



**Report of the Consensus Conference
on Emergency Ambulance Services
April 1993**

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Contents

Executive Summary

Recommendations

Introduction

Defining Emergency Ambulance Services (EAS)

The Population

Outcomes

Factors Which Influence Outcome

Services

Factors Influencing Choice of Service

The Inter-relationship Between Services

Discussion

092209

Enabling Factors

Appendix 1 - List of suggested national service standards

Appendix 2 - List of participants

Appendix 3 - Glossary of terms

Appendix 4 - Conference background material

Appendix 5 - Methodology of consensus process

Executive Summary

The Emergency Ambulance Services (EAS) consensus conference convened a panel of clinicians, ambulance providers, and purchaser and consumer representatives. It met for two days to consider the key components necessary to provide effective EAS service delivery and thereby achieve the best patient outcomes.

A set of desirable patient and service outcomes were identified. The overall expected outcome of effective EAS is that the patient receives appropriate, timely care and, as necessary, transport to the appropriate medical facility, and arrives there in the best possible condition.

Factors which influence outcome were then identified under the headings of patient factors, access, patient care, cultural factors, and resource factors. Public knowledge of the service and ability to access easily through the 111 telephone system were seen as critical to achieving best outcomes.

The components of a fully comprehensive EAS were then considered, along with factors that influence a person's choice of whether or not to use the service. Those factors were summarised under the following headings:

- the precipitating event
- personal preference
- the profile of the service
- socioeconomic factors
- policy and regulation

The inter-relationships between EAS providers and general practitioners, hospitals, air ambulance services and other emergency services were also explored. Integration of air ambulance services into the overall ambulance system was seen as crucial if service duplication is to be minimised.

Discussion about how service fees affect consumer access concluded that there should be no distinction between accident victims and medical emergency cases. In addition, rural/urban differences result in particular access problems. Providing EAS to remote areas has resource, patient outcome and cost implications. Future services should be part of an overall regional service delivery plan.

Factors that would enable EAS providers to ensure their services are effective are split in this report into those within the sphere of influence of the providers and those that are outside service provider influence. The most important internal enabling factors relate to competency of staff and service standards. The most important external enabling factors identified were the political will to fund and purchase quality EAS and legislative recognition of the role of the ambulance service.

The panel reached the unanimous decision that EAS must be free to the user, and that the free status of 111 calls must be protected.

Recommendations

The consensus forum recommends that:

all emergency ambulance services be free to the user

any emergency ambulance response be on a 'Go-if-at-all-in-doubt' basis

the present free status of 111 calls be protected

emergency air ambulance services be fully integrated into the overall emergency ambulance service

duplication of services be avoided

there be a coordinated approach to funding regional EAS. Additional government funding, such as that available through the Lotteries Board, should be made available only when the proposal is part of a fully integrated regional plan for service delivery

there be improved information dissemination to the public from service providers about the purpose of EAS and how to access them

all emergency ambulance services be licensed, to ensure patient safety

national service standards be developed for all EAS

service contracts be flexible and recognise the circumstances of the local community. Differences in rural and urban areas should be taken into account when assessing crewing mix and where contracts include desired service response times

ambulance officers be registered

all emergency ambulances be crewed by two ambulance officers holding at least the elementary nationally recognised ambulance service qualification

ambulance services not be fragmented because of commercial contracting and commercial secrecy

Introduction

Background

In 1992 the Core Health and Disability Support Services Committee report recommended that emergency ambulance services be given priority by regional health authorities over the next two to three years. As a consequence the Department of Health, in consultation with those involved with ambulance services, embarked on a project to review emergency ambulance services.

Method

There are two stages to this project. The first was the convention of a consensus forum on emergency ambulance services on 7 & 8 April 1993. This report is the outcome of that forum. The second will be the presentation of policy advice, including this report, to the Minister of Health.

A paper outlining relevant issues was produced as background material for the consensus forum. The paper posed questions about the current and future emergency ambulance services in New Zealand.

Conference participants were selected by a small project team. Brief details of the participants are included in Appendix 2. Before the conference the participants read the background paper and the articles listed in Appendix 4. The methodology of the consensus process is outlined in Appendix 5.

