

Utilization of the Helicopter Emergency Medical Service

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Introduction

The Helicopter Emergency Medical Service (HEMS), funded jointly by Express Newspapers and the Department of Health, is an experimental system seeking to define the exact role of helicopter based pre-hospital care in this country¹. It provides intensive roadside treatment for trauma victims, and efficient transport to a hospital with facilities to treat that patient's particular injuries. A secondary role is the immediate interhospital transfer of patients with serious injuries requiring treatment at a specialist centre.

The helicopter operates within a 50 mile radius of central London, and is available without charge to any ambulance service or hospital within this area, being despatched by the London Ambulance Service (LAS). The aim of this study is to examine the use of HEMS by the various ambulance services within the South-East of England.

Method

The source of each of the HEMS call-outs between 1 January 1990 and 1 January 1991 was identified from the record of each mission flown. These were subdivided according to whether the mission was a primary rescue, an urgent inter-hospital transfer, or a non-urgent inter-hospital transfer.

Results

HEMS was used to a significant extent only by the London Ambulance Service, 84% (304) of requests coming from this area (Table 1). Of the calls from outside London 40% (23) were for non-urgent inter-hospital transfers, 37% (21) for primary rescues, and 23% (13) for urgent transfers. Many of the requests to transfer patients between hospitals by helicopter originated from the medical staff involved, rather than the local ambulance control. This pattern of use of the helicopter was constant over the year of the study.

Discussion

HEMS is available without charge to improve the treatment of the seriously injured patient in the UK. 'Injury' is a 'hidden epidemic' which has received little attention until recently², but has profound social and economic effects³. The service provided by HEMS is part of a radical change in trauma care initiated by clinicians with the full support and involvement of the London Ambulance Service. It brings the technology and skills found in hospital to the roadside allowing more time to be spent stabilizing the patient on scene. Hospitals may then be by-passed where indicated, to take the patient to the most appropriate rather than the nearest centre. This approach is not fully accepted in this country, despite its obvious advantages and widespread use by helicopter-based services both in the United States^{4,5} and Europe⁶.

HEMS is used to a significant extent only by the London Ambulance Service (LAS), with remarkably few calls from the home counties. This is not surprising as the service is based in London and despatched by the LAS. However there are many victims of trauma outside the LAS area (Table 1) who are being denied this form of roadside advanced trauma life support, which has clearly saved lives within London, and contributed to the care of many more patients by rationalizing trauma care.

Many counties do not have all the specialist facilities (maxillofacial, thoracic, plastic, and neurosurgery with first class intensive care) that are needed to deal with multiple system injury together in a single institution (Table 2). Trauma victims requiring urgent transfer to Regional units are thus condemned to lengthy transfer by road, also requiring clinicians to leave their duties in the primary hospital to accompany the patient.

HEMS has been widely publicised by personal communication, information sheets, posters and action cards throughout the South-East of England, so lack of awareness is unlikely to be a reason for

Table 1. The number of requests for HEMS and number of road deaths/injuries in each county

Ambulance service	Primary rescue	Urgent transfer	Other transfer	RTA deaths*	RTA injuries*
London	213	30	61	446	49 668
Essex	9	3	0	146	10 719
Surrey	6	1	1	90	7628
Kent	2	0	5	138	7551
Berkshire	3	0	1	73	4142
Hertfordshire	0	0	0	83	5990
Buckinghamshire	0	0	1	63	3743

*Department Of Transport statistics 1988

Table 2. Regional availability of surgical specialties

Area	Neurosurgery	Cardiothoracic	Burns
London	x	x	x
Surrey	x		
Kent			
Berkshire			x
Hertfordshire			
Buckinghamshire			
Essex	x		x

as provided by HEMS⁷, to give roadside advanced trauma life support or to accompany ventilated patients to regional units. It would be impractical and very expensive for each ambulance service to have its own helicopter as three to four aircraft working in an integrated fashion would be sufficient to cover the whole of the South-East of England. There is a clear necessity for co-operation between the county ambulance services to utilize the helicopter to provide the best possible care for victims of trauma.

It is significant that the LAS is the only ambulance service to have made specific provision for helicopter operations in its control structure. The 'HEMS desk' in the LAS control room sees the details of every incoming 999 call and selects those to which it is appropriate to send the helicopter. This desk is manned by one of the paramedics attached to the project, so that the decision to despatch the aircraft is being made by someone familiar with its operation. It is unfortunate that other ambulance services have not yet realized the benefits of the HEMS service and do not appear to believe that the helicopter is available for their use.

The pattern of utilization of HEMS shown by these figures has implications for the future of pre-hospital care. If the system is not used to its full potential there will be great difficulty in assessing its value, and it will be easy to say that it has failed. It would be unfortunate if neglect of this service contributed to the continuation of 'Trauma Wastelands' in the areas outside London that currently lack an integrated trauma service. Correct use of this resource would simply require each county to provide a control structure working in harmony with the London Ambulance Service.

References

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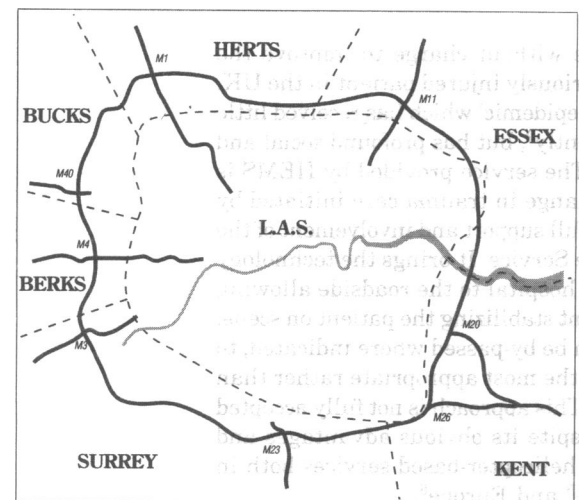


Figure 1. Map of M25 motorway showing ambulance service boundaries

the under-utilization of this service by some counties. There is inevitable resistance to the changes which HEMS represents, and in particular the mixture of medical and paramedical abilities. Part of this seems to be manifested by a reluctance to use the helicopter service. A graphic example of this is that in the year of this study HEMS was not called to any part of the M25 outside Kent or Essex despite the number of accidents with serious injury on this motorway. Almost all of the M25 is outside the LAS area (Figure 1).

Each county ambulance service has its own management structure and a high degree of autonomy. There are several plans for helicopter services within the South-East and the Kent Ambulance Service already has a helicopter service, without the benefit of a doctor