2 Introduction

2.1 Background

After a period of relatively stable Emergency Department (ED) demand in public hospitals in NSW, in 2005/06 there was a significant increase in ED demand across the state which was not easily accounted for in terms of planning projections based on demographics. Other mainland states – Queensland, Victoria, South Australia and Western Australia – also experienced a higher increase in demand for ED services from 2005/06. A relatively sudden and unexpected increase in ED demand has major implications for resources, quality of service and demand management initiatives applied.

NSW Health, with the support from the health departments of the other mainland states initiated further projects to quantify the extent and nature of the demand increase, and identify and analyse root causes. To help quantify the demand increase, in November 2006 NSW Health commissioned Paxton Partners Pty Ltd to review the recent growth in ED activity in NSW and to identify the characteristics of the growth in NSW. Further analysis by NSW Health of data since 2005/06 indicated that some of the ED demand increase might be attributed to demand transfer from primary care. In August 2007, NSW Health – with support from the other mainland states – commissioned Booz Allen Hamilton (Australia) Ltd to analyse the root causes of the recent increase in ED demand with a particular focus on primary care transfer.

2.1.1 Previous Reports

2.1.1.1 Paxton Partners Report

The Paxton Partners Report[3] concluded that the growth in ED demand in NSW over the last five years is generally consistent with that in other mainland states. Specifically, it concluded that:

- The growth was most concentrated in the relatively more urgent triage categories, T2 and T3 (see definitions below)
- The highest growth was in the 75 and over age group
- There was also substantial growth in ED attendances in the 30 to 64 age group
- The growth in ED attendances has been accompanied by a strong growth in ambulance arrivals at ED, with a disproportionate number over 75 years of age
- Patients over 75 spend longer in ED than other patients (average 8.8 hours), and a higher proportion (55%) are likely to be admitted than other age groups

[3] *Paxton Partners,* Analysis of Emergency Department Admission Data – Discussion Paper *(Draft), June 2007*

- The volume of attendances and hospital admissions for the over 75 group has increased

The report also concluded that the growth experienced in ED demand in NSW in 2005/06 was also experienced by the other mainland states, and that all states reported the strongest growth in the relatively urgent triage categories (T2, T3 and to some extent T4) which are the categories having most impact on hospital inpatient utilisation.

2.1.1.2 BEACH Report

Established in 1998, the BEACH (Bettering the Evaluation and Care of Health) program is a continuous national study of general practice activity in Australia which provides information about GP-patient encounters, and the services and treatments provided by GPs to the Australian community. The most recent report[4] provided a comprehensive snapshot of general practice in Australia in 2005/06 and how it is changing. Some of the more important conclusions of particular relevance to this study are as follows:

- Australia had a relatively high utilisation of GPs compared with other advanced western countries such as the USA and New Zealand
- The GP workforce reflected increasing feminisation, ageing and presence of overseas graduates
- GPs were taking lifestyle choices to work fewer sessions and they are less likely to provide after hours care
- There were fewer encounters with children but more in the 45 to 64 and the over 75 age groups
- There had been an increase in the management rates of specific types of chronic conditions such as hypertension and diabetes
- There had been a decrease in the number of clinical treatments provided by GPs
- There had been a decrease in prescription rates by GPs, although this was not consistent across all drug types
- There had been significant increases in the rates with which GPs order pathology and imaging tests

2.1.1.3 Centre for Health Service Development Reports

Two recent studies led by Professor Kathy Eager, Director, and Centre for Health Service Development at the University of Wollongong, and subsequently published in the journal *Emergency Medicine Australia* are of direct relevance to the current study:

[4] *Australian Institute of Health and Welfare and the University of Sydney,* General Practice Activity in Australia 2005-6*, January 2007*

- A review of the definition of 'primary care' and 'inappropriate patients' in EDs and the development of an acceptable working definition of a 'primary care' presentation to ED[5]
- A comparison of the reasons identified by clinical staff for potential primary care attendances to EDs with those previously identified by patients[6]

The working definition of 'primary care patient' developed by the first of these studies included patients who are:

- Of low urgency / acuity – categories T4 and T5 in the Australasian Triage Scale
- Self-referred (this excluded patients referred to an ED by a GP)
- Presenting for a new episode of care
- Unlikely to be admitted

The second study concluded that the clinicians' perspectives on the reasons for potential primary care patients' use of the ED differ markedly from those of patients. Clinicians were more likely to emphasise cost and access issues whereas patients are more likely to emphasise complexity and acuity issues.