The consensus conference considered:

- who should be the population to receive emergency ambulance services
- what the outcomes should be of an effective emergency ambulance service
- what factors influence the outcomes for patients
- what factors influence the choices people make when considering whether or not to call or use the ambulance service
- what the essential components are of an effective emergency ambulance service
- what the factors are that would enable effective, efficient service provision
- recommendations

Defining Emergency Ambulance Services (EAS)

Emergency ambulance services (EAS) assess, treat, and transport patients from a site of illness or injury to an appropriate medical facility.

The panel recommended that any definition of EAS take into account the following:

An emergency response is not necessarily vehicle dispatch. Telephone triage is usually the first response.

EAS deal with urgent, unplanned events. The service must be available on-call, 24 hours a day, 7 days a week.

It is essential that the request for help be taken at face value. Factors such as the caller being a third party (ie not the patient), the caller having English as a second language; the caller being highly distressed and so on, mean that patient assessment over the telephone is often difficult. Dispatch of emergency services **must** be on the basis of "if in doubt - turn out".

An EAS should respond in the same manner whether the situation is an accident or a medical emergency.

Not all emergency responses result in a patient transport. On occasion the call may not be as urgent as first thought; or the person may have died by the time the ambulance arrives; or the person may die even though appropriate treatment is initiated. Ambulance services do not generally transport deceased persons.

EAS must be prepared for potential as well as actual call outs. This emergency capability includes having the capacity to respond to civil emergencies, aircraft alerts, fire standbys, armed offender alerts etc.

An emergency transport may be an inter-hospital transfer. Ambulance officers transport patients to the nearest most appropriate facility. Patient deterioration or inability of the facility to manage the immediate medical or surgical needs of the patient may lead clinicians to deem a further transport necessary. If this further transport is within 24 hours of the initial injury or illness it should be classified as emergency transport.

The following definition attempts to capture these points.

"Emergency ambulance services provide a 24 hour, 7 days per week emergency response to any 111 or other urgent call requesting ambulance assistance. Emergency ambulance services include telephone response; assessment, treatment and transport of patients by land, air or water as soon as possible and within 24 hours of notification of the illness or injury; operation of a comprehensive 24 hour communications system; and the capability to respond to potential and actual major incidents."

Recommendation

That the above definition be accepted by purchasers of emergency ambulance services

That any EAS response be on a "Go-if-at-all-in-doubt" basis

The Population

The population requiring emergency ambulance services is potentially everyone in New Zealand or within New Zealand's territorial limits and area of responsibility who has or perceives that they, or their friend, relative, or other member of the public has, a medical crisis or a serious accident, and calls for ambulance assistance.

Emergency ambulance services (EAS) respond to a wide range of emergencies. The list below is to demonstrate the variety of calls the EAS attend and is illustrative of specific target populations EAS need to think about when delivering services. Some examples of population sub-groups are:

- ◆ The chronically ill and High Users¹
 - cardiac and asthmatic patients
 - alcohol and drug abusers
 - people with disabilities
- ◆ Trauma\accident victims
- ◆ Those with limited transport\access
 - carless
 - difficult access situations
 - remote areas
- ◆ Victims of criminal assault\rage
- ◆ Occupational accidents
 - industrial\farm\forestry workers
- ◆ Obstetric users
 - unborn and newborn
 - women in labour - especially when, as in Katikati, a special agreement exists
- ◆ Emergency inter-hospital transfers
- ◆ Potential or actual mass casualties
 - civil defence emergencies
 - armed offenders alerts
 - fire\airport\crowd emergencies
- ◆ People of different cultures
 - elderly Maori
 - Maori women caring for relatives
 - immigrant groups with English as a second language

We reiterate that all persons who call urgently for an ambulance should be responded to as quickly as is possible.

¹that is, persons holding High Use Health Cards

Outcomes

Having defined the population who require emergency ambulance services, the key question is "What is the outcome we are trying to achieve?"

desired patient outcomes

The overall expected outcome of effective EAS is that the patient receives appropriate, timely care and, as necessary, transport to the appropriate medical facility, and arrives there in the best possible condition.

