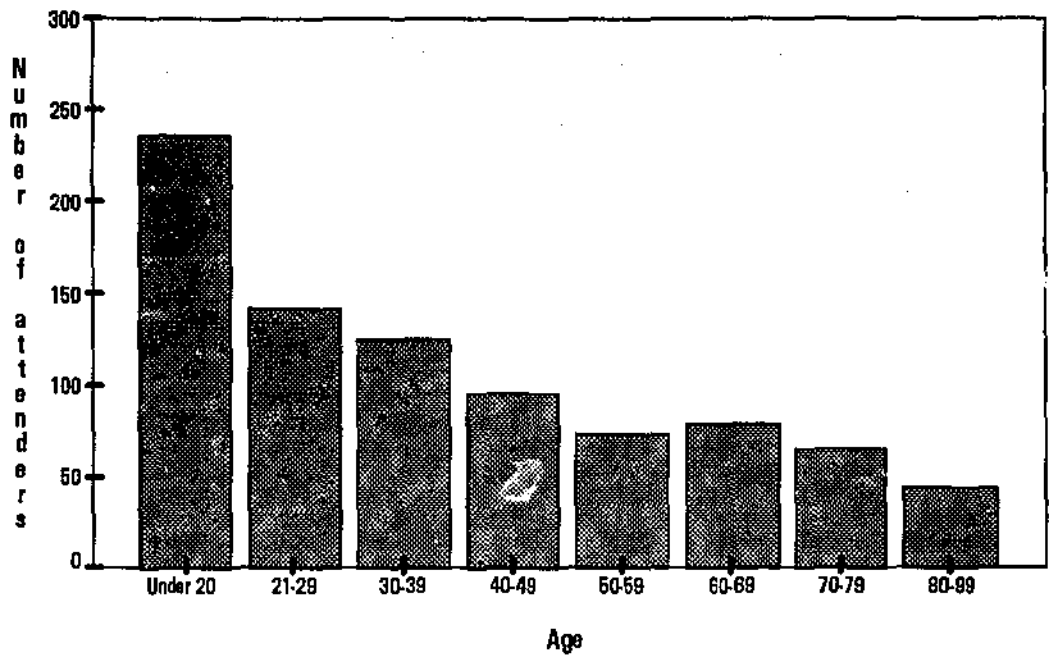


Figure 3. Total number of attenders by age.

Figure 4 shows the total number of attenders by gender and age. Fifty-six percent of attenders were males and 44% were females. There was a higher percentage of male attenders in all age groups, except for the over 80s group where females outnumbered males by 2:1.

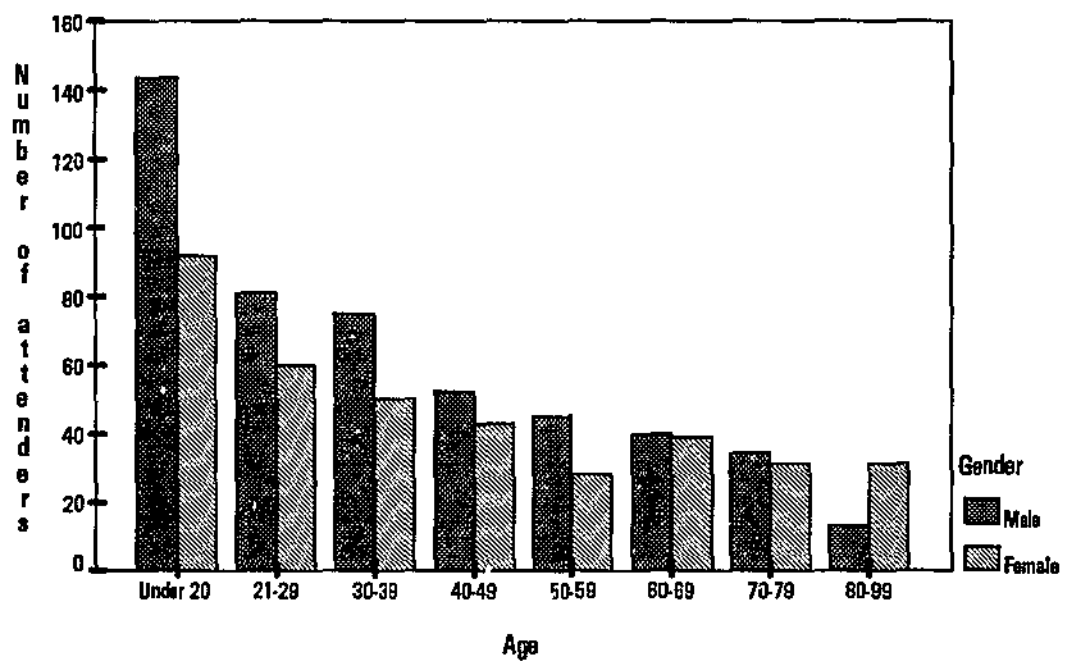


Figure 4. Total number of attenders by gender and age.

The complaints of people who presented at the study hospital's emergency department were categorised by the researcher into surgical/trauma, medical, social, and psychiatric groupings. Figure 5 illustrates that 62% of complaints were linked to the surgical/trauma categories.

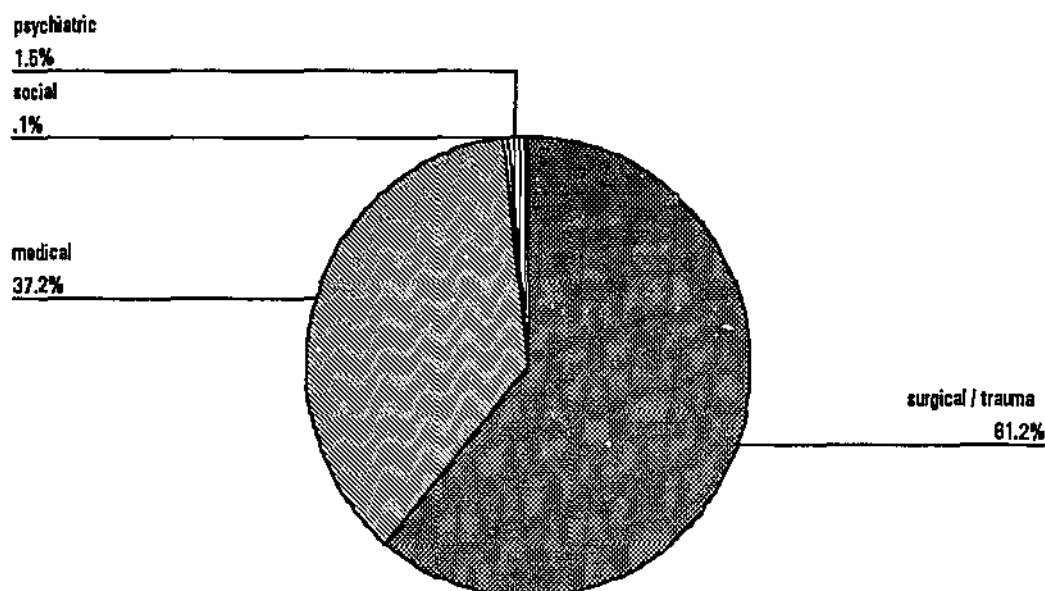


Figure 5. Complaint categories of the total number of attenders.

Fifty-two percent of attenders lived inside the study hospital catchment area. It must be noted all Perth teaching hospitals have officially designated catchment areas that have been defined by the Health Department of Western Australia (J. B. Clark, personal communication, March 7th, 1994).

5.1.3 Characteristics of the Survey Sample

The following section presents the results obtained from the data of the survey sample. The survey sample consisted of 100 participants conveniently sampled using predetermined criteria, from the total number of attenders at the study hospital's emergency department.

The age of the participants ranged from 16 years to 83 years of age, the average age being 35 years. Forty-five percent of the sample were aged under 29 years, 48% were aged between 30-59 years, and 7% were aged over 60 years. Table 3 compares the ages of the participants by the ages of the total number of attenders, and shows similarities in the under 29 years age groups.

Table 3

Ages of Participants by Ages of the Total Number of Attenders

Age groups	Participants' age	Age of total number of attenders
Under 20	24%	27.5%
21-29	21%	16.4%
30-39	21%	14.6%
40-49	12%	11.1%
50-59	15%	8.5%
60-69	3%	9.2%
70-79	3%	7.6%
80+	1%	5.1%
Total	100%	100.0%

In addition, 56% of the survey sample were males and 44% were females. Fifty-two percent of the sample lived inside the study hospital's official catchment area.

Table 4 illustrates the number of participants in each complaint category. The participants were categorised by the researcher into the same four groups as the total number of attenders.

Table 4

Complaint Categories by the Number of Participants

Complaint category	Number of participants
Surgical/Trauma	66
Medical	32
Psychiatric	2
Social	0

The figures obtained in the complaint categories for the total number of attenders are similar to those obtained from the study sample.

Figure 6 shows trauma categories of the participants seen at the emergency department.

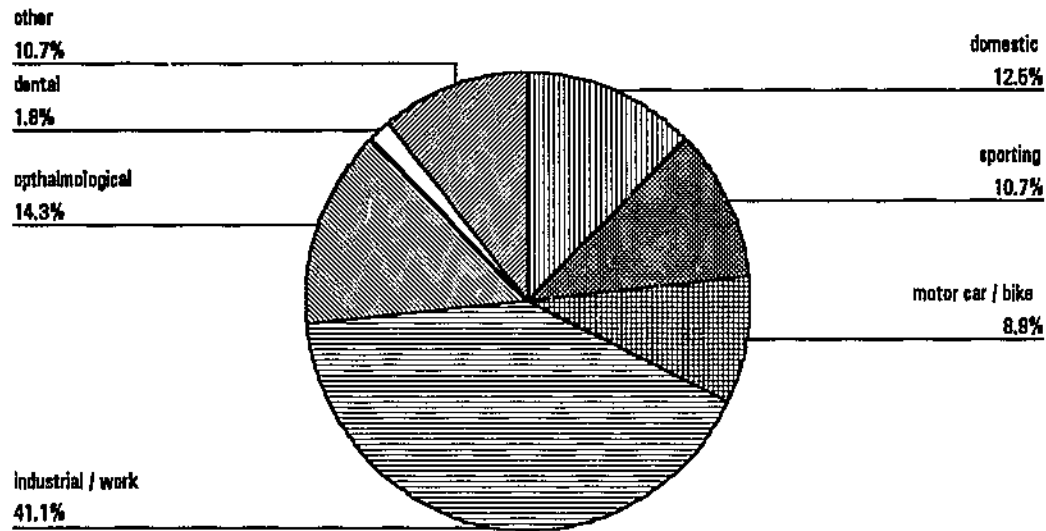


Figure 6. Trauma categories of the participants

Sixty-seven percent of the participants were Australian born, 15% were born in the United Kingdom, and the remaining 18% were born in Asia, Europe, Africa, and the United States of America. Also, 56% of the participants were employed, and 14% were unemployed. Table 5 shows the participants' employment status.

