Emergency: Implementing an Ambulance Despatch System

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EXECUTIVE SUMMARY

This case study charts the story of the problematic implementation of a computerised despatch system for the Metropolitan Ambulance Service (MAS) in Melbourne, Australia. The system itself is now operational; however, the legal and political implications are still subject to the deliberations of inquiry boards, and police investigations. The value of the case study is in highlighting some of the pitfalls and implications of failing to consider the financial pressures and resource constraints that define the (medical) despatch environment.

MAS attempted to procure a state-of-the-art emergency despatch and communication system for one of the most complex ambulance systems in the world. However a desire to cut operating costs and improve efficiency, a stormy relationship with stakeholders and users, and the tendency to ignore the trade unions severely hampered the development effort. The imposition of a fixed deadline for direct switchover in such an uncertain environment became a major constraint for the whole project. The case further highlights the politics of procurement, the danger of developing a system without adequate consultation, the risk from outsourcing and privatising vital public services, and the inability of sophisticated technology to overcome human and organisational issues.

ORGANISATION BACKGROUND

The first plans for an ambulance service in Melbourne, the capital of the South East Australian state of Victoria, were made in 1883. By 1887 sufficient funds have been accrued to purchase six Ashford litters, which were placed at the police station. In 1889, they were replaced by the first horse-drawn ambulance. This was the humble beginning of the Metropolitan Ambulance Service (MAS).

The current-day MAS is responsible for providing emergency medical transport, pre-hospital care, and non-emergency stretcher and clinic car transport services for around 3.5 million people throughout the Melbourne metropolitan and Mornington Peninsula regions, an area of almost 10,000 square kilometres. The Service is the largest ambulance service within the state, with 62 emergency response locations, 763 staff (excluding non-emergency contractors), 56 emergency ambulance teams, and 218 vehicles. It is also responsible for providing air ambulance services throughout the state. The Service is an integral component of the local health care system and, consequently, a significant infrastructure is in place to enable a rapid emergency response and delivery of pre-hospital care to the community. Note that many, but by no means all residents subscribe to the annual Ambulance Membership Scheme, which entitles them to utilise the full services offered by the MAS for free. In principle, non-subscribers are expected to pay for such services.

The objectives of the Service as outlined in the *Ambulance Services Act* of 1986 are as follows:

- *"to respond rapidly to requests for help in a medical emergency;*
- *to provide specialised medical skills to maintain life and to reduce injuries in emergency situations and while moving people requiring those skills;*
- *to provide specialised transport facilities to move people requiring emergency medical treatment;*
- *to provide services for which specialised medical or transport skills are necessary;* and
- *to foster public education in first aid."*

SETTING THE SCENE

In common with most ambulance services around the globe, emergency operations represent the primary function of MAS. In an average day, MAS ambulances attend more than 600 medical emergencies and are also involved in transporting around 400 patients. Not surprisingly, there is a public expectation that the Service will provide a timely, appropriate, and professional response to all calls for emergency assistance. To this end, the Service employs a range of resources to ensure that the best possible response is provided to each case based upon an assessment of the urgency and clinical condition of the patient involved in each emergency event.

Emergency ambulances are despatched according to the information received from callers. Each call is assessed and given a priority code. Code 1 is a time-critical emergency, so that the despatched ambulance proceeds with lights and sirens. Code 2 is an acute, non-critical case and the ambulance proceeds without lights and sirens. Code 3 is a non-acute or routine case.

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