



Strategic Statements

Australian and New Zealand Ambulance Services – A strategic direction for the future

Introduction

The Council of Ambulance Authorities (CAA) is the peak body representing the principal statutory providers of ambulance services in Australia, New Zealand and Papua New Guinea. This document provides an overview of the key issues and future strategic directions of Australian and New Zealand ambulance services.

The CAA provides a forum for sharing information and developing common strategies for the ambulance industry. The principal objectives of the CAA are to promote the development of ambulance services in Australia and New Zealand and to provide a voice for ambulance issues of national significance. The CAA also has strong links with international EMS groups and facilitates international exchanges of information to promote best practice.

Ambulance services provide pre-hospital and out of hospital clinical care to the sick and injured through the provision of emergency and non emergency patient care, transport; inter-hospital patient transport; specialised rescue services; response to multi casualty events; and capacity building for emergencies¹.

Ambulance services utilise a variety of service delivery models to ensure that all communities have access to appropriate pre-hospital care. These systems use combinations that include first responders, volunteer ambulance crews, paramedics (including redeveloped roles to meet community needs), air ambulance and rescue and the use of related agencies that provide aeromedical and rescue services all of which are supported by efficient and effective communication systems.

Australia has a vast geographical area which makes providing ambulance services in rural and remote areas even more challenging than in the metropolitan areas. Australia has a land mass of 7.7 million square km rated sixth out of the seven largest countries of the world with a population of approximately 21 million. Compared to other countries Australia has one of the smallest population density equating just 2.7 people per square km. Population is more highly concentrated on the South Eastern Sea Border with population density highest in the city centre's. Australia's topography is one of the lowest, flattest, and driest of the continents².

The health of Australian's is comparable to other developed countries with one of the highest life expectancies at birth. The leading causes of death are cardiovascular diseases, cancers and respiratory diseases with injury the leading cause of death in the first half of life. Australian's living in rural and remote areas experience higher rates of illness and disease and a shorter life expectancy compared to those who live in the major cities which is partly contributed to a higher rate of indigenous population³. Australia's indigenous population represents 2.5% of the population and has a significantly lower life expectancy than the general population. Indigenous Australians are hospitalised at five times the rate of non indigenous for potentially treatable conditions⁴.

New Zealand consists of two main islands; the North and South Island with a total land area of 268,680 square kilometres. The population of New Zealand is approximately 4.2 million and the majority (72%) of the population live in urban areas. Compared to Australia, New Zealand has a

¹ SCRGSP (Steering Committee for the Review of Government Service Provision). (2007). *Report on Government Services 2008*. Productivity Commission, Canberra.

² Australian Bureau of Statistics (2008). *Year Book, Australia, 2008*. Cat no. 1301.0, ABS, Canberra.

³ Australian Institute of Health and Welfare (2008). *Australia's Health 2008*. Cat no. AUS 99, Canberra.

⁴ Australian Bureau of Statistics (2008). *The Health and Welfare of Australia's Aboriginal and Torres Strait Islander Peoples, 2008*. Cat no. 4704.0, ABS, Canberra.

higher population density with 14.9 people per square kilometre. The topography is varied with predominately mountainous regions with some large coastal plains⁵.

Australia's health system provides affordable and accessible health care through a national health care funding system 'Medicare'. Medicare is financed through a levy based on a person's taxable income and provides subsidies for prescribed medicines, subsidised treatment by medical practitioners, and access to public hospitals at no cost to the patient. This allows Australians a choice between using a public system or access to a private system via obtaining private health insurance⁶.

Australian Commonwealth government provides a leadership role in national issues such as health and policy making whilst the States and Territories are responsible for the funding, delivery and management of a wide range of public health services. Funding for public hospitals and community care for aged and disabled persons is jointly funded by the Commonwealth and the State and Territory governments. There is also a large private sector providing health services and the Commonwealth provides a subsidy for those individuals insured by private health insurance.

In New Zealand there are 21 District Health Boards (DHBs) responsible for providing or funding the provision of health and disability services in their district. The Government, through the minister of health, allocates funding to the 21 DHBs to purchase health services for the people of New Zealand using a weighted population-based funding formula. The District Health Boards are supported by the Ministry of Health which provides national policy advice, regulation, funding, and monitors agency performance. Similar to Australia, publicly funded health services include; free public hospital treatment and subsidies on prescriptions and for visits by family members to GPs. Insurance to access private healthcare can also be purchased⁷.