Table 5

Employment Status of the Participants

Employment status	Percentage of participants
Employed	56%
Unemployed	14%
Pensioners /sickness benefits	13%
Students	9%
Home duties	8%

Table 6 illustrates the gross weekly income of the participants. Fifty-one percent of participants received a gross weekly income between \$58 and \$308. Eighteen percent of participants were unsure about their weekly income or declined to answer the question.

Table 6

Participants' Gross Weekly Income

Level of income	Number of participants
Less than \$58	4
\$58 - \$96	6
\$97 - \$154	10
\$155 - \$230	21
\$231 - \$308	10
\$309 - \$385	8
\$386 - \$481	7
\$482 - \$577	4
\$578 - \$673	3
\$674 - \$769	4
\$770 - \$961	0
\$962 - \$1,154	5
Not known	18
Total	100

5.1.4 Use of Services by the Survey Sample

Forty-three percent of participants were attending the hospital's emergency department for the first time. Of the remaining 57% who had attended on a previous occasion, 50% were under 29 years of age. The significance of this will be discussed in the following chapter.

Table 7 compares the number of times participants had used GP services and emergency department facilities over the previous 12 months. The table shows that participants used the services offered by GPs more than emergency department services.

Table 7

Comparison Between Use of GP and Emergency Department Services Over the Previous Twelve Months

Type of service	Number of visits by participants					
	None	Once	Twice	3 -5 times	6 - 10 times	Over ten times
General Practitioners	12	12	13	27	14	22
Hospital emergency department	64	21	8	3	1	3
Other hospital emergency departments	84	12	3	1	0	0

5.1.5 Outcome of Attendance at the Emergency Department

Eighty-eight percent of the participants were discharged following consultation with a medical officer. Of the remainder, 8% were admitted to the hospital for further treatment, 2% requested a transfer to a private hospital, and 2% left the department before being seen by a medical officer.

Fifty-one percent of participants required further investigations and received treatment. Twenty-five percent required treatment only, 12% required only investigations, and the remaining 12% did not require investigations or treatment.

The medical officer examining each patient made a decision about follow-up arrangements. Forty percent were advised to return for review to the emergency department or outpatient clinic, 31% were referred to their GP, 1% were referred to a dentist, and 18% were discharged with no follow-up arrangements.

The second research question asked:

"What are the factors which influence patients to attend emergency departments"?

The availability of other medical services, for example, GP services, is documented in the literature as influencing attendance patterns at emergency departments.

5.2.1 General Practitioner Services

Eighty-two percent of participants were registered with and used the services offered by a particular GP. The remaining 18% were not registered with a particular GP. Of the participants registered with a GP, 50% could see their GP without an appointment, 38% had to make an appointment to see their GP, and 12% were unsure if they could see their GP without an appointment. Four out of the nine participants who were unsure about their GPs appointment system were over 50 years of age, the relevance of which will be discussed in the following chapter. Of those participants whose GP used an appointment system, 16 could get an appointment the same day, 12 within one day, and 2 participants had to wait over two days to get an appointment.

Participants who were registered with GP's were asked about the usual waiting times at their GP 's surgery. Eighty-one percent of participants waited less than half an hour to be seen, 16% waited between half an hour to an hour, and 3% waited over an hour.

5.2.2 Availability of GP After Surgery Hours

Table 8 shows participants' responses about the availability of their GP after surgery hours. Thirty one percent of the participants did not know about the availability of their GP after surgery hours.

Table 8

Participants' Responses About the Availability of their GP After Surgery Hours

Weeknights after 7pm	
Participants' response	Number of responses
Yes	20
No	29
Do not know	31
If on call	2
Weekend nights after 7pm	
Participants' response	Number of responses
Yes	15
No	34
Do not know	33
Weekends during the day	
Participants' response	Number of responses
Yes	44
No	9
Do not know	16
Saturday morning	13

Table 9 compares responses to GP availability given by participants attending the emergency department for the first time to those who had attended on previous occasions. Results show that the participants who had attended the emergency department on previous occasions were more aware of GP availability than those who were attending for the first time.

Table 9

Comparison of Responses About GP Availability by First Time EmergencyDepartment Attenders and Re-attenders

Participants' response about GP's availability weeknights after 7pm	Number of visits to the emergency department	
	First visit to emergency department	More than one visit to emergency department
Yes	6	14
No	13	16
Do not know	15	16
If on call	0	2

Number of visits to the emergency department		
Participants' response about GP's availability weekend nights after 7pm	First visit to emergency department	More than one visit to emergency department
Yes	5	10
No	15	19
Do not know	14	19

Number of visits to the emergency department		
Participants' response about GP's availability weekends during the day	First visit to emergency department	More than one visit to emergency department
Yes	14	30
No	6	3
Do not know	8	8
Saturday morning	6	7

Table 10 compares participants' knowledge of GP availability by age. The table demonstrates that participants in the under 29 years age groups did not know if their GP was available after surgery hours.

Table 10

Participants' Knowledge of GP Availability by Age

Age	Weeknights after 7pm			
	Participants' response about GP availability			
	Yes	No	Do not know	If on call
Under 21	5	4	8	0
21-29	3	9	4	0
30-39	5	4	6	1
40-49	3	3	6	0
50-59	3	5	5	1
60-69	0	3	0	0
70-79	0	1	2	0
80+	1	0	0	0

Weekend nights after 7pm

Age	Participants' response about GP availability		
	Yes	No	Do not know
Under 21	3	6	8
21-29	1	7	8
30-39	3	8	5
40-49	4	3	5
50-59	3	7	4
60-69	0	2	1
70-79	0	1	2
80+	1	0	0

5.2.3 Locum Services

One third of participants did not know how to contact a locum doctor if their GP was unavailable.

5.2.4 GP Availability on Day of Attendance at the Emergency Department

Forty-five percent (37) of participants stated their GP had been available to be seen on the day that they had attended the emergency department. However, only 24% (9) of these participants had seen their GP before attending the emergency department. Table 11 shows the reasons why the remaining participants did not see their GP. Six respondents stated that they were unable to see their GP because the surgery was closed. These responses were incongruent with the question which clearly asked the participant why they did not see their GP even though the GP was available.

Table 11

Responses to Why Participants Did Not See Their GP Even Though Their GP Was Available

Participants' responses	Number of responses
GP's surgery was closed	6
Previously advised by GP to attend emergency department	4
Told by ED to return to emergency department for review	3
Quicker to come to emergency department and be seen	3
Prefers hospitals	2
Did not think about contacting GP	1
Hospital employee	1
Did not think that GP's have the facilities for suturing	1
Feeling too unwell to visit GP's surgery	1
Cheaper to be seen at the emergency department	1
Requires specialised equipment to examine injury	1
Did not think injury warranted a visit to a doctor at that time	1
Unable to contact GP	1
Requires specialised tests	1
Referred by diabetic clinic	1
Total	28

Forty-two percent (34) of the participants stated their GP had been unavailable to be seen on the day that they attended the emergency department. Table 12 shows the reasons why participants could not see their GP. The main reason given

by participants for their GP being unavailable was because the surgery was closed. Other reasons included the participants themselves being on holiday and also being unable to contact their GP.

Table 12

Reasons Why Participants Could Not See Their GP Because of Unavailability

Reason why GP was unavailable	Number of participants
After surgery hours	16
Other	11
GP was on holiday	4
GP was too busy	3

Thirteen percent (11) of participants did not know if their GP had been available to be seen on the day that they attended the emergency department.

5.2.5 Participants Not Registered With a Particular GP

Table 13 compares the age of the participants with GP registration. Eighteen percent of participants were not registered with nor used the services of a particular GP. Twelve of the eighteen participants without GPs were under 29 years of age. The significance of this finding is discussed in the following chapter.

Table 13

Comparison of Age and Use of a Particular GP

Participants' age	Registered with GP	
	Yes	No
Under 20	17	7
21-29	16	5
30-39	16	5
40-49	12	0
50-59	14	1
60-69	3	0
70-79	3	0
80+	1	0

Five participants who did not regularly consult with a particular GP had seen a local GP, and the remaining 13 participants were asked why they had attended the emergency department rather than seeing a local GP. Table 14 shows that participants offered a variety of reasons for not seeing a local GP.

Table 14

Reasons Given by Participants With No Particular GP for Attending the Emergency Department Rather Than Seeing a Local GP

Participants' response	Number of responses
Prefers to see specialists	1
Brought in by friends	1
Local GP closed	1
Injury was an emergency	1
Shorter waiting time in emergency department	1
Unable to wait until GP opened in the morning	1
Hospital is closer to home and more convenient	1
Have not got a GP	1
Needed specialised treatment	1
Advised by employer to come to the emergency department	1
Has been treated at the hospital before	1
GP's do not have facilities for suturing	1
Injury needs stitches	1
Total	13

The following section discusses factors other than GP services that have been identified in the literature as influencing attendance patterns at emergency departments.

5.2.6 Type of Complaint

Prior to medical consultation, the participants were asked to categorise their condition into one of the following groups: injury, illness, or other. Following the consultation, the researcher categorised participants' final medical diagnosis into the same three categories. The results showed that 55 participants identified their complaint as an injury, 44 participants identified their complaint as an illness, and one participant identified his complaint as a dental case. These figures corresponded exactly with the participants' final diagnoses that were identified by the medical officers.

5.2.7 Advised to Attend the Emergency Department

Table 15 shows the sources of advice to attend the emergency department by gender. Sixty-three percent of participants had been advised to attend the emergency department, 34 were males and 29 were females. The remaining 37% self-referred, and this group was comprised of 22 males and 15 females. The relevance of these findings will be discussed in the next chapter.

