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CONFERENCE REPORT

AMBEX 2003

“Modernisation in Motion” A Learning Experience

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Introduction

Every June, the Yorkshire spa town of Harrogate plays host to AMBEX, the annual conference of The Ambulance Service Association (ASA), which describes itself as the voice of public sector ambulance services in the UK.

The primary objective of the conference is to draw together the 39 ambulance National Health Service (NHS) trusts in the UK to promote discussion and interaction on current challenges and developments within the ambulance services. However the conference is open to international participation, with delegates representing ambulance services from around the world. Countries represented this year included Norway, Sweden, Finland, Denmark, Japan, New Zealand, Australia and South Africa.

The theme of the conference was **“Modernisation in Motion”**. Designed around the five “P’s” – **Patients, People, Performance, Policy and Partnerships,** the issues addressed impacts and influences on ambulance services in the UK as a result of the implementation of the modernisation agenda currently underway.

General Impressions of “Modernisation in Motion”

On Friday 27th June 2003, I witnessed the opening ceremony, which was initiated by the Mayor of Harrogate Borough, Councillor Ian Galloway following the marching arrival of the Scottish Highland Bagpipe Band who heralded in the familiar “Scotland the Brave”. Having been to Scotland as an avid mountain climber in my younger days, the haunting and powerful tones of the pipes were as moving then, as they had been many years before in the Highlands of Scotland.

After listening to the Mayor’s opening welcome, I moved on to the conference opening speeches in the setting of the famous Majestic Hotel. The topics were surprisingly consistent with concerns shared by ambulance services around the world, in dealing with Health Partnerships, Corporate Governance etc. although more local in detail, than international.

The overall exhibition complex was enormous, each hall equivalent in size to a *Spark of Life* or *ACAP* conference in Australia. There were five halls of similar size, plus a main hall which was much larger. More than 150 stands displayed an array of products ranging from resuscitators, medical equipment, vehicles, stretchers, chemical/biological/radiological (CBR) equipment, compressed gases, computer technologies for automated vehicle location (AVL), publishing companies, educational organizations and workload density mapping and educational aids.

For example, Smart Technologies Inc.**[1]** had an electronic whiteboard retailing for £1800 approx. A$5000 which has the technology to save anything that is written on the board - words, shapes or diagrams. It also saves work in colour when special whiteboard markers are used, and at the touch of a button, can reproduce information from the board to a printer.

The *Zoll Medical Corporation* stand displayed the latest Biphasic Defibrillators including the *Rectilinier Biphasic Waveform Defibrillator*, which automatically compensates for high or low chest impedance when delivering direct cardiac counter shock (DCCS). An interesting paper by Mittal et al.**[2]** reports on a Clinical Trial for the *Waveform.* Zoll claims that this type of defibrillator is superior to monophasic defibrillators in managing cardioversion of atrial fibrillation and high impedance patients in ventricular fibrillation.

Zoll were also marketing the *ResQPOD Circulatory Enhancer for Cardiac Arrest* manufactured by *ResQSystems Inc*..**[3]** This is a valve which is placed between a ventilation source and the airway adjunct (face mask, laryngeal mask airway or endotracheal tube). The *ResQPOD* is stated to double blood flow during CPR, doubling survival rates of patients in VF when used in conjunction with defibrillation while enhancing the pharmaceutical effect of cardiac drugs. Research articles on this topic include Lurie, Zielinski, McKnite, Aufderheide and Voelckel**[4]** and Lurie, Zielinski, Voelckel, McKnite and Plaisance.**[5]**

A Swedish company *Jolife AB* displayed their gas driven automatic mechanical compression and active decompression resuscitation device. This device is stated to improve CPR efficiency and provide an extra hand for giving optimal treatment. The main disadvantage for ambulance practice is that it consumes 70 litres of compressed gas per minute! Evaluation of this device was undertaken by Steen et al.**[6]** and published in the journal Resuscitation in 2002.