The organisational and corporate arrangements of ambulance services across Australia and New Zealand are a mix of State Government statutory authorities, divisions of Departments and not for profit organisations providing services under contract to State Governments (St John in WA, NT and NZ).

The role of ambulance services in the health system is increasingly well recognised at the State level, but is not widely appreciated at the Federal level. A key aspiration of the CAA is to ensure that policy makers understand the current and potential contribution of ambulance services to health system performance, as well as the impact decisions in other parts of the health sector may have on ambulance services.

This document identifies issues impacting ambulance services across Australia and New Zealand, captures broad developments, and provides a consensus on common themes and an agreed direction on where the industry identifies key areas for future developments.

⁵ New Zealand Geography. (2008) *Environment and Demographics*. Accessed 3rd June 2008: http://en.wikipedia.org/wiki/New_Zealand

⁶ Financing and Analysis Branch Commonwealth Department of Health and Aged Care. (2000). *The Australian Health Care System: An outline*. Commonwealth of Australia.

⁷ Ministry of Health. (2003). *New Zealand Health and Disability Sector Overview*. Wellington: Ministry of Health.

Strategic areas

The CAA provides an opportunity for member services to develop a body of knowledge through research, exchange of information, monitoring and reporting of key components relating to ambulance service delivery including clinical practices, service delivery models and educational standards. Ambulance services are focusing on achieving best practice pre-hospital and out of hospital care through both evidence based research and expert consensus in order to provide communities and patients with better health outcomes.

This document provides an overview of the key issues impacting ambulance services and provides the industry with a broad direction for the future. The areas of focus as outlined in the document are categorised as; service delivery, workforce, resources and systems, and integration of the community and health care systems.

1. Service delivery

This section describes issues around service delivery including increasing demand for services, maintaining efficiency of service delivery, rural and remote challenges, meeting the needs of the community, using evidence based research to guide both service delivery models and clinical practice, and technological systems and interoperability.

1.1 Demand

Over the past five years across Australia there has been an increase of 17.3% across all incident types, and a 21.7% increase in emergency and urgent incidents per 100,000 persons⁸. Ambulance services are striving to maintain standards of service delivery in light of this increasing demand by using a variety of strategies.

A study investigating factors in ambulance demand found that between 1996 and 2001 only 25% of growth in service utilisation could be attributed to demographic factors of age and gender⁹. This left 75% of change contributable to other factors that influence ambulance demand including; changing health system practices and policy environments, disease patterns, dispersed population, socio-economic change, access to alternative services, public expectations/perceptions and changes in domestic circumstances.

Levels of unmet need, i.e. patients with acute conditions who self present to an emergency department rather than arrive by ambulance transportation, demonstrate the potential for further increases to ambulance demand. Although it is unclear what proportion of patients should be transported by ambulance for each triage category, comparing the proportion of patients by triage category demonstrates a number of patients in triage categories 1 and 2 who are self presenting. Triage category 1 are conditions that are immediately life threatening such as cardiac or respiratory arrest and require immediate attention and triage category 2 are conditions that are imminently life threatening such as severe respiratory distress and require treatment within 10 minutes.

The challenge for the industry is to meet the unmet demand in an environment of a health system under increasing pressure. In order to address this issue ambulance services are

⁸ Council of Ambulance Authorities. (2008). *2007-08 Annual Report*. Accessed 21st July 2008 at <http://www.ambulance.com.au/intranet/docs/doc4505.pdf>

⁹ Livingston, C., Condron, J., Dennekamp, M., Taylor, M, Gardner I., & Bakacs, L. (2007). *Factors in ambulance demand: options for funding and forecasting*. The Australian Institute for Primary Care, Faculty of Health Sciences, Latrobe University, Victoria.

continuing to monitor the increases and are committed to exploring new options for managing demand. Ambulance services are ensuring that where the demand doesn't warrant the traditional services provided by ambulance, new services and options are being developed to better meet the needs of the patient and to ensure efficient use of ambulance services resources.

The options being explored by ambulance services come under three broad categories; public education, telephone triage and referral, and expanded roles for paramedics. Public education strategies include campaigns to raise awareness of the role of ambulance as an emergency pre-hospital health care provider in order to reduce the numbers of inappropriate calls to ambulance services, encourage the use of ambulance services for emergency health care and encourage the public to insure against the cost of ambulance services.

Telephone triage and referral strategies are being used at the point of the call for patients that require health care advice but do not require an ambulance response. This includes referral services within the ambulance call centre or external services, for example the national COAG initiative the National Health Call Centre Network which provides the public with health care information and advice. Paramedic roles are also being redesigned to treat and leave or refer patients at the point of contact rather than transport all patients to the emergency department.