Table 15

Sources of Advice to Attend the Emergency Department by Gender

Participant advised by	Male	Female
Own GP	10	7
Health centre	4	5
Employer	4	2
Relatives	4	5
Friends	5	4
Other hospitals	5	5
Pharmacist/Physiotherapist	1	1
Police	1	0

5.2.8 Length of Time Since Onset of Injury or Illness

The majority of participants (69%) attended the emergency department within 24 hours of sustaining their injury or the onset of their illness. Forty percent attended within two hours, 29% within one day, 15% within a week, and 3% within a month. The remaining 13% had sustained their initial injury over two months ago. Table 16 shows that the majority of participants under 29 years of age attended the emergency department within 24 hours. The relevance of this finding will be discussed in the following chapter.

Table 16

Length of Time Since Onset of Injury or Illness by Age

Age of participant	Up to 2 hours	1 day	1 week	1 month	2-6 months	Over 6 months
Under 20	13	8	2	0	1	0
21-29	7	8	4	0	1	1
30-39	11	3	4	1	2	0
40-49	3	2	3	1	2	1
50-59	5	5	1	1	1	2
60-69	0	2	1	0	0	0
70-79	1	1	0	0	1	0
80+	0	0	0	0	0	1

5.2.9 Place of Injury

Fifty-three percent of participants' injuries occurred at home. Twenty-two percent of injuries were work related and the remaining 25% had occurred elsewhere than work or home.

5.2.10 First Time Attenders

For 54% of participants attending the emergency department, this was the first time they had seen a doctor about their particular problem. The remaining 46% had previously seen a doctor about the same problem. Of those participants who had seen a doctor before, 56% had been to their GP, 24% had been to the study hospital's emergency department, and 20% had seen a doctor at work or a health centre. Eighty

percent of these consultations had taken place within the week prior to the data collection.

5.2.11 Weekly Income

Table 17 illustrates that 56% of participants attending the emergency department for the first time received a weekly income of less than \$385 compared with 27% who received a weekly income of \$386 or above. Of the participants who had attended the emergency department on a previous occasion, sixty-one percent received a weekly income of less than \$385 and 19% received a weekly income of \$386 or above. These results suggest that low income earners use emergency departments on a regular basis.

Table 17

Gross Weekly Income of First Time Attenders and Re-Attenders to the Emergency Department

Weekly income of participants	First attendance at emergency department	Previous attendance at emergency department
Less than \$58	2	2
\$58 - \$96	2	4
\$97 - \$154	4	6
\$155 - \$230	9	12
\$231 - \$308	4	6
\$309 - \$385	3	5
\$386 - \$481	4	3
\$482 - \$577	1	3
\$578 - \$673	1	2
\$674 - \$769	3	1
\$770 - \$961	0	0
\$962 - \$1,154	3	2
Not known	7	11
Total	43	57

Sixty-six percent of participants who were seen at the study hospital's emergency department in the previous 12 months were in the lower income category compared with 16.6% in the higher income category. Similarly, 75% of participants

seen in another emergency department within the last 12 months were in the lower income category compared with 12.5% in the higher income category. Table 18 illustrates that those participants who were not registered or using the services offered by a particular GP, were from the lower income groups.

Table 18

Participants' Gross Weekly Income and Registration With a GP

Participants' gross weekly income	Registered with a GP	Not registered with a GP
Less than \$58	4	0
\$58 - \$96	4	2
\$97 - \$154	9	1
\$155 - \$230	18	3
\$231 - \$308	8	2
\$309 - \$385	4	4
\$386 - \$481	6	1
\$482 - \$577	3	1
\$578 - \$673	3	0
\$674 - \$769	2	2
\$770 - \$961	0	0
\$962 - \$1,154	5	0
Not known	5	0
Total	82	18

5.2.12 Private Health Insurance

Thirty-two percent of participants were members of a private health insurance fund. Twenty-nine percent had full hospital cover and 3% ancillary benefits. Twenty-two percent of participants with a weekly income of less than \$385 had private health cover compared to 47% of those with a weekly income of over \$386. Thirty-four percent of participants who had a particular GP had private health cover and 22% of participants who had private health cover were not registered with a GP.

5.2.13 Participants' Perceptions of Possible Treatment

Table 19 illustrates participants' perceptions about the type of treatment they might require.

Table 19

Participants' Perceptions About the Type of Treatment They Might Require.

Participants' responses	Number of responses
Suture laceration	15
X-ray	14
Prescribe medications	14
Do not know	12
Arrange an operation	11
Investigate the problem	10
Investigate the cause of the pain	5
"Get rid of the pain"	4
Review injury	4
Remove foreign body	2
Pathological tests	2
"Make me better"	1
"Check blood pressure"	1
Cauterise bleeding	1
Relocate shoulder	1
"Nothing"	1
Refer to physiotherapist	1
"Observe overnight"	1
Total	100

The third research question asked:

5.3.1 "Why do Patients Use Emergency Departments in Preference to Alternative Medical Services"?

Participants were asked , " Why did you come to this emergency department about your problem rather than seek assistance from any other service"? A content analysis was carried out on participants' responses and the common themes identified by the researcher are shown in Table 20. These themes are discussed in the following chapter.

Table 20

Reasons Why Participants Attended the Emergency Department

Participants' responses	Number of responses
<u>Convenience</u>	
Close to work or home	14
Department not as busy as other emergency departments	2
Nearest hospital	4
On the way home	2
Came in with friends	1
Open 24 hours a day	1
Cheaper than seeing a GP	2
Less waiting time than at a GP's surgery	4
Total	30
<u>Advised to attend emergency department</u>	
By GP	4
By family or friends	3
By pharmacist	2
By physiotherapist	1
By ED medical Officer	3
By employer	4
Total	17

(table continued)

Participants' responses	Number of responses
<u>Treatment</u>	
Requires sutures / x-ray	4
Total	4
<u>Referrals</u>	
Referred by GP	16
Referred by another hospital	2
Referred by diabetic clinic	1
Total	19
<u>General Practitioner services</u>	
Surgery is closed	5
GP does not suture or have equipment needed for examination	4
Unsure about after hours facilities at GP's surgery	3
Dissatisfied with GP service	2
Total	14
<u>Past experience</u>	
Unpleasant experience with GP	3
Hospital staff are aware of medical history	2
Waiting for bed at hospital in connection with problem	2
Total	7
<u>Prefers hospitals</u>	
Always comes to this hospital	1
Higher standard of care at hospital / Best hospital	4
Total	5
<u>Other services</u>	
Locum's are too expensive and take too long	2
Could not find 24 hour clinic	1
Does not like local hospital	1
Total	4

The fourth research question asked:

5.4.1 "Are Patients Aware of any Alternative Medical Services Where They Can Receive Medical Care"?

Forty-nine percent of participants stated that they did not know of any alternative medical service where they could have obtained medical care for their complaint. Twenty-two percent were aware of the services offered by GP's, and seventeen suggested other emergency departments as an alternative medical service. Eight percent of participants suggested that two alternative medical services were available to them when they were seeking medical help. Table 21 shows participants' responses about alternative medical services.

Table 21

Participants' Responses About Alternative Medical Services Availability

Participants' responses	Number of responses
Do not know of any other services	49
General Practitioner	22
Other emergency departments	17
GP and other emergency departments	6
Hospital and locum	2
Company nurse	1
Locum	1
Injury not appropriate for any other service	1
Too expensive to travel anywhere else	1
Total	100

5.5.1 Summary

The results of this study showed that more people attended the emergency department during the weekend. The study also found that majority of attenders were under 29 years of age, male, and low income earners. Analysis showed that 52% of attenders lived outside the official catchment area. The study examined socio-demographic characteristics of the total number of attenders and the survey sample and the results obtained were similar. This indicates that the survey sample was a representative sample of the total number of attenders seen at the study hospital's emergency department.

Sixty-six percent of participants' complaints were categorised by the researcher as surgical/trauma injuries, and 75% of participant's injuries occurred at home or at work. Most of the injuries seen at the study hospital's emergency department were minor injuries, and in 88% of cases did not not require hospital admission.

Thirty percent of participants stated they had attended the emergency department for convenience-related reasons. For some this meant the department's proximity to place of residence, work setting, or the occurrence of the injury. To others it meant a shorter waiting time, 24 hour availability, or a free service.

Forty-nine percent of participants stated they were unaware of alternative medical services which provided medical assistance for their complaint.

CHAPTER SIX

DISCUSSION

The purpose of this study was to examine the attendance pattern of patients at an emergency department and identify factors that influence patients to attend emergency departments for their health care needs, in preference to seeking alternative medical services. The single setting of the study restricts the generalizability of the findings. However, the findings do provide current information on one emergency department's attendance pattern.

6.1 Patterns of Attendance

This study found that attendance patterns vary according to the time of day and day of the week. This is congruent with findings from previous studies (Dixon & Morris, 1971; Williams & Pottle, 1989). The study found that the highest number of patients attended the emergency department on Saturday and Sunday, with 133 and 132 attenders respectively. These figures can be compared with the week day average of 118. Other researchers have reported similar findings (Coleridge et al., 1993; Williams & Pottle, 1989). The study found that the increase in attendance patterns at the weekends is related to the limited availability of GP services at that time. The increase in the number of attendances at weekends greatly increases the department's workload. Therefore, these findings may be useful in predicting, assessing, and planning of staffing levels.

The highest number of attenders during the week days were between the hours of 8 p.m. and midnight, except for Thursday when an increased number of patients attended between the hours of 4 p.m. and 8 p.m. One reason for this change in attendance pattern may be because of a social event attracting an increased number of people to the geographical area. Similarly, an increased number of patients attended the department during the hours of 4 p.m. and 8 p.m. on Saturday and Sunday. This

may be because more people participate in sporting activities at the weekend and seek medical assistance for sports related injuries. These findings are inconsistent with findings from other studies which reported that mornings are the busiest period (Coleridge et al., 1993; Trinker et al., 1975). These researchers suggested this is perhaps as a result of people waiting overnight before attending the emergency department. The difference in this study's findings and findings from other studies about the busiest periods may indicate that patients wait until such a time when it is convenient for them to attend the emergency department.

Sixty percent of patients attended the emergency department between 8 a.m. and 8 p.m. all days of the week. This is congruent with the findings from other similar studies that most patients attend during daylight hours (Coleridge et al., 1993; Trinker et al., 1975). These attendance figures only apply to the month of January so it is possible that seasonal variation may alter attendance patterns, although, similar studies examining monthly attendance patterns have found little or no seasonal variation (Coleridge et al., 1993).