2.2 Objective and Scope

The objective of the study – as determined by NSW Health and the other participating states – was to develop a concise paper that draws on qualitative, and where possible, quantitative analysis to identify:

- Whether increase in ED demand is likely to have resulted from demand transfer from the primary care sector
- What the principal root causes or drivers of that demand transfer may have been
- Whether ambulance usage growth is the result of any practice change in primary care
- Whether aged care practice has influenced demand on EDs

The deliverables from the study were to be:

- An agreed set of prioritised hypotheses to explain the increase in ED demand
- Supporting evidence for these hypotheses based on quantitative analysis, drawing on existing research studies and publicly available data
- Further testing of the emerging hypothesis through additional field research including:
  - A national survey of patients
  - A survey of GPs in NSW

---

[5] *Bezzina, Smith, Cromwell and Eager,* Primary care patients in the emergency department: Who are they? A review of the definition of the 'primary care patient' in the emergency department*, Emergency Medicine Australia (2005) 17, 472-479*

[6] *Masso, Bezzina, Siminski, Middleton and Eager,* Why patients attend emergency departments for conditions potentially appropriate to primary care: Reasons given by patients and clinicians differ*, Emergency Medicine Australia (2007) 19, 333-340*

  - A survey of residential aged care facilities in NSW
- Confirmation and additional validation of the hypotheses through a pilot cluster study in a catchment area in NSW that was representative of 'growth corridors' around Australia where population growth might be ahead of GP supply
- A recommended methodology for Part B of the study which was to have more of a quantitative focus and propose initiatives to address the increase in ED demand

2.3 The ED Primary Care Patient Cohort

The definition of 'primary care patient' developed by Eager (et al) was modified for the purposes of this study to include patients who had been referred by a GP and patients who made repeat presentations at EDs for the treatment of the same condition. The rationale for these modifications was that there was strong anecdotal evidence that some GPs were referring patients who would have been treated by other GPs in a primary care setting, and strong anecdotal evidence[7] that some patients were using EDs on multiple occasions to access primary care for ongoing conditions.

The primary care patient cohort utilised for this study therefore included patients who:

- Were classified as triage categories T4 (semi-urgent: within 60 minutes) or T5 (non-urgent: within 120 minutes) under the Australasian Triage Scale
- Did not arrive by emergency vehicle
- Who were not admitted to the wards

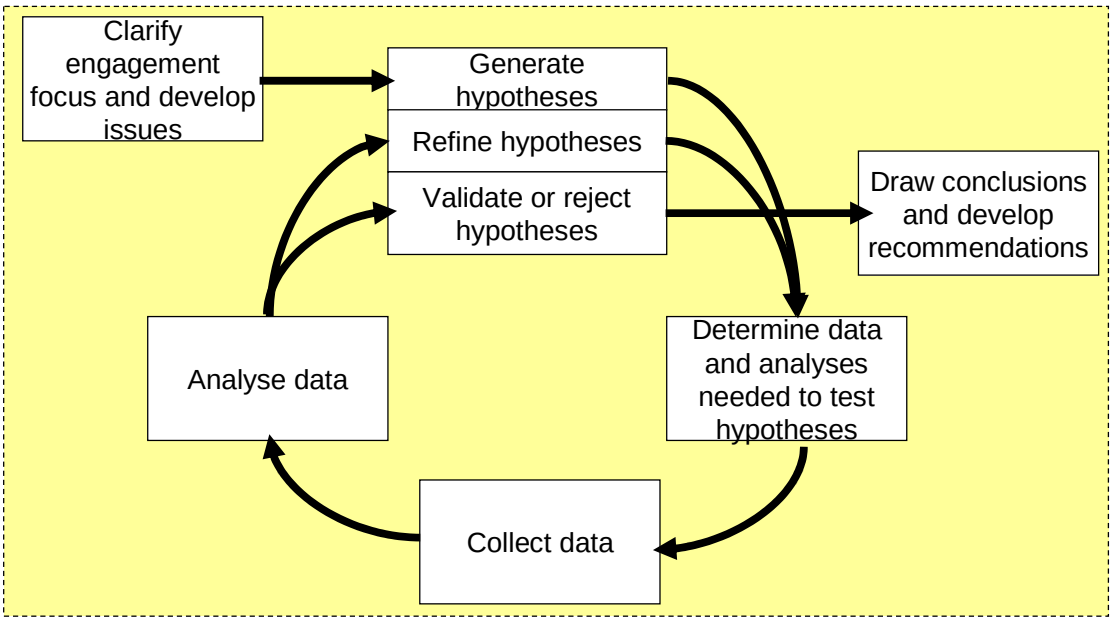
Some stakeholders from participating states suggested the need for more comprehensive analysis to define the ED primary care cohort from a morbidity / case-mix perspective. While this suggestion has merit, it was beyond the scope and resource limitations of this study.