1.2 Efficiency of service delivery

There is a commitment amongst services to benchmark performance in order to drive efficiency and improvements to service delivery. Ambulance services are improving efficiency of operations by monitoring ambulance demand and performance through a variety of measures including utilisation rates, cases per capita, and response times. Ambulance services recognise response times are an important component of service delivery although also recognise that the primary focus is on improving patient outcomes rather than primarily timeliness of response.

Ambulance services are also collaborating with other health services to ensure the patient is transported to the correct health service according to their needs. Ambulance services are implementing a range of strategies to ensure efficient services including the use of single responder vehicles to ensure appropriate resources are sent to the appropriate patients.

1.3 Rural and Remote

Ambulance services face many challenges in providing services in rural and remote areas where health services may not be readily available in the local area. There is a variety of ambulance service delivery models used in rural and remote locations to ensure that communities have access to appropriate care. This includes community first responders, volunteer ambulance crews, paramedics, extended care paramedical services, mixed volunteer and paramedic crews, air ambulance and rescue and the use of related agencies that provide aeromedical and rescue services all of which are supported by efficient and effective communication systems.

Volunteer involvement has been a long standing feature of rural and remote ambulance service provision in parts of Australasia for many decades. Factors such as Australia's huge land mass, low population density, the numbers of people living in small rural towns and the distances from many towns to larger regional centres in combination have necessitated volunteer involvement in emergency services to ensure cost effective service provision.

The role of the ambulance volunteer varies between services, with some volunteers acting as community first responders providing care to the patient pre the ambulance arrival to volunteer ambulance officers who have both treatment and transport capability. Volunteers are also used to provide a wide range of administrative support roles.

Whilst most emergency services volunteers provide their services for 'free', in Victoria, volunteer ambulance officers are remunerated for some of their time (response and training), but not for other time (on-call). In Victoria there are also a number of unremunerated ambulance community first responders.

Volunteers are and will remain an essential part of ambulance service delivery in Australia and New Zealand. It is estimated that CAA member Australian and New Zealand ambulance service volunteers are collectively on-call approximately 8.4 million hours per year. The CAA recognises and values the significant contribution volunteers make to Australasian communities and the many sacrifices and challenges volunteers face in their duties particularly in rural and remote areas.

Although volunteers are recognised by Government as making a valuable contribution, they are not cost free to governments or the employers who provide funds and support to volunteer organisations. Volunteering also can come at a financial cost to the individual to cover direct costs such as; petrol, food and drink, clothing, training and education; and in-kind contributions such as; use of own phone, office equipment, motor vehicle repairs and maintenance, etc.

The main challenge identified by ambulance services impacting the sustainability of rural and remote ambulance services is the difficulty in recruitment and retention of both paramedics and volunteers to these locations.

Ambulance services are exploring innovative options to improve access between health services through collaboration with health care providers and the community. In rural and remote locations paramedics are providing their services in hospital ED departments as a response to both GP and nurse shortages; coordinator roles primarily aimed at supporting volunteers and the community with additional health services when required and in roles promoting injury and disease prevention. This collaboration provides these communities with better access to a wider range of health care options.

The CAA collaborates with various organisations and peak bodies in order to provide its members with information on current best practice for the education, training and delivery of pre-hospital emergency care in rural and remote locations.

The CAA's Rural and Remote Group is a member of the National Rural Health Alliance (NRHA) which is the peak body working to improve the health of Australians in rural and remote areas. The CAA is also represented on the Australian Emergency Management Volunteer Forum, a national forum representative on the volunteer emergency management sector, to facilitate better communication between the organisations within it, and to provide advocacy for the sector. International developments are monitored through participation on the International Roundtable on Community Paramedicine, an organisation of delegates from various countries and regions to promote the exchange of information and experience related to the provision of flexible and reliable health care services to residents of rural and remote areas.

1.4 *Community satisfaction*

The satisfaction of the community with ambulance services is annually measured through a national patient satisfaction survey instrument. Results from this survey consistently find a high level of patient satisfaction with the ambulance service. In 2009, 97% of patients surveyed were satisfied or very satisfied with the overall service provided¹⁰. Ambulance officers are also consistently rated as Australia's most trusted profession followed by fire-fighters, pilots, nurses, pharmacists, and doctors¹¹.