Two British universities had stands promoting pre-employment degrees in paramedic sciences. Those represented, were the University of Hertfordshire, Hatfield and University of Wales, Swansea who currently appear to be the most advanced in pre-employment education for ambulance services in the UK.

There were CBR decontamination demonstrations set up in a spare area of the complex. A Japanese emergency worker, who was involved in the Japanese underground railway Sarin attack, introduced these demonstrations. They were excellent in method and content, providing an amazingly effective example of the decontamination process. Portable decontamination tents with raised drainage platforms and roller tables for washing victims down, were typical examples of the types of equipment commonly sought by emergency services in light of the unfortunate reality of today's threat of terrorism. The contaminated liquid was drained into special 100 litre bags for safe disposal. Ferno (UK) Ltd**[7]** and The Aire Group**[8]** provided the equipment and conducted the demonstrations.

Overall, it was evident that the UK is putting massive investment into modernising its ambulance service. More than £50,000,000 has been spent over the past four years, leading to more frontline ambulance staff and more vehicles. There has also been the recent introduction of satellite navigation systems to assist in improved response times.

It was evident that some of the 39 NHS ambulance trusts are more advanced than others, the main problem being logistics due to the diverse UK landscape as well as other management and funding issues.

It was also clear that some of the problems experienced in meeting the demands of improved response times are similar to those experienced in Australia.

Policy

Richard Diment, the Chief Executive of ASA was the first speaker at the conference. He spoke of the key need to reduce ambulance waiting times and design services around the needs of patients. Richard used the following guidelines for discussion:

- Create Patient pathways to individual care packages involving patients more in their own care.
- Break down demarcations – inter-professional, intra-organizational and inter-organisational.
- Apply lateral thinking to existing and new types of health care e.g. Paramedics working in community hospitals with provision for paramedics to utilise additional learned skills where there is no doctor available (in remote areas).
- Improve "door to needle" times, to allow for early intervention at local level, with emergency care networks linking primary and secondary care.
- Challenge outmoded practices.

David Lammy, Member of Parliament and Under Secretary of State for Health was scheduled to speak but was unable to attend at the last minute.

There are 16 "Tsars" appointed by the British Government, whose roles are to reform government services. The next speaker, Sir George Alberti, was the Tsar for "NHS Emergencies" (National Clinical Director for Emergency Access). Former president of the Royal College of Physicians, Professor Alberti has been working on reforming "procedures in casualty departments which will end excessive trolley waits" states the Society Guardian.**[9]** He is aiming for 90% of patients to be treated in hospital casualty departments, within a timeframe of no more than 4 hours by the end of 2003, increasing to 100% in 2004. Professor Alberti wants to see better co-operation between agencies in Emergency Care with Ambulance at the centre. He sees ambulance as the First Contact Emergency Practitioner, able to work in partnership with other health professionals to reduce numbers attending accident and emergency departments. One service has arranged with doctors for ambulance paramedics to be in control of bed allocations for patients in their service area.

Performance

Paul Sutton, Director Operations, East Anglia Ambulance Service discussed improving response times. Department of Health**[10]** key targets are:

- Improved patient experience.
- 75% of ambulance category **A** (life threatening) calls to have a response time of eight minutes or less.
- 95% of category **A** calls to receive a response within 14 minutes (urban) or 19 minutes (rural).
- GP urgent calls to arrive within 15 minutes of the time stipulated by the GP.
- By 2006, 70% of patients to receive thrombolysis within 60 minutes of calling for professional help.

Paul believes that the 75% benchmark is only achievable through system change and >75% improvement will require wholesale modernisation across the UK. He wants to train first responders to reduce response times for category **A** calls. One ambulance service intends to develop first responder programmes with the aid of the local Anglican Bishop, by placing Shock Advisory External Defibrillators (SAED's) in all churches in the diocese. It is anticipated that the Bishop's influence may well encourage and extend interest in teaching basic life support in the school curriculum.

In addition this, the service wants to put SAED's which will be operated by trained security officers, into supermarkets.

