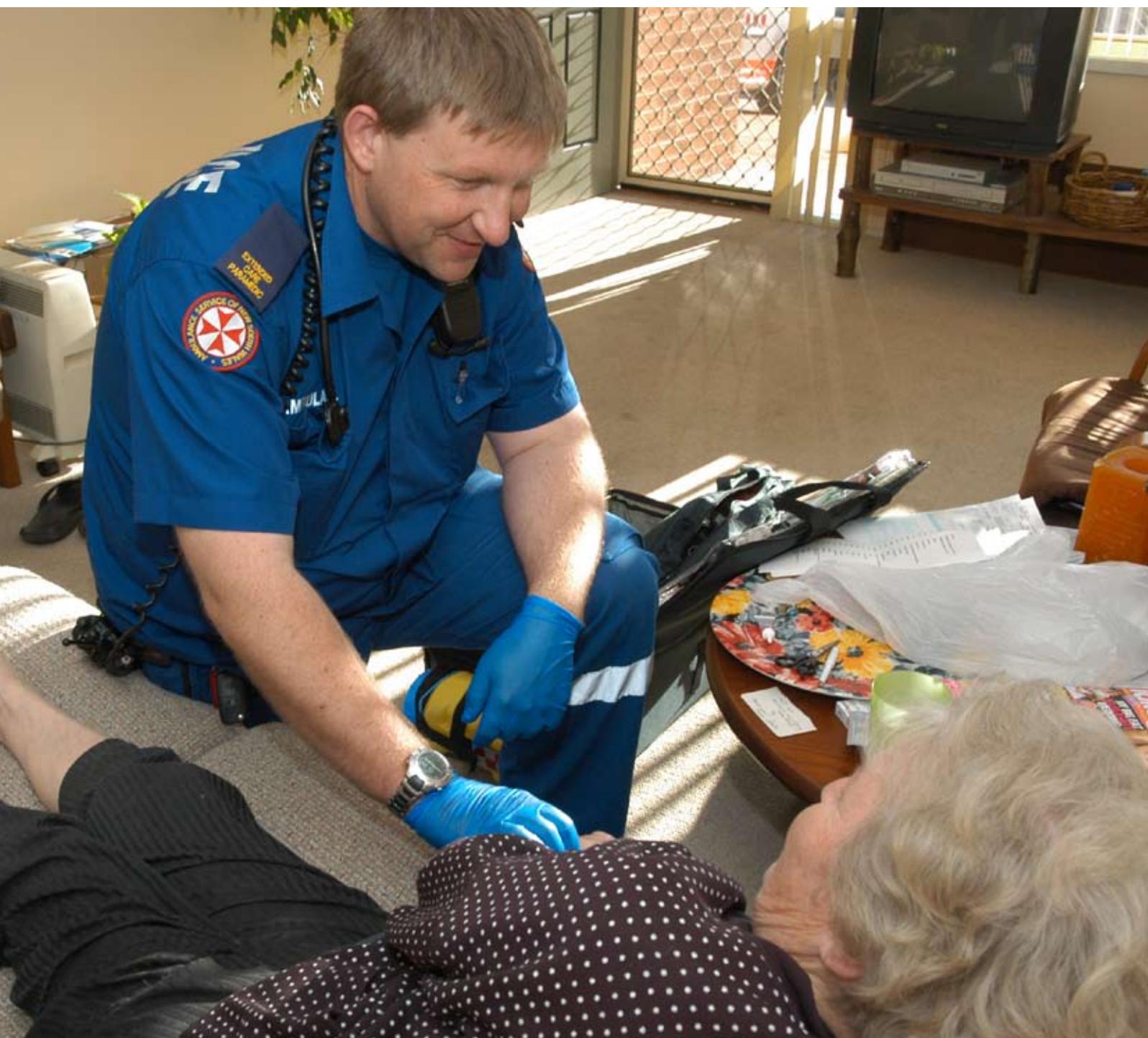




Trends in the use of Ambulance services in NSW



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The Ambulance Service of NSW (Ambulance) is the third largest ambulance service in the world. We employ over 4,000 people, with 90 per cent being operational staff involved in the front-line delivery of services. This includes paramedics, control centre and patient transport officers, special operations, counter disaster, aeromedical and medical retrieval.