6.1.1 Characteristics of Attenders

The tendency for attendance by people under 29 years of age in both the total number of attenders (44%) and the sample (45%) appears to be typical of an emergency department population. These findings support the findings of Trinker et al. (1975) and Walsh (1990a), and suggest that higher attendance figures for the younger population indicate that older people have had more experience with the health system and have a better understanding about alternative medical services, and therefore seek medical care from their GP. However, attendance figures are not necessarily an accurate reflection of an emergency department's workload because older people often present with illnesses that are more severe, or have multiple problems which can require more time to assess and manage.

There was a tendency for males to outnumber females in most age groups in both the overall attendance figures (56%) and the sample (56%). The study indicates a reason for this may be that a high proportion of ambulatory patients present with injury related problems, and that males are more susceptible to injury through manual labour or sport related activities as 62.5% of injuries were sustained by males. An exception to this pattern was in the over 80s age group where females outnumbered males by 2:1. This may be because there is a higher percentage of females in the population as females have a longer life expectancy than males.

This study reports a high attendance rate by people who live outside the official catchment area, which may suggest that the service offered by the emergency department is being misused. Forty-eight percent of the sample and the total number of attenders lived outside the catchment area. As the study hospital is the only teaching hospital in the area, it may attract referrals from outside the official catchment area because of its reputation or the specialities available. The attendance figures for people living outside the catchment area will also be influenced by other emergency department attenders such as tourists, visitors, or people who work in the vicinity of the study hospital but who live outside the catchment area. Fifty-nine percent of participants who lived outside the catchment area stated that they attended the emergency department because they had been referred by their GP or by another hospital. Other participants stated that they attended for convenience-related reasons and one participant stated that he attended because he did not like his local hospital.

The study showed that the majority of participants attended the emergency department for minor trauma not requiring hospital admission. This is consistent with findings in other Australian studies (Dunoon, 1978; Starr, 1973; Trinker et al., 1975). Sixty-one percent of the total number of attenders and 66% of the sample were classified into one surgical/trauma group because it became apparent that most of the surgical attendances resulted from trauma and in some cases it was difficult to differentiate between the trauma and surgical groups. Seventy-five percent of participants' surgical/trauma injuries resulted from accidents either at home or in the

workplace. Assault injuries accounted for less than 2%. Minor injuries were a substantial part of ambulatory participants' trauma injuries, the most common being lacerations and muscular/bony injuries.

Current statistical information about average weekly earnings from the Australian Bureau of Statistics (ABS) reports that the average gross weekly wage for full time employees in Western Australia is \$505.60 (ABS, 1993). This figure was used as a comparison to assess whether participants' incomes reflected those of the general population. The results showed that most participants had lower weekly incomes than the current average wage for full-time employees in Western Australia, with only 16% of participants having a higher or equivalent wage. Forty-one percent of participants had a weekly income between \$97 and \$308, and 10% received less than \$96 per week. A possible explanation for these low income figures, when compared with the average weekly wage, is that 44% of the sample were either students, pensioners, or participants receiving unemployment or sickness benefits.

The results show that low income earners use the service offered by the emergency department more than high income earners. There are several possible explanations for this finding. Firstly, low income earners may attend more often than high income earners because they cannot afford to see their GP. Secondly, low income earners may be more susceptible to illness or injury because of social circumstances than high income earners. Finally, low income earners are less educated and therefore less likely to be aware or able to find out about such services.

6.1.2 Use of Services by the Survey Sample

Forty-three percent of participants were attending the hospital's emergency department for the first time. Of the remaining 57% who had attended on a previous occasion, 50% were under 29 years of age. This suggests that the under 29 age groups are more likely to use the facilities offered by the emergency department than the older age groups. This may be because people in the younger age groups are more likely to be students, transient workers, or trendy mobile professionals, and have

not registered with a local GP. Whereas older age groups are geographically more stable, may have built a rapport with a particular GP, have more experience with the health care system, and a better understanding of the availability of alternative medical services. Alternatively, patients in the older age group were very sick and therefore excluded from the study.

Participants used the services offered by GPs more frequently than those services offered by emergency departments. Eighty-eight percent of those interviewed had consulted their GP at least once in the previous 12 months, and 63% had seen their GP more than three times. By comparison, the services offered by emergency departments were used less frequently; 84% of the participants had not attended any other emergency department, and only 12% of participants had attended another emergency department once during the previous 12 months. This finding is not unexpected as the majority of participants lived inside the hospital's catchment area and were therefore attending their local hospital. In regard to participants attending the study hospital's emergency department in the previous 12 months, 21% had attended the department once during this time and 15% on more than one occasion. These results suggest that participants differentiate between the type of service offered by GPs and emergency departments, and they use the services offered by GPs if they feel it is appropriate for treating their complaint.

6.1.3 Outcome of Attendance at the Emergency Department

Eighty-eight of the participants were discharged from the study hospital's emergency department. This high discharge rate suggests that the major part of the emergency department workload is treating minor injuries or illnesses which do not require hospital admission. Eighty-two percent of the participants who were discharged required investigations or treatment before being discharged. The medical officer examining each participant decided on the relevant follow-up arrangements, 31% were referred back to their GP for review, and 24% were advised to return to the emergency department. There were no specific guidelines for the medical officers

regarding follow-up arrangements. Therefore, medical officers working in the emergency department should be encouraged to refer patients back to their GPs for follow-up care whenever possible, as this will reduce the numbers of emergency department re-attenders.

6.2 Factors that Influence Patients to Attend Emergency Departments

The study examined the factors that influenced participants to choose the emergency department to meet their medical needs. The following section discusses the study's findings.

6.2.1 General Practitioner Services

Eighty-two percent of participants were registered and used the services of a particular GP. This study's findings showed that participants use the services offered by their GP if they feel it is appropriate for treating their complaint, as participants differentiated between the types of services provided by their GP and that of the emergency department. GPs were viewed in a diagnostic role and as being unable to carry out some treatments. Participants who stated they did not have a particular GP used the emergency department as their practitioner service. Two out of 18 participants without a particular GP used the services offered by a local medical centre on a regular basis.

The study also showed that participants were knowledgeable about the services provided by their GPs during regular hours. Eighty-eight percent of participants were aware of their particular GP's availability during surgery hours. The study did however find that of the 12% of participants who were unsure about their GP's availability during regular hours, half were over the age of fifty. This is a surprising finding because the study has already shown that participants over the age of 50 years are more inclined to consult a GP about their problem.

Ninety-three percent of participants stated they could get an appointment to see their GP the same day or within one day of ringing. Two participants said that they

had to wait longer than two days to get an appointment. It would seem that GP services are fairly accommodating to patients seeking an appointment. The absence of an appointment system did not appear to influence participants' perceptions that their GP would see them in an emergency.

In regard to waiting time in their GP's surgery, 81% of participants stated that they waited less than half an hour before they were seen. However, 4% of participants still anticipated a shorter waiting period at the emergency department, and stated that this had been their main reason for attending. The reason for this could be attributed to previous experiences of these participants with the length of time spent waiting at a GP's surgery.

6.2.2 Availability of GPs After Surgery Hours

The study found that 54% of participants attended the emergency department because they felt it was more accessible than their own GP. A possible reason for this finding may be lack of knowledge about GPs after hour services. One third of participants were unaware of the range of services available after surgery hours, or how to contact their GP in an emergency. Singh (1988) reported a similar finding in his U.K. study, and suggested that patients needed to be educated about primary care services. Eighty percent of participants had more understanding about their GP's availability at weekends than during the week. This finding might indicate that these participants have used after hour services provided by GPs more frequently at the weekend than during the week. This practice should be encouraged as this study has demonstrated the emergency department has a greater number of patients attending during the weekend.

A significant difference was seen in the responses from participants attending the emergency department for the first time compared with those who had attended on previous occasions. Emergency department re-attenders were well informed about GP availability compared with those participants attending for the first time. This shows that emergency department re-attenders also use the services offered by GPs

and suggests that experience with health services increases knowledge about availability of these services.

There are several possible explanations for the lack of participants' knowledge of GP availability after hours. Firstly, until it becomes necessary to seek after hours medical attention from their GP, people may not give this event prior thought, as people often live with the belief that illness or injury will never happen to them. A second explanation could be that people already consider the emergency department with its 24 hour open door policy as their usual service once their GP's surgery is closed. A third explanation may be that insufficient information is provided to the public about service availability after surgery hours, and how to contact their GP in an emergency. Davies (1986), Singh (1988), and Worth and Hurst (1989) agree that more attention should be focused on increasing public awareness about the availability of GP services. The findings of this study suggest that the same would be useful here.

Another factor contributing to knowledge of GP availability is age. This study found that participants under 29 years of age were not as well informed about GP availability after surgery hours compared with participants from the older age groups. It has been suggested by Mathers and Harvey (1988) that this may be because younger people are generally healthier, use fewer health services and are often not registered with a particular GP.

6.2.3 Locum Services

A similar pattern was seen regarding participants' knowledge of locum services. Most participants knew that their GP was not available 24 hours a day, however, a substantial proportion of participants (35%) were unaware that most practices used an on call roster, and/or provided a locum doctor after hours. Of those participants who were aware of the locum service, many were dissatisfied, as they felt that the locum's fee was too expensive. As well, they often waited a long time between calling the doctor and actually being seen. Therefore, these participants felt that it was often quicker, despite long waits, and cheaper to attend the emergency department. One

participant felt that he experienced greater satisfaction from the medical care received in the emergency department than that provided by locum doctors, and he refused to go anywhere else for treatment.

6.2.4 GP Availability on Day of Attendance at the Emergency Department

The study found that a high percentage of participants (86%) were aware of the availability of their GP at the time of their injury. Forty-five percent of the participants stated their GP had been available to see them on the day that they attended the emergency department. However, only 24% had seen or tried to see their GP to seek advice before deciding whether to attend the emergency department. This suggests that a number of factors may influence participants with their decision making processes. The two most common reasons given by participants for not trying to contact their GP were firstly, that the surgery had closed, and therefore it was too late in the day to contact their GP, and secondly, that their GP did not have the necessary skills or equipment required for treating their injury. This is a further indication that patients differentiate between the types of service provided by GPs and that provided by emergency departments. A small percentage of participants (4%) had been advised by their GP to attend the emergency department on a previous occasion, and felt such previous advice justified their current attendance.