1.5 *Evidence based approach*

Ambulance services are moving towards evidence based approaches to practice with performance measured primarily through patient outcomes. Ambulance services currently measure cardiac arrest survived event rates (measuring patient survival to hospital) and in the short term aim to report indicators on cardiac arrest survival to hospital discharge and effectiveness of pain management.

Ambulance services will continue to develop indicators that measure clinical areas and patient outcomes to improve patient care. The CAA is in the process of developing new performance indicators to demonstrate the equity and effectiveness of access of services to specific parts of the community, quality and safety of services provided, patient outcomes and the long term sustainability of the ambulance workforce.

In 2009 ambulance services reported against a revised performance indicator framework in the Report on Government Services (RoGS). This framework was adapted to align with the framework used in the health section of the report based on the National Health Performance Framework.

1.6 *Technological systems and interoperability*

The Triple Zero number is a vital platform for consumer access to emergency ambulance services across Australia. It also provides emergency services with essential information, which must be up-to-date and correct, in relation to caller information such as name and address. The increasing usage of mobile phones and VOIP has had a deleterious effect on the timeliness of emergency call taking due to the need to ascertain from the caller their location. Indeed, some VOIP providers may not be able to provide customers with access to emergency calls.

It is essential that the Australian Communications and Media Authority (ACMA) and Telstra continue to maintain an intact environment and that Telstra meet its service level obligations in relation to Triple Zero. This is of particular importance in an environment of constantly emerging technologies, some of which could detrimentally affect the Triple Zero service such as voice over internet protocol, which has the potential to immobilise the Triple Zero system by overwhelming it with calls.

The policy response in relation to constantly emerging technologies must be proactive if it is to ensure timely risk management of these issues. A sustainable regulatory framework needs to provide for flexible approaches that are responsive to change and can accommodate new dynamics.

¹⁰ Bogomolova, S., & Hoj, S. (2009). *Council of Ambulance Authorities – Patient Satisfaction Survey Results 2009*. Ehrenberg-Bass Institute for Marketing Science, Uni SA, South Australia.

¹¹ Atkins, M. (2008). *Australia's most trusted professions*. Readers Digest. Accessed 17th July 2008 <http://www.readersdigest.com.au/content/australia-most-trusted-professions-2008>

Radiocommunication and interoperability is an issue of strategic importance to ambulance services across Australia. Interoperability is defined as the ability of two or more different agencies to interact and exchange information, according to a prescribed method, in order to achieve successful outcomes.

There are a number of national police and emergency service working parties with input to this issue, including the National Counter Terrorism Committee (NCTC), the AEMC and ACMA. Ambulance Services need to ensure their interests are represented in any national strategic approach.

The national goal of the Standing Group on Law Enforcement and Public Safety Radio communication Interoperability is to establish a seamless, coordinated wireless voice and data system across the State and Territory and Australian Government public safety agencies to ensure first responders have the necessary means to communicate with one another, to maximise information sharing and facilitate decision-making.

Radiocommunication interoperability across Australia's law enforcement and emergency services would be of critical importance during a terrorist incident in providing accurate situational awareness for decision-makers, and potentially limiting fatalities among public safety agency personnel and the wider Australian community. However, an all-hazards approach must be taken, which incorporates issues of day to day public safety and emergency management, in developing interoperability.

It will be essential that public safety and emergency management agencies and jurisdictions are committed to the establishment of interoperable wireless and voice data, and that collaboration and coordination across these agencies is enhanced. All jurisdictions would need to plan and implement interoperable solutions on an ongoing basis to ensure sustainability.

2. Workforce

A key challenge identified by the industry is trying to match the service to the increasing demand which impacts on the requirements for increased staffing levels. Ambulance services are striving to match the workforce to the demand for services in order to ensure efficient services are available for the community. This section describes issues impacting workforce planning, staff development, staff welfare, education strategies and the CAA's position statement on regulation.

2.1 Workforce planning

Ambulance services are moving towards a national approach in predicting workforce supply and demand. A national workforce planning project is being facilitated by the CAA in order to produce a single national snapshot of the ambulance workforce to address a wide range of issues fundamental to the development and sustainability of the ambulance workforce.

Ambulance services have identified the main challenge facing services is the changing dynamics of workforce resulting in:

- an increasing numbers of female recruits that the traditional roster does not easily accommodate;
- an ageing workforce leading to higher rates of attrition and overall a less experienced workforce;

- younger recruits who demand better work/life balance and the option to work part-time; and
- difficulties in recruiting and retaining staff in rural and remote areas.