Dr Tracey Cooper (a former Ambulance Medical Director) and now with the NHS Clinical Governance Support Team (CGST)**[11]** talked about the CGST's role and the need to challenge mindsets, change behaviour and improve relationships using the following method:

Effective Teamwork + Appropriate Culture + Appropriate Systems.

John Seddon, an occupational psychologist representing Vanguard Education**[12]** talked about systems thinking and cited the Toyota motor company as an example.

He stated that thinking needs to change in current management and mindset structures:

Not MANAGEMENT (Command & control thinking)	*but* SYSTEMS (Systems thinking)
Not "Top Down" planning	*but* "Outside In" planning

John provided a very interesting and conceptual presentation, which can be further explored at the Vanguard Education web site.**[12]**

Patients

The Clinical Showcase covered some interesting topics including a research paper by Denniston, O'Brien and Stableforth**[13]** which was presented by David Stableforth of Birmingham Heartlands Hospital. It claimed to confirm that the use of uncontrolled oxygen for patients with acute exacerbation of chronic obstructive airway disease (COAD) was common and "associated with a higher frequency of severe respiratory acidosis and mortality". It showed that those COAD patients in this research context who received oxygen at rates greater than 28% had a higher rate of mortality.

Some presentations from the 999 EMS Research Forum covered such things as ***NHS Direct,*****[14]** a new medical telephone advisory service designed to reduce out of hours demand for hospital and ambulance services. Andy Heward**[15]** reported that the problem of inappropriate calls being made for ambulance still existed, despite the implementation of an intensive ***NHS Direct*** education programme.

NHS Direct Online is designed to cover rudimentary symptoms for people seeking medical advice. If a satisfactory solution to a particular symptom is not automatically provided on the ***NHS*** call taker's screen during the interviewing process, the patient is then asked to ring ***NHS Direct*** for further advice. As ***NHS Direct*** call takers have limited medical knowledge, it is said that they often contact ambulance call takers for advice or advise the patient to call an ambulance if they are unable to deal with the patient's problem. It appears that current multi-level communication processes involved in ***NHS Direct*** have done little to offer significant improvements to ambulance and hospital services as yet, only adding yet another link in the chain of emergency response.

People

The University of Wales Swansea, Pre-Hospital Emergency Unit (PERU)**[16]** performed a study into the "Incidence and Predictive Factors of Post Traumatic Stress Disorder (PTSD), Depression and Anxiety in Emergency Ambulance Personnel"

It showed that 21% of ambulance personnel suffered PTSD compared to 18% for other emergency personnel. 1029 ambulance personnel were surveyed. It was stated that a dripping tap effect of traumatic and difficult cases, plus organisational stress applied to all emergency services. The study will be published in EMJ in early 2004.

Partnerships

This subject was presented by David Veness, Assistant Commissioner Specialist Operations Metropolitan Police.**[17]** The context was the fight against terrorism as an enduring threat, and the need for public/private sector partnerships. He also talked about integrated networking systems between hospitals, pre-emptive information delivery and speed of response. Technological networking is advancing as a result of the very real possibility of a terrorist attack occurring in one of UK's heavily populated areas where up to 10,000 casualties could suffer.

The UK fire service legislation was enacted in the Atlee government era and is being urgently updated to reflect the modern role of a fire service. This is expected to lead to First Responder programmes throughout the UK. A new partnership between fire and ambulance is expected to be forged.

Conclusion

It is evident that the UK ambulance system is undergoing radical change. In some ways it is behind Australia (e.g. first responder) and in other ways ahead (e.g. technology). However, the message continues to be for ambulance services worldwide to remain open to the challenges of better response, better integration of resources and teamwork in the health sector. The appointment of a "NHS emergencies Tsar" is of particular interest. Could this method perhaps offer new solutions to successfully improve integration of health services?

I can recommend a visit to AMBEX 2004 in Harrogate if you can make it. It will be a very valuable and worthwhile learning experience.

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