The main reason given by participants (47%) for their GP being unavailable for a medical consultation was because their injury or the onset of their illness occurred after regular surgery hours. The frequent occurrence of this particular response is not unexpected because half of the data was collected between the hours of 8 p.m. and 8 a.m. when GP surgeries were closed. This result also indicates that a high proportion of participants assume that GPs are only available during surgery hours and not at weekends or during the night. This is perhaps an area in which an increase in public awareness about GP service availability may produce a decrease in attendance at the emergency department. Other reasons given by participants were that their GP was

on holiday, or was too busy. As well, some of the participants were themselves on holiday.

Thirteen percent of participants had not tried contacting their GP, and were therefore unsure about their availability on the day they attended the emergency department. There appears to be two main reasons for participants not contacting their GP. Firstly, they were working in, passing through, or visiting the area where the study hospital was located. Secondly, they required special investigations such as an x-ray or pathology tests, and felt it was not worth seeing their GP because they would be referred to the hospital for access to the specialised equipment anyway. Wilkinson et al. (1977) reported similar results in their study. Patients were a predominantly young and working population who used the emergency department for convenience or because they needed hospital treatment.

6.2.5 Role of the GP

Most participants' perceptions about the skills and services provided by GP's came from prior personal or family experience. This study found that there was considerable diversity amongst participants' knowledge of the role of their GP. Such diversity about GP's skills and services is compounded by a lack of consensus among GP's themselves about the type of services they should be providing (Whitfield & Bucks, 1988). Some GPs provide minor surgical services such as suturing and lancing, however, according to Myers (1982) many avoid undertaking minor procedures on a regular basis. Myers suggests that if patients are to be encouraged to seek medical assistance from their GP for minor injuries, it is essential that GPs are both accessible and motivated.

6.2.6 Participants Not Registered With a GP

Eighteen percent of participants were not registered with a GP. Only one participant in the over 50s age group was unregistered which suggests that older people are more inclined to use the services offered by GPs. Twelve out of 18

participants, not using the services of a particular GP, were under 29 years of age. This may have an effect on the attendance patterns for the under 29 age groups at emergency departments, and help explain why a large proportion of emergency department attenders are from these age groups. Mathers and Harvey (1988) suggest that the younger generation are less likely to have a GP because they are usually healthier, and therefore use fewer health services. Wilkinson et al. (1977) suggest that geographical mobility and age are related to the likelihood of being registered. They found that younger people on average were more mobile, and therefore less likely to be registered. These researchers also suggest that younger people do not register because of social circumstances.

This study found that participants who were not registered with a particular GP were reluctant to use the services provided by a local GP. This may indicate a lack of confidence in general about GPs' abilities, or the belief that the emergency department was more appropriate for treatment. This same group of participants regularly used the services provided by the emergency department. The reason given for this was that the participants had developed a strong sense of loyalty for the hospital, and believed that they received better treatment because the doctors knew their medical history.

6.2.7 Type of Complaint

The study found participants diagnosed their condition fairly accurately. Participants' perceptions of their condition were compared with the diagnosis made by the medical officer in the emergency department, and the perceptions and diagnoses matched. This finding is supported by Lewis and Bradbury (1981) who suggest that patients make a diagnostic appraisal of their condition, and attend the emergency department to have this confirmed and treated.

6.2.8 Advised to Attend the Emergency Department

The decision to attend the emergency department was not always the participant's decision alone. Participants reported that they sought advice from a variety of people about the nature of their complaint before attending the emergency department. Thus the advice of others could be considered an influential factor when deciding to attend an emergency department. This study found that males are more likely to make a decision to self-refer, and females are more likely to seek advice from health professionals or friends before attending the emergency department. These findings are similar to those reported by Walsh (1993b), however, he also found that women were twice as likely to attempt to see their GP before attending the emergency department than men. This study found no significant difference between the numbers of males and females trying to contact their GP.

In the case of work related injuries, some participants were advised inappropriately by their employers to attend the emergency department, irrespective of the severity of the injury. The justification for this appears to be for insurance purposes in the event of a workers compensation claim, however, GPs are well able to handle workers compensation cases.

6.2.9 Delayed Attendance

The study found that 69% of the participants attended the emergency department within 24 hours of sustaining their injury or the onset of their illness. The most common types of injuries and illnesses seen at the emergency department within 24 hours of the injury or illness occurring were lacerations, muscular or bony injuries, non-specific chest or abdominal pain, and dressing reviews. Bellavia and Brown (1991) also found similar results in their study which examined patient motivation to attend an emergency department. Sixty-five percent of their 200 participants attended the department within 24 hours of sustaining their injury. The researchers were surprised at the high figure (35%) for attendance 48 hours after sustaining the injury, and suggested that some of these patients could be categorised as inappropriate

attenders.

Participants are more likely to attend an emergency department within the first two hours of the onset of their injury or illness if they feel that their condition is an emergency which requires urgent treatment. A definition of what constitutes an emergency perhaps provokes the most controversy between health professionals and patients despite repeated attempts to find a solution (Bain, 1971; Driscoll et al., 1987). This researcher found that participants with minor injuries perceived their injury as being urgent, and it was these people who complained about the length of time they had to wait to see a medical officer.

Participants over 50 years of age were more reluctant to attend the department immediately, some preferring to wait 48 hours. This delay may occur in the hope that their symptoms will disappear, or they may not try to seek medical assistance until their condition deteriorates further. It is therefore important that these people are not included in the category of inappropriate attenders by health professionals if they do not seek immediate assistance.

6.2.10 Place of Injury

Nationally a significant proportion of injuries occur as a result of accidents in the home or place of work (Australian Bureau of Statistics, 1990). These trends are reflected in this study because 75% of participants' injuries occurred in these two places. However, contrary to findings from another study (Lewis & Bradbury, 1981), this study showed that males appear to be more likely to have accidents both at home and at work, whereas Lewis and Bradbury (1981) reported that women were more likely to have accidents in the home. One explanation for this finding may be because some of the data was collected at the weekend when more males than usual would have been in the home environment.

6.2.11 First Time Attenders

Fifty-four percent of participants were seeing a doctor for the first time about their complaint. The remaining 46% had seen a doctor on a previous occasion about the same problem, and 80% of these consultations occurred in the week prior to the data collection. This suggests that some participants were using the emergency department for a second opinion, or were dissatisfied with the initial treatment. However, further analysis of the data showed that 47% of participants who had previously consulted their GP had been referred to the emergency department by that doctor. Similar findings were reported by Macklin (1992) who examined attendance patterns at 13 emergency departments in Sydney. Forty-eight percent of respondents had previously seen a doctor about their presenting problem, and 35% of these consultations were in the previous 24 hours. Macklin reported a slightly higher referral rate of 56.7%, however this finding may be due to the larger sample size.

6.2.12 Socio-Economic Status

It would appear that socio-economic factors play an important part in determining the use of health care facilities. This study found that 41% of participants were categorised as low income earners. Myers et al. (1981) reported over half of emergency department users were from the lower socio-economic groups, and the main reason for attending was because they could not afford to see a doctor. Other researchers (Dunoon, 1978; Trinker et al., 1975) have also reported similar findings, and suggest reasons for attendance are related to other factors rather than cost alone. Dunt et al. (1988) also found that few participants offered their financial situation as the main reason for attending the emergency department, and this could be because people are less likely to admit to financial embarrassment when directly interviewed. This researcher proposes that low income earners are more likely to use the emergency department on a regular basis suggesting that this group are more susceptible to illness and cannot afford to see their GP as often as necessary because

of cost. The study also showed that participants who were not registered or using the services offered by a particular GP, were more likely to be low income earners.

Five percent of participants were categorised as high income earners using the Australian Bureau of Statistics' definition (1991b). This low figure suggests that high income earners use alternative medical services for their medical care. This is congruent with findings from Macklin's study (1992) which showed that high income earners were under-represented in the emergency department attendance population compared with the general population.

6.2.13 Health Insurance

Following the finding that 41% of participants were low income earners, it was anticipated that these participants would not belong to a private health insurance fund. It was found that of the 32% of participants who had private health insurance, the majority of these were in the higher income categories. Sixty-eight percent of the participants in this study did not contribute to a private health insurance fund. Of these, 47% were found to be in the lower income categories. This suggests that socio-economic factors are an influence in subscription to a private health fund. Myers et al. (1981) reported similar findings, where the majority of attenders in their study were not insured because they could not afford private health insurance.

Thirty-four percent of participants who used the services provided by a particular GP had private health insurance compared to 22% of participants who were not registered or using the services of a particular GP. The most common reason given by participants for having private health insurance was for "peace of mind". Ten percent of participants stated that they felt secure knowing that they were eligible to receive immediate treatment at a private hospital if required.

6.2.14 Past Experience with Health Care Services

Participants' past experiences with health care services appear to be an important influential factor in deciding where to seek medical assistance. This study

found that 70% of participants had visited the hospital previously in some capacity, although not necessarily as an emergency department attender. It is suggested that previous satisfactory experiences with the hospital or the emergency department may encourage a person to attend the emergency department. One participant stated that because of previous positive experiences with the study hospital, he would not go anywhere else for treatment. Five percent of participants had recently been admitted to the hospital for treatment, and therefore stated that it was more appropriate for them to attend the emergency department because their medical history was available. Three percent of participants attended the emergency department because they had previously had an unpleasant experience with their GP and consequently lacked confidence in their GP's ability. Two percent of participants were dissatisfied with the service provided by their GP.

6.2.15 Perceptions of Possible Treatment

The study found that 45% of participants chose the most appropriate place, in their opinion, to seek medical attention based on their perception of the type of treatment they required. Fifty-four percent of participants were accurate in self-assessment of their medical needs. Fourteen participants anticipated that their condition might require an x-ray to confirm a diagnosis, and of these, thirteen were correct. Similarly, fifteen participants believed that their injury required sutures, and of these eleven did receive sutures. When participants were asked to describe their expectation about the type of treatment they might receive, nine participants stated they were expecting to have an operation. This seemed rather surprising until further investigation revealed that all nine participants had been referred by their GP, who had obviously suggested that they might require an operation. Of these nine, five were subsequently admitted to the study hospital for an operation, two were admitted to a private hospital, and two were put on the waiting list for surgery and sent home.

6.2.16 Appropriate Attenders

This study did not investigate whether participants attending the emergency department were making appropriate use of this service, however, a discussion in relation to this topic is warranted. It was evident from participants' responses that they felt they were using the service appropriately. The literature review showed that there is great variation amongst health professionals regarding the appropriate use of emergency services (Driscoll et al., 1987; Walsh, 1990b). It would seem that this variation also applies to members of the public, and the process of deciding which complaint is appropriate for a particular medical care service. The decision making process prior to attending the emergency department involves a number of factors including socio-economic circumstances. Green and Dale (1990) suggest that it would be difficult to implement general guidelines for attendance, which address all the factors involved in the decision making process due to the broad features of injuries and illnesses.