Important features are:

- that the appropriate level of quality care is provided as swiftly as possible
- that any transportation is safe for the patient and minimises the likelihood of further injury
- that patient dignity, privacy and confidentiality is maintained
- that the patient feels satisfied and comfortable that their expectations have been met
- that the care delivered takes into account age, gender and cultural factors
- that there is good communication and co-ordination of emergency services for the chronically ill
- that services are "good value for money"

service outcomes

To ensure the above patient outcomes, service providers need to ensure:

- that the public are aware of the system
- that the system is affordable and user friendly
- that access is easy, particularly for those outside the major centres
- that there is timely delivery of service to the patient/caller/customer
- that appropriate telephone triage takes place, and that when dispatched, appropriate equipment and competent personnel are delivered rapidly to the site of injury or illness
- that the mode of transport is appropriate to the patient's condition and distance from the appropriate medical facility
- that the response meets the both the patient's and medical profession's expectations as well as community expectations
- that responding services present no hazard to others
- that resources are coordinated with other emergency response services (fire, police, medical services etc)
- that there is the capability to respond to a major disaster
- that services are cost effective and efficient from both the client and funder perspectives

Factors Which Influence Outcome

A number of factors were identified by the panel as influencing outcomes for patients. These have been summarised below:

- (a) **Patient Factors**
The precipitating event, the type of incident and its severity and urgency as well as the condition of the patient will affect the patient outcome.
- (b) **Access Factors**
The patient or caller must know how and when to access the emergency system. The present free status of 111 calls must remain. Geography and other physical rural and urban features affect the ability of providers to respond quickly to some calls. Availability of specific service resources, such as air ambulances, also impacts on the access an EAS has to the patient.
- (c) **Patient Care**
The competency of the personnel who arrive at the scene, the time it takes them to get there, the treatment initiated at the scene and during transit, and the treatment at the receiving institution all have a direct bearing on patient outcomes. Triage, that is making sure the right patient gets the right care first, is critical. This may begin as early as the telephone dispatch. Sensitivity to gender and cultural needs is also crucial for best outcomes. Staff skill maintenance is difficult in areas of low workload and ongoing staff training should be an integral part of any EAS.
- (d) **Cultural Factors**
EAS should be tailored to meet the needs of Maori and immigrant populations. Maori traditionally associated ambulances with "death" and as a consequence have been reluctant to call for or travel in one. Understanding cultural preferences, such as keeping injured or ill Maori together during transport whenever possible, and permitting whanau to accompany a patient, can assist in improving outcomes for Maori patients. Other immigrant groups frequently have language barrier problems of which service providers need to be cognisant.
- (e) **Resource factors**
Personnel are a major resource for the EAS because of the large number of, and reliance on, volunteer officers. The crew mix and the number of crew are especially important.

Outcomes are also dependent on getting the right equipment to the right place at the right time. Transport mode may depend on vehicles, aircraft and vessels available. EAS income may determine the type and level of service that can be offered.

Recommendations

That the present free status of 111 calls be protected

That there be improved information dissemination to the public about the purpose of EAS and how and when to access them

Services

So far this report has considered the target population and the desired patient outcomes. This section defines the services required to achieve those outcomes.

A wide range of services is necessary to provide effective, efficient EAS. A fully comprehensive EAS will include:

- A fully comprehensive communications system with 111 call integration for easy client access, telephone triage and advice, and field communications
- 24 hour, 7 day per week coverage for both telephone and transport responses
- Response by land, air or water to actual and perceived emergencies
- Command, control and administrative structures for day-to-day emergency response and for major incident response including civil defence emergencies, and which allow provision of on-scene triage and back up resources
- Networking with other emergency response services - (eg police, fire, midwives, GPs, air ambulance operators, etc)
- Formal protocols identifying hospital and treatment facilities to allow -
 - choice of appropriate treatment facility (eg ICU, psychiatric facility, recompression facility etc)
 - back up of medical staff when planned (assistance with critical care measures)
- Service review -
 - routine data collection and analysis, appropriate medical input into care procedures, appointment of regional medical directors, systematic medical and service audit, national standardisation of treatment guidelines and procedures, peer review and continuing competency evaluation
- Precautionary response capability
 - Armed Offenders alerts
 - fires/explosions/chemical spills/bomb scares
 - rock concerts, major sporting events and other large public gatherings
- Education Services -
 - public awareness of service availability, capability, and how to activate the system
 - life support skills (First Aid, CPR etc)
- Formal training systems for ambulance crews (from Entry to Paramedic levels) which are standardised nationally
- Liaison with allied community groups - Red Cross, Women's Refuge, Salvation Army, Surf Lifesaving organisations, Civil Defence, the Order of St John (non-ambulance part) etc