The remaining 10 per cent of our workforce are corporate and support staff who assist in the delivery of services, including mechanical workshops, finance and payroll, human resources and information technology.

Together we are committed to providing high quality clinical care and health related transport services to over 7.2 million people in NSW, distributed across an area of 801,600 square kilometres.

STUDYING TRENDS

The Service Planning Unit has been studying the past and current patterns of use of Ambulance to provide information for improving services and supporting service developments. Study of trends at present highlights the achievements of Ambulance in the consistent provision of care in the face of very significant increasing demand.

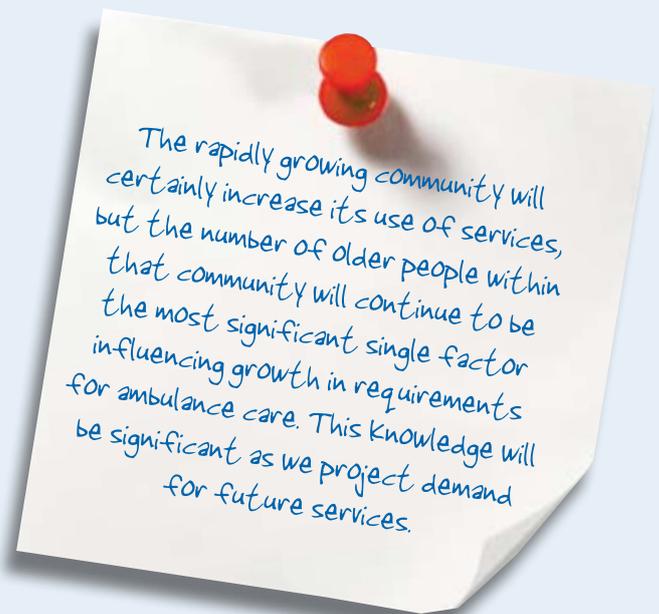
WHAT ARE THE IMPLICATIONS OF THE INFORMATION GATHERED SO FAR?

One of the ways the analysis of trends has added considerably to our knowledge is by helping us to understand the causes of growth in demand.

Analysis of trends in demand shows that increases in the number of aged people in the population are much more significant drivers of growth in demand for Ambulance services across the state and within particular localities than are increases in total population.

Provision of service does not necessarily result in transport:

- > treatments are provided at special events and other locations;
- > Extended care Paramedics (ECPs) and Low Acuity Pathway (LAP) treatments provide care as alternatives to transport to hospital;
- > some patients decide they don't need to be taken to hospital or receive further treatment.



This analysis also suggests that growth in demand has been attributable to other factors beyond those of population aging and growth. This data enables us to identify those areas within the state where there has been considerable change in demand, and will be significant as we project demand for future services.

We are currently looking at key areas which have been identified to complement the knowledge gained so far, which will be used to improve many aspects of planning to better meet community need and expectations.

Responding to these changes will include developing and expanding care models, such as:

- > responding to the needs of older people; and
- > providing care to the patient in their own home or facilitating access to appropriate health care providers, enabling them to receive the care they require without the need to be transported to hospital.

Ambulance continues to explore the patterns of demand and increase our understanding of what drives it. This will lead to the development of more approaches to care that are responsive to the needs of the population and have the potential to deliver care to more people and better understand the areas of highest growth.

As well as emergency care, Ambulance provides a significant level of non-emergency transport. This includes transport for scheduled health services and for patients travelling between facilities.

What does our current analysis tell us?

CURRENT DEMAND

In the last financial year (2009/10) the demand for Ambulance care was:

- > **Total incidents:** 938,835
662,167 (70.5%) of these were emergencies
- > **Total responses:** 1,131,294
- > **Total transports:** 760,264
- > **Transports including:**
 - emergency: 66.2%
 - non-emergency: 33.8%

Some key facts about the services delivered in 2009/10 include:

- > around half (48.2%) of ambulance services are currently provided for the population aged 65 years and over who represent 14% of the population
- > on average, a population of 1,000 people will generate 133 incidents, 160 ambulance responses and 107 patient transports per annum
- > the rate of incidents per 1,000 population varies – in metropolitan areas it was 114 incidents per year, whereas in rural areas it was 150-160 incidents per year
- > 58% of emergency responses occur between 8am and 7pm
- > 37.5% of patients accessing Emergency Departments with life threatening conditions were transported there by Ambulance.