Interestingly, the Nurse's Reference Library (1985) defines an emergency as "any condition that - in the opinion of the patient, - requires immediate medical intervention" (p. 1). This is in effect saying that a patient's perception about the nature of their injury is a consideration in assessing if a service has been used appropriately. However, use of this definition could potentially increase attendance rates in emergency departments rather than contribute towards reducing them.

It could be argued that this study's findings indicate that some participants did not always choose the most appropriate place to receive treatment for their complaint. While fourteen participants attended the emergency department because they required medication, and fifteen for treatment of minor injuries, both of these requests could have been adequately managed by a GP. However, other factors must be considered when assessing whether attendance is appropriate, for example, GP availability and participants' perceptions of the role of their GP. This study indicates that for most participants the decision of where to seek medical assistance is dependant upon more than one factor.

It is important for health professionals not to be dismissive of patients who could have perhaps seen their GP but instead choose to attend the emergency department. This is because patients may still have significant health problems. A health professional's opinion and understanding is not always congruent with those of patients.

6.3 Reasons Why Participants Attended the Emergency Department

Thirty percent of participants stated they attended the emergency department for convenience-related reasons. This is congruent with the findings from other studies (Dunoon, 1978; Macklin, 1992; Wilkinson et al., 1977). Participants' interpretation of convenience differed, but for some it meant the department's proximity to place of residence, the occurrence of the injury, or the work setting, in comparison to their GP's surgery. To other participants convenience meant the 24 hour availability of the emergency department service, and to others it meant a shorter waiting time than at their GP's surgery. Macklin (1992) identified a convenience factor as being a comprehensive range of services in one location. Interestingly, this factor was not identified by any of the participants in this study. This study found that convenience-related reasons were most often given by the low income earners. Surprisingly, few participants identified cost factors as their main reason for attendance, however, this may be because people are less likely to admit to financial embarrassment when directly interviewed.

Nineteen percent of participants stated that their reason for attendance was because they had been referred by their GP or from another hospital. Although having already been assessed by a doctor prior to their arrival at the study hospital, participants had to go through the assessment and consultation process again. This duplication of services is inefficient for all concerned and costly. GPs and doctors from other hospitals should be encouraged to refer directly to specialists.

Sixty-three percent of participants stated they had been advised by others to attend the emergency department. Seventeen of these gave this as their main reason for attending.

Fourteen participants gave reasons for attending that were related to their beliefs about GP services. Four percent of participants believed that their complaint was not suitable for their GP to treat, and five said their main reason for attending the emergency department was because their GP's surgery was closed.

Four percent of participants attended the emergency department because they believed that hospitals offer a higher standard care than alternative medical services. This belief may stem from an unpleasant past experience with another medical care service or from a previous satisfactory experience at the emergency department. These findings are congruent with the findings from other studies (Macklin, 1992; Trinker et al., 1975; Walsh, 1990b). Macklin (1992) suggests that patients' beliefs that hospitals provide a higher standard of care may be because hospitals provide both a wide range of services and highly skilled practitioners.

6.4 Alternative Medical Services

Participants displayed a lack of knowledge about other alternative medical services. Forty-nine percent of participants stated they did not know of any alternative medical services that were available to them at the time they attended the emergency department. Contrary to Macklin's (1992) findings, only one participant admitted that their lack of knowledge was a contributory factor in their decision to attend the emergency department. Macklin reports a much higher figure of 15.1%. An explanation for this difference may be because participants do not recognise their lack of knowledge about alternative medical services as being their main reason for attending an emergency department. A second explanation is that participants did not want to admit to a knowledge deficit when interviewed by this researcher.

Of the 51% of participants who were aware of alternative medical services, the most common responses to alternative medical services that were available were GPs or other emergency departments. A surprising finding was the low number of participants (eight) who were aware that more than one service was available to them. This knowledge deficit about alternative medical service availability may be influenced by the time of the day when their injury occurred as the participants were specifically asked about their knowledge of alternative medical services available at the time they attended the emergency department. As some of the data was collected during the night, alternative medical services available to participants at this time would be more limited. Alternatively, participants may have felt that alternative medical services were inappropriate for treating their complaint.

CHAPTER SEVEN

CONCLUSIONS AND RECOMMENDATIONS, IMPLICATIONS FOR NURSING, AND RECOMMENDATIONS FOR FUTURE RESEARCH

This chapter discusses the conclusions that have been drawn from the study, the implications for nursing, and makes recommendations for further research.

7.1 Conclusions

One hundred patients attending a Perth teaching hospital emergency department were convenience sampled to determine the attendance patterns and factors which influence attendance. The study findings revealed that more people attended the emergency department during the weekend. This finding was congruent with those of similar studies by Coleridge et al. (1993) and Walsh (1990a). The study also found that the majority of attenders were under 29 years of age, male, and were low income earners. Trinker et al. (1975) and Walsh (1990a) reported similar findings in their studies.

The majority of participants attended the emergency department for convenience-related reasons. These reasons included the emergency department being close to their work place, home, or occurrence of the injury, open 24 hours a day, no appointment system, and free. Dunoon (1978) and Trinker et al. (1975) also reported similar findings.

Participants who attended the emergency department and lived outside the study hospital's official catchment area did so because of referrals by GPs, and other hospitals, or for convenience.

The majority of participants who presented to the emergency department were ambulant and had minor injuries not requiring hospital admission. Coleridge et al. (1993) report that a significant proportion of an emergency department workload involves treating patients with minor injuries. This study found many participants presented with minor injuries, and although x-ray and/or suturing was required in these cases, these procedures could have been adequately managed by a GP.

The study found that participants differentiated between the services provided by GPs and the emergency department. Interestingly, GPs were viewed in a diagnostic role, and the emergency department was seen as the place for actual treatment. Lewis and Bradbury (1981) reported similar findings. This researcher suggests that members of the public have not been educated enough regarding the role, scope, and availability of the GP.

This study found that participants over 50 years of age reported using GPs regularly for their health care needs. Macklin (1992) reported similar findings. This researcher suggests this is because these people are geographically more stable, and have had the time to seek out and build a rapport with a particular GP.

Another finding of this study is that 75% of participants were injured at home or at work. This researcher suggests this is because safety standards or measures are poorly utilised. Bellavia and Brown (1991) and Lewis and Bradbury (1981) report similar findings and also suggest that adherence to or maintenance of safety standards are inadequate.

Participants had limited knowledge about alternative medical services, and 49% of participants stated that they were unaware of an alternative medical service where they could have sought medical assistance for their complaint. Macklin (1992) reports similar findings. This researcher suggests that participants' perception of

availability of alternative medical services at the time of injury or illness may be an influential factor in their choice of medical service.

7.2 Recommendations

This researcher recommends the following:

1. Representatives from the emergency department and General Practitioners need to collaborate and develop a joint education plan which covers all aspects of GP and emergency department services. This plan would provide the public with specific information regarding the role of the GP, the range of services available, and the availability of alternative medical services. This would decrease the number of people attending the emergency department with minor injuries or illness and leave the emergency department better able to treat patients with serious conditions.
2. Awareness raising programs regarding safety standards at work or in the home should be increased. Understanding, acceptance of, and adherence to, safety standards would decrease the number of people requiring treatment for injuries received because of breaches of such standards.
3. A third recommendation pertains to the introduction of a new role for nurses, that of the nurse practitioner in the emergency department. The nurse practitioner would require appropriate skills and education to practice in this new role, autonomy within the work setting, and the freedom to make decisions consistent with the scope of the role. According to a New South Wales discussion paper on nurse practitioners in the emergency department (cited in Strange, 1994), the nurse practitioner would be able to operate a 24 hour restricted clinic in diagnosis and treatment. Patients who met predetermined criteria would be referred via the triage nurse. Hence the number of patients with minor injuries or illnesses seeking the services of an emergency department, who erode resources would decrease. In turn resources necessary for

treating urgent or severe illness or injury would be increased. It is also likely that patient waiting time would be dramatically reduced.

7.3 Implications for Nursing

The study findings have implications for nursing, particularly in the areas of patient education and public awareness raising. Nurses working in emergency departments are responsible for providing a triage service to the attenders. It is the triage nurse who is the patient's first contact in the emergency department. However, it is not appropriate that this nurse turns patients away or suggests the use of alternative medical services. This is because firstly, the Medicare agreement states that no one person can be turned away from the emergency department (cited in Strange, 1994). Secondly, patients are not always receptive to listening while being triaged, since they may be anxious, upset, or intoxicated. It is the treating nurse who gains the patient's trust and is more able to inform the patient about the availability of other medical services, and the role and scope of GPs, should that person require similar services in the future.

Occupational Health and Community Nurses are also charged with the responsibility for educating the public regarding the maintenance of safety standards in the home or work place. These nurses need to review the content and delivery of current education programs and develop and implement more creative programs specifically designed to capture public interest and awareness.

Nurse managers and senior nurses in emergency departments are responsible for increasing and maintaining job satisfaction amongst experienced registered nurses working in the emergency department. This researcher suggests that the introduction of a new role for nurses, that of the nurse practitioner, would provide experienced nurses with an opportunity to broaden their educational knowledge, acquire new

clinical skills, and undertake a challenging role which allows them to use such knowledge and skills in autonomous nursing practice.

7.4 Recommendations for Future Research

This researcher recommends that:

1. This study be replicated over a longer time period at other emergency departments. This would validate the findings of this study.
2. Research be undertaken which is aimed at identifying patients' attitudes and perceptions of the range of health care in relation to the services provided.
3. Research focused on the development and evaluation of the effectiveness of teaching strategies used in public education about the services provided by GPs and emergency departments be undertaken.

7.5 Summary

The traditional role of emergency departments is to provide emergency and life-saving treatment to accident victims (Catchlove, 1974). These departments provide a unique service to the Australian community, as medical treatment is available without medical referral or appointment. However, attendance patterns suggest that a high proportion of members of the public seek treatment for non-urgent illness and injury at the emergency department (Bain & Johnson, 1971; Starr, 1973).