Factors Influencing Choice of Service

There are a number of factors which influence whether or not somebody will call an EAS.

(a) **The event**

The type of incident usually dictates whether or not someone feels an emergency ambulance should be called. The caller always believes the case is urgent. Time of day is often a factor, as is the place, (home, work, rural, urban etc) the geography (terrain, climate) and perceived availability of certain services (helicopter, launch), as well as the proximity of medical facilities.

(b) **Personal preference**

The caller is often a third party. Their previous experiences will influence whether or not they call an ambulance. The knowledge of the caller or patient about the service is a major factor. For Maori, one consideration is where they think they may be taken because they will often wish to remain near their whanau.

(c) **Service profile**

Public perceptions and knowledge of what their service offers and how to access it is a major influence. Historical factors also come into play, for example, in one area when the rural maternity hospital was closed, transport was guaranteed for mothers in labour.

(d) **Socioeconomic factors**

At present, most services charge a service fee to emergency medical cases. Those worrying about meeting the payment may choose not to call. Other people may believe that an ambulance fee is less than payment for a general practitioner and call inappropriately for an ambulance. A person without a car is also more likely to call an ambulance.

(e) **Policy and regulation**

Legislation and regulations impose limits on who may do what when delivering emergency services. Local attitudes and policies also come into play. In some areas chronically ill patients have 'standing orders' from their doctors as to when to call an ambulance.

The inter-relationship between services

EAS providers are part of the continuum of health care services. They intersect and inter-relate with other health providers. A smooth interface between all providers is essential if best outcomes are to be achieved.

General Practitioners

EAS officers are limited in the treatments they can administer. Medical practitioners are, therefore, a crucial resource, particularly in rural areas when distances from tertiary medical facilities impose longer transport times. General practitioners (GPs) and ambulance officers need to work closely and co-operatively, to ensure best patient outcomes. They should look to each other for support and view their roles as complementary. Extra education for GPs intending to work in emergency medicine, and appropriate ongoing education for those GPs currently providing emergency medical care, should be mandatory.

Hospitals

The interface between EAS and receiving hospitals is critical for quality patient care. Communication prior to patient arrival should be the norm for serious cases. Ambulance officers need protocols determining which facility is the most appropriate for particular cases (the "right place"). EAS need access to relevant patient information held by hospitals, particularly data relating to patient outcome, so they can properly audit their services.

Air Ambulance Services

EAS include land, water and air services. Most people think of the road vehicles when 'ambulance' is mentioned. At present air ambulances are operated by private businesses, usually under the Air Rescue Trusts umbrella, and are mostly independent of land based ambulance services. The panel considers that emergency ambulance services should encompass **all** services, irrespective of mode of transport. Air ambulance services should be integrated with land services, probably by sub-contracting with currently recognised EAS providers (such as the Order of St John). This would best provide effective utilisation of the resource, avoid service overlap, ensure safety standards are met and allow clear accountability for costly air ambulance dispatch.

Other emergency services

The new health environment will allow the free exchange and management of resources in innovative ways. Opportunities will arise, for example sharing of communication networks or headquarters or station space with other emergency response services. Such opportunities should be investigated to assure that duplication is avoided and the best use is made of public funds.

Recommendations

That emergency air ambulance services be fully integrated into the overall emergency ambulance service

That duplication of services be avoided

Discussion

The panel recognised that some particular features of the current ambulance service may not be generally known. Those features which impact especially on the delivery of a quality emergency service are discussed further below.