TRENDS IN DEMAND

Growth over the past decade (2000/01-2009/10) for total demand (emergency and non-emergency activity) showed:

- > 35% increase in incidents
- > 42% increase in transports
- > total population growth increased by 7.8%
- > around half of the increased demand for transports can be attributed to the growth in aging and size of the population, while half is due to other demand drivers.

Growth in emergency demand over the five years to 2009/10 showed:

- > 12.3% increase in incidents
- > 12.6% increase in responses
- > 21.4% increase in transports
- > 4.1% increase in population growth
- > 10.1% increase in admissions to hospitals for emergencies

Growth in non-emergency demand over the five years to 2009/10 showed:

- > incidents increased by 13.1%
- > this growth has been higher than that for emergency demand.

The emergency transport to incident ratio:

- > increased 8.1% from 70 to 76 transports per 100 incidents across NSW; and
- > showed the greatest growth in the Sydney Division with an 11.8% increase.

Off-stretcher time at hospitals continues to pose a challenge for Ambulance and availability of paramedic care:

- > Off-stretcher time increased across NSW between 2005/6 and 2009/10, with increases of 14% for the Sydney Division.
- > NSW Health, together with Ambulance and Local Health Districts, will work to improve the process of allocating ambulance patients to better manage clinical conditions and Emergency Department demand.

over the last five years there has been a 19% increase in the number of paramedics in the workforce.

Trends in the use of Ambulance services in NSW

While we now understand some of the trends more clearly, we have also clarified where more information is needed and we are targeting our study in these areas.

FUTURE INDICATORS OF DEMAND

NSW is experiencing significant population growth with the Department of Planning and NSW Health (March 2009 Release) projecting growth as follows:

- > NSW population is projected to increase from 6.8 million in 2006 to 8 million in 2021 – an increase of 1.2 million people (17%)
- > the number of people aged 65 years or older will increase by 52% in the same period to 2021
- > the number of people aged 80 years or older will increase by 49% to 2021
- > the NSW population is estimated to exceed 7.2 million in 2011.

Determination of the future impact of these factors on Ambulance demand levels is complex and our study of this will need to continue. It is clear that new models for care will be developed in conjunction with other care providers, and it is certain that in 10 years we will have many care options that we do not have at the moment, just as we have many now that we did not have 10 years ago.

TERMS AND CONCEPTS

Incidents	Triple Zero (000) calls.
Responses	Sending paramedics to a scene.
Transports	Each time patients are taken to hospital.
Multiple calls	Not all Triple Zero (000) calls result in a paramedic being sent – multiple calls may be received for a single incident. On some occasions, two ambulance vehicles may be sent to a single incident – a paramedic who is able to commence treatment may arrive first in a non-stretcher vehicle, followed by paramedics in a stretcher ambulance.
Off-stretcher time (now known as Transfer of Care time)	The time from when an ambulance arrives at a hospital to the time the patient is placed in a bed in the hospital, at which point of care is transferred to Emergency Department staff.

HOW ARE WE WORKING TO IMPROVE OUR KNOWLEDGE?

Using national and local knowledge, we are developing a shared set of definitions of the data that we use for reporting and planning, so that staff involved in planning can readily exchange information.

We will continually update information to track further changes to patterns of demand and supply of care.

Subjects for further study include:

- > the drivers for changes in total demand for emergency care;
- > changes to the ratio of transports to incidents;
- > trends in medical conditions associated with requirement for transport; and
- > exploration of the difference between metropolitan and rural transport rates.

We will also develop our understanding of the priority areas for growth of service use with increased focus on:

- > Identification of geographical areas where there is greatest growth in demand.
- > Identification of geographical areas where the demand levels provide the best opportunities to develop different service models. This includes many that are being implemented jointly with Local Health Districts.
- > Development of strategies to manage the pressure arising from hospital off-stretcher time.
- > Development of strategies to ensure we meet the rising demand for emergency care, while still allowing for a sustainable approach to meeting the growth in demand for non-emergency transport.
- > Development of approaches to planning ambulance services that better align the need for paramedic roles with population demand.
- > Development of a guide to planning ambulance services that better aligns the requirements of bases, vehicles and equipment that are required with population demand and the appropriate paramedic roles.