These changes are occurring in an environment of a tightening labour market which is leading to an overall health workforce shortage.

Ambulance services are sharing information on recruitment and retention strategies for local areas, overseas recruitment, and volunteers. Some services are recruiting paramedics/ambulance officers from overseas to meet the increased needs of the service.

Another issue is the trend towards increased mobility of employees across states and countries making it particularly challenging to retain staff in remote areas. Services have also identified the increasing difficulty in retaining volunteers in rural and remote areas. Ambulance services are investigating these issues in order to develop national policies for sustaining volunteer numbers and ensuring the sustainability of services to all parts of Australia.

2.2 Staff development

Staff development involves the ongoing training of staff in new clinical or social skills or for managers in further developing management capability. Clinical development may require post graduate education.

The changing needs of the employee including a greater demand for work life balance impact the role of staff development. Staff development programs need to take into account generational differences and needs.

Changes in service delivery models involving paramedics are designed to stream line patient access to health care. These changes require a wider range of skills, training and education for paramedics taking on extended or advanced care roles in initial assessment and referral. Future linkages of these programs to university will further limit organisational capacity for training.

2.3 Staff welfare

Ambulance services have a 'duty of care' to provide employees with safe workplaces. This involves education of employees on potential hazards in the workplace and include; manual handling, dangers of shiftwork and fatigue, and other occupational health and safety standards.

2.4 Education

Paramedic education is new and growing in the university sector and will soon be the only entry route to professional paramedic practice and employment in Australia. Nationally, some ambulance services have continued with internal paramedic diploma programs as there have not been enough graduate places to meet the needs of this growing industry. Whilst others have found that by moving to a full pre-employment model other universities have come into the market creating adequate places for students.

The university education model creates a new recruitment challenge for ambulance services in accurately predicting the number of students required through a university system of three years duration. Ambulance services are collaborating in addressing the challenges arising from this educational model.

With the advent of a number of pre-employment ambulance paramedic degree programs across Australian ambulance services, it is important that educational standards are maintained. The CAA is undertaking a *Paramedic Education Programs Accreditation Program*.

As ambulance demand continues to increase, ambulance services are required to recruit larger numbers of paramedics. Significant issues facing Australian ambulance services are to ensure paramedics graduate from university as a multi skilled practitioner who is responsible for the out-of-hospital clinical care and safety of their patients and the community as a whole. This must be achieved whilst also encouraging an increased labour pool to support the trends toward part-time and casual employment as desired by paramedics.

2.5 Regulation

The CAA has developed a position statement on the regulation of paramedics/ambulance officers and believes ambulance practice is more regulated than many if not most registered health occupations through the combined effects of their educational, clinical monitoring and quality assurance systems and processes to clinically credential each employee and where necessary apply disciplinary processes to individual practitioners.

The CAA will monitor developments in the fields of both accreditation of health practice and health registration generally as events linked to the COAG 'Intergovernmental Agreement for a National Registration and Accreditation Scheme for the Health Professions' unfold both within each jurisdiction and across jurisdictions.

Completion of the current CAA initiated process on accreditation of tertiary providers of ambulance education is an important step to a common national approach to ambulance clinical practice through education standards and CAA should revisit this issue when that process is complete.

3. Resources and systems

This section describes ambulance service funding arrangements including user charges and how information systems are being utilised by ambulance services to increase the evidence base in order to improve service delivery and patient outcomes.

3.1 Finance

Currently there are a variety of approaches to funding, access, and provision of pre-hospital emergency care in Australia. Ambulance services are largely funded by a combination of direct State or Territory revenue, subscription schemes, and user charges.

Ambulance services are provided free of charge to users who; hold a subscription or insurance, have been injured at work or in motor vehicle accidents, are transported between public hospitals, and for those who are qualified health care cardholders. Patients with none of the above (except patients in Tasmania and Queensland) are charged for services. Consumers, hospitals, and other funders (For example: transport accident insurance schemes) can also be charged by Ambulance services to varying degrees. Charges for these services also vary between jurisdictions.

There is national support for funding arrangements that are sustainable and reflect ambulance service demand and the real costs of service delivery. These models would match

changes in demand to funding levels. It is widely acknowledged that the industry needs to have a good understanding of the cost structure in order to ensure services are efficient and provide value for money.