Service fees and patient access

Apart from the Wellington Free Ambulance, ambulance services have a fee for users other than accident victims. At present, ambulance services receive funding from various sources. Accident victims are covered by the Accident Rehabilitation Compensation and Insurance Corporation. Grants from area health boards and community fundraising efforts assist with the operating costs for non-accident cases but do not fully cover them. User fees are therefore charged to patients who have medical conditions (as opposed to injuries caused by an accident), to make up the difference.

This conference was concerned only with the emergency services ambulance operators currently offer. The panel agrees with the Core Services Committee that EAS should be a core service. Further, in an emergency situation, there should be no distinction between someone who has had an accident and someone who has a medical problem, such as a heart attack. Free emergency ambulance services are a fundamental part of health service delivery. In the reformed health sector, sufficient funds should be allocated to Regional Health Authorities to enable this to occur.

Recommendation

That all emergency ambulance services be free to the user

Rural vs Urban patient access

Historically, ambulance services were funded by keen local populations. Consequently they were not always placed in the most advantageous positions for a rapid response to all the areas they cover today. The recent closure of outlying hospitals has stimulated the concern of rural communities that their access to ambulance services in emergencies be assured. Population distribution, the terrain and other geographical factors affect travel times. If purchasers intend to specify response times for EAS, consideration must be given to differences between rural and urban areas.

Rapid service delivery to remote areas has resource, patient outcome and cost implications. The panel believes this cost must be accepted by funders and purchasers if rural populations are to have equity of access and if downstream costs are to be minimised. However ad hoc development of services is inappropriate. Future services should be part of an overall service delivery plan for the region. Extra funds, such as those available through the Lottery Grants Board, should be utilised only for services that are part of the agreed regional plan.

Recommendation

That extra government funding, such as that available through the Lotteries Board, be made available only when the proposal is part of a fully integrated regional plan for service delivery

That contracts which include desirable response times take into account differences in rural and urban areas.

Workforce Issues

Even though ambulance officers are front-line health care workers, they are not registered health professionals. This means that they are not statutorily registered as achieving minimal competencies for patient safety. Yet ambulance officers can administer certain drugs, use cardiac monitors and perform certain surgical procedures. Given the high risk nature of EAS work, registration is seen by the panel as imperative to ensure protection of the public.

A substantial part of the workforce is volunteer (around 2,200 nationally). EAS in the five largest centres make some use of volunteer officers, while those elsewhere are either greatly or wholly reliant on them. This means that staff training needs are different to those of other health professionals. Many of the wholly volunteer stations are in the most remote areas.

It is generally accepted that two persons are required to perform resuscitation effectively. As well, the driver cannot effectively care for a critically ill person whilst driving the vehicle. Two person EAS crews are thus seen as vital, although each person may have a different skill level. Assessment of crewing mix should take into account the differences in staffing between rural and urban areas. Some rural areas, with large numbers of volunteers, have more officers available to crew vehicles. In general, there are fewer paramedics in rural areas. Skill maintenance in areas of low workload is essential. The panel believes that the minimum training acceptable is that of the National Ambulance Officers Training School (NAOTS) Elementary Ambulance Aid course.

Recommendations

That ambulance officers be registered

That all emergency ambulances be crewed by two ambulance officers holding at least the elementary nationally recognised ambulance service qualification

That any assessment of crewing mix is systematic and takes into account differences between rural and urban areas

In the future

Legally, anyone can establish an ambulance service. All that is required is a passenger service licence from the Land Transport Division of the Ministry of Transport. This licence, however, has nothing to do with safety standards. There is currently little in the way of enforceable safety or medical-related standards covering air ambulance services, although air operators have an admirable safety record to date. As the health sector becomes more competitive and a free-market environment requires contracts with regional health authorities, this lack of formal safety standards carries the risk that unsafe operators can tender to deliver services. Those service components for which standards and guidelines should be developed are attached in Appendix 1. Licensure to ensure public safety is seen by the panel as essential. Concern was also expressed that the co-operative environment which currently exists may be jeopardised by commercial contracting, with commercial secrecy leading to fragmentation of services.

Recommendations

That all emergency ambulances be licensed, to ensure public safety

That national service standards be developed for all EAS

That ambulance services not be fragmented because of commercial contracting and commercial secrecy

Enabling Factors

Consensus was obtained on the following factors which would allow the provision of effective EAS and thereby achieve best patient outcomes.

internal enabling factors

These are factors that are within the sphere of influence of the service providers.