The purpose of this study was to update existing information about attendance patterns by describing the current use of one teaching hospital's emergency department. A descriptive study design was used to describe attendance patterns and identify the reasons why patients choose emergency departments to meet their health care needs. Pender's Health Promotion Model (1987) provided the framework and

guidance for the study. One hundred ambulant patients were convenience sampled following a nursing triage assessment. The data was collected over a one week period using a validated questionnaire.

Data analysis revealed that the sample was typical of an emergency department population as reported by other studies (Trinker et al., 1975; Walsh, 1990a). Participants were predominantly young (under 29 years), male, and low income earners. The study showed that participants chose to attend the emergency department because of their perceptions of its usefulness to them. The most common reasons given by 30% of participants for attendance were convenience-related. These reasons included the emergency department being close to home or work, open 24 hours a day, no appointments system, and free. The study clearly indicates that for most participants the process of making a decision about where to attend to receive treatment for their complaint is influenced by more than one factor. However, in most cases there appears to be a dominant factor which motivates the participant to attend the emergency department. The study showed that a substantial proportion of participants had limited knowledge about the services provided by GPs during and after surgery hours. An increase in public education about the range of services and availability of GPs after hours may encourage the public to seek medical assistance from their GP, particularly at weekends.

The introduction of nurse triage has successfully reduced the waiting time for patients to be clinically assessed (Mallett & Woolwich, 1990). However, patients still have to wait to see a medical officer for a medical assessment. The length of time spent waiting for this assessment depends directly upon how busy the medical officers are at that particular time, and the severity of the patient's condition or injury. The introduction of a nurse practitioner with appropriate skills and education would treat those patients with minor injuries or illness and further reduce patient waiting times.

REFERENCES

- Australian Bureau of Statistics. (1990). National health survey of accidents Australia, catalogue no 4384.0. Canberra: National Capital Printing.
- Australian Bureau of Statistics. (1991a). Census of population and housing: How Australia takes a census, catalogue no 2903.0. Canberra: National Capital Printing.
- Australian Bureau of Statistics. (1991b). Perth: A social atlas, catalogue no 2840.5. Canberra: National Capital Printing.
- Australian Bureau of Statistics. (1993). Average weekly earnings, states and Australia, catalogue no 6302.0. Canberra: National Capital Printing.
- Bain, S., & Johnson, S. (1971). Use and abuse of hospital emergency departments. Canadian Family Physician, 17(5), 33-36.
- Blackwell, B. (1962). Why patients come to a casualty department. The Lancet, 1(1), 369-371.
- Bellavia, J., & Brown, D. (1991). A misuse of resources. Nursing Times, 87(44), 26-29.
- Burns, N., & Grove, S. K. (1987). The practice of nursing research: Conduct, critique and utilization. Philadelphia: W. B. Saunders.
- Catchlove, B. R. (1974). Community requirements and the modern casualty department. The Medical Journal of Australia, 1, 937-938.
- Coleridge, J. T., Cameron, P. A., White, J. B., & Epstein, J. (1993). Profile of emergency department attendances. Emergency Medicine, 5, 1-70.
- Davies, T. (1986). Accident department or general practice. British Medical Journal, 292, 241-243.
- Davison, A. G., Hildrey, A. C. C., & Floyer, M. A. (1983). Use and misuse of an accident and emergency department in the East End of London. Journal of the Royal Society of Medicine, 76(1), 37-40.
- Deeble, J. (1991). Medical services through Medicare. National Health Strategy, Background Paper No 2. National Health Strategy, Melbourne: Treble Press.
- Dixon, P. N., & Morris, A. F. (1971). Casual attendances at an accident and emergency department and health centre. British Medical Journal, 277(4), 214-216.

- Driscoll, P. A., Vincent, C. A., & Wilkinson, M. (1987). The use of the accident and emergency department. Archives of Emergency Medicine, 4, 77-82.
- Dunoon, D. (1978). Use of six casualty services in southern Sydney with particular reference to primary care patients. Sydney: Health Commission of New South Wales, Southern Metropolitan Region.
- Dunt, D. R., Oberklaid, F., & Temple-Smith, M. J. (1988). Factors affecting the selection of primary medical care agency in the western region of Melbourne: An interview study of adult patients. Community Health Services, 12(2), 167-175.
- Epstein, J. (1991). Why "emergency department" - not "casualty" or "accident and emergency". Emergency Medicine, 3, 37-80.
- Farmer, R. (1984). Patients like to be 'an emergency'. Health and Social Service Journal, 94(4893), 466.
- Fremantle Hospital Annual Report. (1991-92). Perth: Western Australia.
- Fry, L. (1960). Casualties and casuals. The Lancet, 1(1), 163-166.
- Green, J., & Dale, J. (1990). Health education and the inappropriate use of accident and emergency departments: The views of accident and emergency nurses. Health Education Journal, 49(4), 157-161.
- Green, J., & Dale, J. (1992). Primary care in accident and emergency and general practice: A comparison. Social Science and Medicine, 35(8), 987-995.
- Leedy, P. D. (1989). Practical research (4th ed.). New York: Macmillan.
- Lewis, B. R., & Bradbury, Y. (1981). Why patients choose A and E. Health and Social Journal, 41, 1139-1142.
- Lewis, B. R., & Bradbury, Y. (1982). The role of the nursing profession in hospital accident and emergency departments. Journal of Advanced Nursing, 7, 211-221.
- Macklin, J. (1992). A study of hospital outpatient and emergency department services. National Health Strategy Background Paper No. 10. National Health Strategy, Melbourne: Treble Press.
- Mallett, J., & Woolich, C. (1990). Triage in accident and emergency departments. Journal of Advanced Nursing, 15, 1443-1451.

- Mathers, C., & Harvey, R. (1988). Hospital utilisation and costs study: Volume 2: Survey of public hospitals and related data. Canberra: Australian Institute of Health, AGPS.
- Myers, B., Loy, D., & Nolan, M. (1981). A survey to assess the importance of health insurance arrangements on attendances for primary general practice at the emergency department at Royal Prince Alfred Hospital. Social Work Department, Royal Prince Alfred Hospital, Camperdown, NSW.
- Myers, P. (1982). Management of minor medical problems and trauma: General practice or hospital? Journal of the Royal Society of Medicine, 75(11), 879-883.
- Nurses' Reference Library. (1985). Emergencies. Springhouse, Pennsylvania: Springhouse Corp.
- Pender, N. J. (1987). Health promotion in nursing practice (2nd ed.). Norwalk, Connecticut: Appleton & Lange.
- Royal Perth Hospital Annual Report. (1991-92). Perth: Western Australia.
- Singh, S. (1988). Self referral to accident and emergency department: Patient perceptions. British Medical Journal, 297, 1179-1180.
- Starr, D. (1973). Study of casualty patients at an urban hospital. The Medical Journal of Australia, 1, 533-538.
- Strange, P. (1994). The nurse practitioner in A&E. The Australian Nursing Journal, 1(9), 20-23.
- The Oxford Modern English Dictionary. (1992). New York: The Oxford University Press.
- Trinker, F., Gunter, S., Ewing, M., Best, J. B., & Yeatman, J. S. (1975). A study of patients who come by choice to the casualty department of the Royal Melbourne Hospital. The Medical Journal of Australia, 1, 528-533.
- Walsh, M. (1990a). Why do people go to the A&E? Nursing Standard, 5(7), 24-28.
- Walsh, M. (1990b). Patient's choice: GP or A&E department? Nursing Standard, 5(10), 28-31.
- Walsh, M. (1993a). Delaying attendance at A&E departments. Nursing Standard, 7(24), 33-35.
- Walsh, M. (1993b). A&E or the GP? How patients decide. Nursing Standard, 7(25), 36-38.

Whitfield, M., & Bucks, R. (1988). General Practitioners' responsibilities to their patients. British Medical Journal, 297, 398-400.

Williams, E., & Pottle, B. (1989). The ups and downs of A&E. Nursing Times, 85(47), 60-64.

Wilkinson, A., Kazantzis, G., Williams, D. J., Dewar, R. A. D., Bristow, K. M., & Miller, D. L. (1977). Attendance at a London casualty department. Journal of the Royal College of General Practitioners, 27(185), 727-733.

Worth, C., & Hurst, K. (1989). False alarm. Nursing Times, 85(15), 24-27.

APPENDIX A

QUESTIONNAIRE

Interview number.....

Part 1

Questions 1 & 2 ask about your recent use of outpatient facilities.

1. Is this your first visit to this emergency department?

Yes	1
No	2

2. During the last 12 months

(a). How many times have you visited a doctor's surgery?

None	1	3-5 times	4
Once	2	6 -10 times	5
Twice	3	Over ten	6

(b). This hospital's outpatient department clinic?

None	1	3-5 times	4
Once	2	6 -10 times	5
Twice	3	Over ten	6

(c). Other outpatient department clinics?

None	1	3-5 times	4
Once	2	6 -10 times	5
Twice	3	Over ten	6

(d). This emergency department?

None	1	3-5 times	4
Once	2	6 -10 times	5
Twice	3	Over ten	6

(e). Other emergency departments?

None	1	3-5 times	4
Once	2	6 -10 times	5
Twice	3	Over ten	6

Questions 3-10 ask about your own doctor.

3 (a). Do you have a particular local doctor whom you usually see?

Yes	1
No	2

IF NO, GO TO QUESTION 11

(b). IF YES, in what suburb is the doctors' surgery?

4 (a). Is travelling to the doctor a problem for you?

Yes	1
No	2

(b). IF YES, what is the main problem?

Lack of ready access (inadequate) to public transport	1
Do not have access to private transport	2
Difficult to afford / catch a taxi	3
Other (specify)	4

5 (a). Is it possible for you to see your doctor without an appointment?

Yes	1
No	2
Unknown	3
In an emergency	4

(b). IF NO,

How long do you usually have to wait to get an appointment with your doctor?

Same day	1
1 day	2
2-7 days	3
More than 7 days	4

6. When you have an appointment, how long do you usually have to wait in the doctor's surgery before you are seen?

Less than ½ an hour	1
½ an hour to an hour	2
1 hour to 2 hours	3
More than 2 hours	4

7. Can you see your own doctor after hours on:

(a). Week nights after 7pm

Yes	1
No	2
Do not know	3
If on call	4

- | | | |
|--------------------------------|-------------|---|
| (b). Weekend nights after 7pm | Yes | 1 |
| | No | 2 |
| | Do not know | 3 |
| (c). Weekend daytime up to 7pm | Yes | 1 |
| | No | 2 |
| | Do not know | 3 |
8. Do you see/have you seen your own doctor after surgery hours?
- | | |
|-----|---|
| Yes | 1 |
| No | 2 |
9. If your own doctor cannot see you after surgery hours, is there another local doctor you can see?
- | | |
|-----|---|
| Yes | 1 |
| No | 2 |
- 10.(a). Was your own doctor available to you today?
- | | |
|-------------|---|
| Yes | 1 |
| No | 2 |
| Do not know | 3 |
- (b). IF YES, was there a reason why you didn't see your own doctor?
-
-
- (c). IF NO, was your own doctor?
- | | |
|-------------|---|
| Too busy | 1 |
| After hours | 2 |
| On holidays | 3 |
| Other | 4 |

Part 2

Questions 11-20 ask about why you visited the emergency department today?