3.2 Information management

Information management and information sharing allows ambulance services to continually assess the evidence base and drive a research agenda in order to provide the best possible service delivery and treatment options. This information can be linked across the health system and used to develop better systems across health service providers and to assess longer term patient outcomes. Information sharing can also provide ambulance services with a unified position to inform both policy makers and researchers.

Member services of the CAA share a number of national data collections in order to assess and compare services provided. This is achieved by a national ambulance service data dictionary and the development of a core data set that provides services with comparable consistent performance reporting.

The development in Victoria of a comprehensive clinical information system (VACIS), incorporating electronic capture of data in the field, has been a major initiative supporting this direction. The system has also been rolled out in Queensland and a VACIS collaborative involving the services from most jurisdictions has been established. In time, this will result in the collection of nationally consistent data, providing a major new resource for pre-hospital research.

Data from the system is already being used to refine ambulance-dispatching protocols (better matching patient need with the dispatch) and clinical practice (e.g. management of pain).

Linkages with other health databases are also being pursued, and these will significantly increase the power of the ambulance data, ultimately providing the ability to access data relating to the complete patient experience. This will significantly strengthen the scope for system-wide research and performance monitoring.

4. Integration/community and health system

Ambulance services are uniquely placed within the health system as a key interface between community and acute health and within the health system (inter hospital) spanning primary and acute health care. Ambulance services see a wide range of patients and are often in the front line in regards to mental health patients, transport of aged care patients, and providing public safety initiatives. This unique placement allows ambulance services to integrate with many facets of the health system to provide patients with a wide range of options and timely care. Policy decisions that impact these components of the health system can have a significant impact on ambulance services.

This section describes the integration of ambulance services with components of the health care system, the importance of community engagement, and the emergency management component of ambulance service delivery.

4.1 Health System

Over the past ten years ambulance services have become better integrated with the health system. This integration contributes to better health outcomes for patients particularly for time critical stroke and cardiac cases.

Outcomes for a range of acutely ill patients are critically dependent on the time from onset to definitive care. Services for these patients are becoming increasingly specialised and centralised, due to the costs of service provision and the improved outcomes at higher volume facilities. Ambulance services are therefore developing system strategies in collaboration with hospitals to ensure that these patients get to the right level of care in the shortest possible time, and that relevant information is conveyed prior to arrival at hospital to facilitate early diagnosis and treatment. Key conditions where these strategies are in place or under development nationally include major trauma, acute coronary syndrome (STEMI) and stroke. Some services have also developed referral systems linking to the primary care sector.

Ambulance services are exploring new roles in both metropolitan and rural and remote areas. Paramedics' roles are being redesigned as a community role in rural and remote areas in order to cover gaps in health care. Metropolitan roles are designed to provide a wider range of treatment and referral options to decrease the number of patients transported to the Emergency Department. The development of paramedic roles are contributing to both health care performance and ambulance demand management.

The extended role for paramedics provides a new model for the delivery of aspects of primary care, such as management of minor injury/illness, ordering of investigations, referrals and (potentially) some prescribing of medications. A variety of options are being explored by ambulance services both internationally and nationally. An important factor in the success of such models will be strengthened links between ambulance services and primary care providers. In addition to the demand management benefits, these models have significant potential to improve services for patients in relevant locations.

All ambulance services are experiencing increasing delays at hospital emergency departments. This increases case times for ambulances, reduces their availability to respond and increases response times. The net effect is to increase the time for patients to reach definitive care. Ambulance services are collaborating with hospitals in a number of jurisdictions on system strategies to minimise the impacts on patients. Strategies are continuing to evolve, but include systems for diversion and escalation.

The integration of ambulance services across health sectors can improve the health system by providing a wider range of community health care options by improving systems and allowing patients to access care at the right place and at the right time.

4.2 Community

Community engagement and education of the public can be used as an educational strategy for managing demand to ensure the community is aware of the role ambulance services play in responding to emergency incidents. Community engagement also involves raising public awareness of the importance of community preparedness and the capability to assist the service. Services can monitor bystander CPR rates to ensure the community is prepared for life threatening emergencies.

4.3 *Emergency management*

Ambulance services are an important component of the nation's emergency capability. Although these activities relate to a small proportion of ambulance work, ambulance services acknowledge the significance of being prepared for emergency events and all jurisdictions are involved in National and State level preparedness planning and training exercises.

Ambulance services have well developed arrangements to support each other in managing major incidents, and the CAA coordinates monitoring of each jurisdiction's capacity to respond in times of need. The CAA is represented on the Australian Health Protection Committee, and the ambulance role in planning and response for major incidents is being increasingly understood.