- Recognition that the patients, and what they perceive is best for them, come first whenever emergency ambulance services are discussed
- Competency requirements for individual ambulance officers
- Accreditation of services, documented quality improvement systems, ongoing performance review for all facets of the service
- A 'gold standard' to work towards
- Integration of local and central services (there is a role for the provision of services from a central base which could deliver a higher standard of skills and equipment and back up local services)
- Upskilling of and skill maintenance for all providers, including GPs
- Performance review
- National co-ordination of some ambulance activities (including communication networks, transport specifications [applying to all modes], training)

external enabling factors

These factors would enable the service providers to meet the expected outcomes but are outside the ambit of influence of the services.

- The political will to fund and purchase quality emergency ambulance services. EAS should be free to the user at the point of service delivery
- Guaranteed continued patient access to the ambulance service through the 111 communications network, free of charge
- Legislative requirement of the role of the service. The ambulance service is not currently recognised in law. This lack of statutory recognition means the ambulance service does not have the legal support given to other similar services such as fire and police services. There exists, therefore, a potential compromise of public safety. Ambulance officers cannot "break in" to homes to treat or retrieve patients, are not required to attend major gatherings eg rock concerts etc. Ambulance neutrality is seen as a plus, in that officers can intervene and treat any person without being seen as judgemental.

- Needs analysis of patients and their communities
- Recognition by purchasers that there is a higher short-term cost for improving rural consumer access to services, but that this is likely to reduce long-term costs
- Recognition by purchasers and planners of the resource implications for emergency ambulance services of an increased emphasis on community versus institutional care and of the centralisation of some services
- Recognition that the provision of rural services from a central base will increase costs and that this is a 'given' which should be accepted if adequate services are to be maintained
- Recognition by the purchasers and providers that there are cost implications in separating routine ambulance services from emergency ambulance services. There are efficiencies in integrating both types of service delivery
- Development of a national classification of:
 - i) the severity of an illness\injury,
 - ii) appropriate levels of response,
 - iii) appropriate levels of care, and
 - iv) the status or category of medical facilitiesto provide guidelines on required levels of service
- Better planning of services. Services should not be on the basis of a local community's ability to pay and developments should be planned. Providers should negotiate with their RHA about the rational placement of ambulance bases
- The right to recognise when death has occurred
- Registration of individual ambulance officers
- Enhanced opportunities to share resources with other community agencies and other emergency service resources, (police, district nurses, fire etc). In particular the potential exists for sharing of communication resources and vehicle bases
- Educational programmes to enhance the acceptance of centralised service provision and to improve communications between ambulance services, general practitioners and intensive therapy units
- Regulation where necessary to maintain specific, key service standards

Appendix 1

The panel recognised that contractual obligations will require local variation in service delivery. However development of national service standards and guidelines is suggested for the following:

Standards

- training
- transport modes; land, air or water
- equipment
- skill maintenance
- performance review
- patient informed consent procedures

Guidelines

- response times, rural, urban
- triage - right people to the right place
- systematic audit (medical, service, process)
- quality assurance programmes
- management processes
- efficacy - does the service do what it says it does
- appropriateness of care
- procedures to enhance patient dignity and choice of service
- performance indicators

Appendix 2

i

Participants (in alphabetical order)

Mr Ross Biggs is Senior Tutor at the National Ambulance Officers Training School (NAOTS) at the Auckland Institute of Technology. Ross has been in the ambulance service for 20 years and was a paramedic, serving as Deputy Chief Ambulance Officer, Waikato region, before joining the School in 1986.

Mr Peter Bradley is the Regional Chief Ambulance Officer for the Auckland Ambulance service, the busiest ambulance service in NZ. He has been in the ambulance service for 17 years and is a qualified paramedic. Peter's particular interest is the promotion of the role that ambulance services play in the delivery of patient care.