11. If patient does NOT have a particular GP.

What are the reasons for you not seeing another local doctor but coming here instead?

.....

.....

12. What do you think is the matter with you?

.....	Injury	1
.....	Illness	2
.....	Other	3

13. How long has this problem been worrying you?

1-2 hours	1	1 month	4
1 day	2	2- 6 months	5
1 week	3	Over 6 months	6

14. Is this the first time you have seen a doctor about this problem?

Yes	1
No	2

IF YES, GO TO QUESTION 19

15. How many times have you tried to see a doctor about this problem at the following places?

	None	Once	Twice	More
(a). Own doctor	1	2	3	4
(b). This hospital's ED	1	2	3	4
(c). Work, other clinic	1	2	3	4
(d). Other (specify)	1	2	3	4

16. If more than one consultation was mentioned:

Which of these was the most recent consultation?

Own doctor	1
This hospital's ED	2
Work, other clinic	3
Other (specify)	4

17. How long ago was that?

Within the last week	1
1-2 weeks ago	2
2-4 weeks ago	3
4-8 weeks ago	4
More than 8 weeks ago	5

18.(a). Did anyone suggest that you should come to the emergency department today?

Yes	1
No	2

(b). **IF YES, who?**

Own doctor	1	Friends	6
Health centre	2	Other hospital	7
Employer	3	Physio/Pharmacist	8
Work mates	4	Police	9
Relatives	5		

19.(a). What made you come to this hospital's emergency department about your problem rather than any other service?

(b). What do you think the doctor might do for you today?

(c). Where did your injury occur?.....

20. Do you know of any other services which you could have gone to with your problem?

Part 3 GENERAL INFORMATION

1. Time

2. Day

3. Age

4. Gender		Male	1
		Female	2
5. Marital Status			
Single	1	Divorced	4
De facto	2	Separated	5
Married	3	Widowed	6

6. In what country were you born?.....

7. In what suburb do you live?.....

8. What is your occupation?.....

9. What is your gross weekly income approximately?

Less than \$58	01	\$482 - \$577	08
\$58 - \$96	02	\$578 - \$673	09
\$97 - \$154	03	\$674 - \$769	10
\$155 - \$230	04	\$770 - \$961	11
\$231 - \$308	05	\$962 - \$1, 154	12
\$309 - \$385	06	\$1, 155 - \$1,346	13
\$386 - \$481	07	More than \$1, 346	14
		Not known	15

10. What is the highest level of education you have reached?

- | | |
|----------------------|---|
| University | 1 |
| Other tertiary | 2 |
| Trade qualifications | 3 |
| Completed secondary | 4 |
| Some primary | 5 |
| Primary only | 6 |

11(a). What health insurance cover do you have?

- | | |
|-------------------|---|
| Medicare | 1 |
| Full private | 2 |
| Ancillary private | 3 |
| None | 4 |

(b). If private: Why do you have private health insurance?

.....
.....

END OF INTERVIEW QUESTIONNAIRE

PART 4

Information to be obtained from ED card by the researcher:

- | | | |
|-----------------------|----------------------|----|
| 1. The complaint was: | a. Injury | 1 |
| | b. Illness | 2 |
| | c. Other | 3 |
| 2. If trauma was it: | a. Domestic | 1 |
| | b. Sporting | 2 |
| | c. Motor car/bike | 3 |
| | d. Industrial/Work | 4 |
| | e. Opthal | 5 |
| | f. Dental | 6 |
| | g. Other | 7 |
| 3. If medical was it: | a. Musculo-skeletal | 1 |
| | b. Resp, ENT | 2 |
| | c. G.I tract | 3 |
| | d. Neurological | 4 |
| | e. Cardio-vascular | 5 |
| | f. Skin | 6 |
| | g. Endocrine | 7 |
| | h. Opthal | 8 |
| | i. Renal/ Urological | 9 |
| | j. More than 1 above | 10 |

4. If surgical, was it primarily:

- | | |
|----------------|---|
| a. Orthopaedic | 1 |
| b. Gynae | 2 |
| c. Opthal | 3 |
| d. Vascular | 4 |
| e. G.I tract | 5 |
| f. Plastics | 6 |
| g. Other | 7 |

5. If social, did they need:

- | | |
|---------------------|---|
| a. Financial help | 1 |
| b. Accommodation | 2 |
| c. Social worker | 3 |
| d. District nursing | 4 |
| e. Family planning | 5 |
| f. Other | 6 |

6. If psychiatric, was it:

- | | |
|-----------------------|---|
| a. Overdose | 1 |
| b. Anxiety/Depression | 2 |
| c. Schizophrenia | 3 |
| d. Alcoholism | 4 |
| e. Drug addict | 5 |
| f. Other | 6 |

7. What was the outcome of the visit?

- a. Admitted
- b. Discharged

(i) Investigations

- a. Yes.....
- b. No
- c. Yes.....
- d. No

(ii) Treatment (Describe)

- Yes.....
- Yes.....
- No
- No

8. What were the follow-up arrangements?

- | | |
|------------------------------|---|
| Nil - admitted to hospital | 1 |
| Nil - wasn't necessary | 2 |
| Return to ED | 3 |
| Return to OP | 4 |
| Referred to GP | 5 |
| Referred to another hospital | 6 |



**EDITH COWAN
UNIVERSITY**

PERTH WESTERN AUSTRALIA
JOONDALUP CAMPUS

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24 September 1993

APPENDIX B

Dear Emily

I am pleased to advise that your Research proposal entitled "The walking wounded: A descriptive study investigating the reasons that patients attend Accident & Emergency Departments" for the award of Bachelor of Nursing - Honours has been approved.

This approval means that the Faculty Higher Degrees Committee believes that you have developed the proposal to a stage where worthwhile research can be conducted on your topic. It does not guarantee successful examination of your research thesis.

Copies of reviewers' comments on your research proposal have been forwarded to your supervisor. These comments are offered as a guide for further discussion between you and your supervisor. More detailed comments have been made in the margins of the actual proposal which can be picked up from your supervisor.

You may now proceed to conduct the research and prepare your thesis. In doing so, you should be guided by the information contained in the University booklet "Information for Honours, Masters and Doctoral candidates on Research Policies and Procedures".

Your supervisor will be asked to consult with you in recommending examiners for your thesis. It is important that this is done well before you submit the thesis, so that arrangements can be made to have your thesis examined without unnecessary delay. Therefore would you please ensure that this is finalised at least six working weeks before you submit your thesis. Your supervisor has the required proforma on which these details should be provided.

I wish you every success with your research.

Yours sincerely

ASSOC PROFESSOR MICHAEL LEE
Chairperson, Faculty Higher Degrees Committee

cc Supervisor
Student Services



APPENDIX C

FREMANTLE HOSPITAL

2 November 1993

ALMA STREET, FREMANTLE, WESTERN AUSTRALIA
POST OFFICE BOX 480, FREMANTLE 6160
TELEPHONE: (09) 431 3333 FACSIMILE: (09) 430 5759

Ms E Carmona


Dear Ms Carmona

Re: Research Proposal

I am pleased to inform you that your research proposal "Reasons Patients Attend an Accident and Emergency Department" has been reviewed at the last meeting of the Nursing Research Review Committee. Committee members have endorsed the study subject to:

- an inclusion being made in the consent form that specifies that information regarding medical history is required from the record of current visit.
- an assessment of potential bias is conducted. A record of patients who meet the inclusion criteria but are not interviewed during each data collection period due to lack of time will give an indication of the potential for an unavoidable biased sample.

The proposal also requires approval from the Hospital Research and Ethics Committee and will therefore be presented for review at the next meeting on 16 November 1993. You will be notified of the outcome of this review a few days after the meeting.

Other comments made by members of the Nursing Research Review Committee that may be of assistance to you are as follows:

1. the methodology section should include a clear description of all the variables that will be measured along with the questions that will be used to measure each variable.
2. more information is needed about how Penders Model will be operationalized and the data statistically analysed to test it.
3. conceptual definitions of "attitudinal-perceptual" factors as defined by Pender would have been useful.
4. it is not clear how, according to Penders model, "circumstantial factors" can be classified as "cognitive-perceptual".

Yours sincerely



MARGARET KHAW
DIRECTOR OF NURSING
Chairperson Nursing Research Review Committee

APPENDIX D

CONSENT FORM

A study examining public use of an emergency department.

**I..... consent to take part in this study,
to examine the reasons why people choose to attend emergency departments.**

**I understand that in agreeing to participate in this study, I will be required to answer a
questionnaire about the reasons why I attended the emergency department.**

**I understand that participation in the study will not interfere with any prompt
treatment or care that I might require.**

**I understand that it may be necessary for the researcher, in order to confirm medical
diagnosis, to access the records of my current visit. I give the researcher permission
to access my medical notes should this be necessary.**

**I understand that all information collected from the questionnaire including medical
history will remain confidential, and that my identity will remain anonymous.**

**I understand that I have the option to withdraw from the study at anytime, without
prejudicing any required medical or nursing care. If I have any further questions, I
may contact the researcher on phone number [REDACTED]**

Signed by participant.....

Date.....

Witness.....

APPENDIX E

INFORMATION SHEET

A study examining public use of an emergency department.

Dear Patient,

As part of my studies for an honours degree in nursing at Edith Cowan University, I am conducting a research project about the reasons why people attend emergency departments. The results of this study will be used to help assess the educational needs of the local community.

In order to gather this information, I require your co-operation to complete a questionnaire. This will take approximately twenty minutes, and it will not interfere with you being seen by a doctor or receiving any necessary treatment.

Participation in this study is voluntary, and I completely respect your right to refuse. The information obtained will be used for statistical purposes only, and confidentiality of all information is assured. Your identity will remain anonymous.

Thank you for your time and co-operation.

Emily Carmona.