Mr Bernie Chatterton is currently Regional Chief Ambulance Officer for the northern region of the South Island. Bernie has served as an ambulance officer since 1972. He has worked for the Auckland Ambulance Service, has tutored at the NAOTS, and has held senior posts with the NZ Institute of Ambulance Officers. During his Presidency of the Institute, Bernie led the drive to achieve formal registration for ambulance officers.

Dr Denholm Crone was the clinical co-ordinator for this project. He is an intensive care specialist at Middlemore Hospital, and spends one-third of his time as Medical Director for the Auckland Ambulance Service. Denholm is also medical adviser to the NZ Ambulance Board and Convenor of the Board's medical sub-committee. He has been involved, among other things, with standardised recording of treatment for cardiac arrest patients. His particular interest is on how formal medical audit can improve patient outcomes.

Mr John Funnell has been a helicopter pilot for 25 years. John has been the Chief Executive of the Philips Search and Rescue Trust since its inception in 1985. He is responsible for the day-to-day operation of 3 air ambulance helicopters and 1 fixed wing air ambulance.

Mr Steve Hutchison is General Manager of Northland Ambulance Services, and the Executive Officer of the Northland Emergency Services Trust which operates the local air ambulance service. Steve has been involved with ambulance services for 18 years, holding senior positions for the last 12 years, predominantly with the Auckland service. He is also currently involved with two national projects for the NZ Ambulance Board as a member of the Radio Network Management Committee and as project officer for Quality Assurance Accreditation. **Steve was part of the planning team for this project.**

Dr P R Hyde is an Intensive care Specialist/Anaesthetist at Waikato Hospital. Rowan is the Medical Director for the Order of St John, Waikato region, and of the Philips Search and Rescue Trust. His major interest is in emergency pre-hospital care and transport for trauma victims and the critically ill.

Ms Jeni Irving is Charge Nurse, Wellington Emergency Department, a post she has held since 1991. Since registering in 1980 Jeni has specialised in intensive care and emergency nursing, spending five years in each specialty. She also has experience in District Nursing.

Mrs Putiputi MacKey, Nga Puhi, Ngati Porou, and Ngati Matenga is a consultant on Maori education, teaching and learning. Puti's special interest is the development of positive parenting as part of Maori education, and Maori health.

Mr Bruce Monkton is the Clinical Support Services Manager for the Northern Regional Health Authority. Bruce has been involved in the health sector for 20 years, with experience managing services in the United Kingdom, Australia and New Zealand. Prior to his current position he was the Manager of Auckland Hospital and Auckland Community Health Services.

Mr Gregory Phillips is the Manager of Ambulance Services for the Manawatu/Wanganui Area Health Board. He began his ambulance career in the early 1970s and worked as a paramedic with the Wellington Free Ambulance before transferring to Taranaki to develop the regional ambulance services there. Greg moved to his current post in 1991.

Dr Angela Pitchford is an emergency medicine specialist. Angela is currently Director of Emergency Services at Auckland Hospital. Previously she was head of the emergency department at Christchurch Hospital. Angela is also an instructor for the Emergency Management of Severe Trauma courses offered to rural GPs and specialty registrars.

Dr Peter Robinson is a specialist in public health and occupational medicine. He is presently the Corporate Medical Advisor for the Accident Rehabilitation Compensation and Insurance Corporation. Peter's background is in military emergency services, his previous position being that of Director-General, New Zealand Defence Medical Services.

Mr Gary Salmon, Chief Executive Officer for the Order of St John in the Waikato/Bay of Plenty districts, has worked in the ambulance service since 1969. He supervises the operations of the Order of St John, volunteer community service activity, and public first aid training throughout the region. Gary is also the National Director of Training for the NZ Ambulance Board, and a Fellow and past Inaugural President of the NZ Institute of Ambulance Officers.

Ms Rachael Selby, Ngati Pareraukawa and Ngati Raukawa, was nominated by the Ministry of Consumer Affairs to participate in the conference. Rachael is a lecturer in social policy and social work at Massey University. Her special interests are in education, parenting and Maori community activities, including health issues for Maori women and families.

Dr Tessa Turnbull is a general practitioner from rural Katikati. Tessa is also the current chair of the Royal New Zealand College of General Practitioners. Her special interest is in medical education and quality assurance.

Mr Robin Wakelin has been connected with health services since 1981. Since 1989 he has been Executive Director of the NZ Ambulance Board, which is the national advocate and co-ordinating body for the present operators of emergency ambulance services. Prior to that Robin was a senior manager with the Wellington Hospital Board.

Mr Craig Wombwell is Chief Ambulance Officer for the Otago Region, a post he has held since 1988. Originally a registered general nurse, Craig is also a paramedic. He is the present chairman of the Chief Ambulances Officers Committee of the NZ Ambulance Board.

Appendix 3

Glossary

- Response time - The interval of time from when a call is received until an ambulance unit arrives at the place for which it is requested
- Triage - The sorting out and classification of casualties, to determine priority of need and proper place of treatment
- Crewing mix - The combination of qualifications and experience amongst the crew members in a particular ambulance
- Paramedic - an Advanced Care Ambulance Officer. Paramedics, under delegated medical authority, can instigate a range of advanced life-saving measures and administer certain drugs and treatments
- Accreditation of services - an independent audit process which assesses the quality of service delivery and service resource management against pre-determined criteria. TELARC New Zealand (the specialist statutory body which registers and accredits service suppliers under it enabling act of parliament) has been working with the NZ Ambulance Board to design a special accreditation programme for ambulance services.
- Gold Standard - an ideal, against which a service could measure itself
- Whanau - customary Maori extended family
- CPR - Cardiopulmonary resuscitation

Appendix 4

Reading List

Prior to the consensus conference participants read:

Annual Survey of Ambulance Services in New Zealand 1990/91 NZ Ambulance Board

Ambulance stations - type and location (colour map)

Community emergency care: a possible conflict between general practitioners and the ambulance services Noel T Potter (NZ Family Physician 1984, 11: 185-186)

Locating emergency medical services in small town and rural settings Greg Halseth and Mark Rosenberg (Socio-Econ. Plann. Sci. 1991 Vol. 25, No. 4. pp, 295-304)

Ambulance utilisation in Sweden: Analysis of Emergency Ambulance Missions in Urban and Rural Areas - Bo Brismar, Bengt-Einar Dahlgren, Jarl Larsson (Annals of Emergency Medicine November 1984 13:11)

Emergency Ambulance Service Performance Standards (Health Services Management, May 1992)

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Location of air ambulance helicopters in New Zealand (maps)

Review of Airborne Emergency Medical Services in New Zealand March 1993 - Executive Summary Auckland Regional Rescue Helicopter Trust

Effect of the Cornwall helicopter Ambulance on Ambulance Service Emergency Response Time - Andrew Rouse (West of England Medical Journal September 1991 Volume 106 (iii))

Air Ambulance Protocol Order of St John, Waikato

plus a background paper written especially for the conference which identified the issues and matters of current concern for the EAS

Appendix 5

Conference methodology

Background material, selected by the project manager and a small project team (see list, appendix 4) was distributed for reading prior to the conference. The conference was held over two days, with no opportunity for over-run. The proceedings were managed by a facilitator. A representative of the Department of Health was present throughout to clarify the brief.

Panellists were chosen by the project team. They were people who were highly regarded by their peers in ambulance services and most had considerable involvement in the delivery of quality ambulance services in New Zealand. They were selected from the many people who could make a valuable contribution, so as to achieve an overall balance of knowledge and experience. They were invited as individuals, not as representatives of any particular organisation. Their selection did, however, take into account geographical, service orientation, gender and cultural factors.

Consensus is defined as a recommendation that all participants can support. It does not mean it is the preferred option of every participant, and it is not a majority vote.

Consensus was first sought on whom the emergency ambulance services are intended to benefit, and what relevant outcomes should result from service delivery.

Consensus was identified verbally, and the clinical co-ordinator and project manager took responsibility for accurately reflecting the consensus achieved. Participants were given the opportunity to comment on the draft reports.

Participants were invited to comment on the process of the conference and responses were largely affirmative. Overall, participants found the process positive and enjoyable. The representation of the conference participants was noted as being weighted in favour of providers, with a range of health professionals outnumbering lay representation. This could have the effect of skewing the recommendations towards service requirements at the expense of consumer needs.