2.4 Methodology and Work plan

The primary methodology used in the study was a hypotheses-driven approach where issues nested in the problem of unexpected increase in ED demand were first identified, and then hypotheses relating to the issues were generated. This was followed by the systematic collection and analysis of data to prove or disprove each hypothesis, and the refinement of hypotheses to reflect the available evidence.

[7] *Source: GP interviews*

Figure 3: Hypotheses Driven Approach



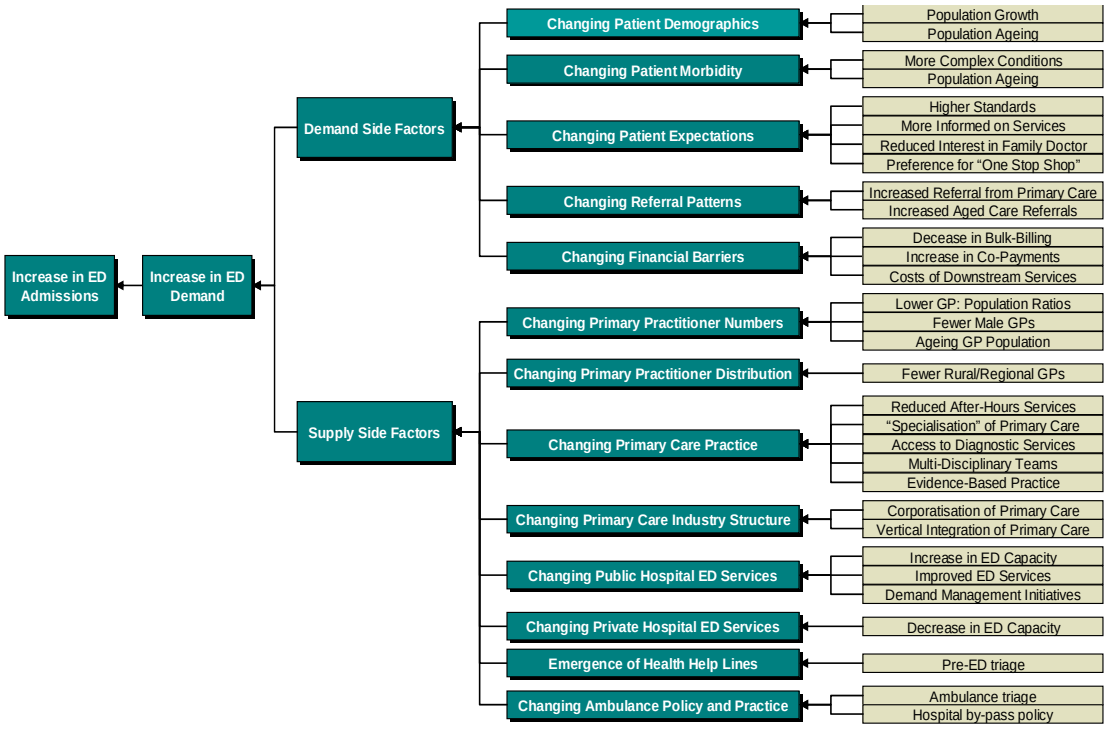
Clearly, the reasons for ED demand increase in the primary care patient cohort are multi-factorial. The initial hypotheses set (see Figure 4 next page) identified a range of factors on the demand and supply side that could be driving this increased demand:

- *Demand Side Factors:*
  - *Changing Patient Demographics*. Population growth, together with a changing demographic mix particularly population ageing, are clearly drivers of healthcare demand generally, and potentially drivers of increased ED demand from primary care patients
  - *Changing Patient Morbidity*. Changing population demographics, and particularly population ageing, together with lifestyle-influenced increases in chronic diseases such as diabetes, were seen as potential drivers of increased ED demand that needed to be tested
  - *Changing Patient Expectations*. A likely driver of increased ED demand was the preferences of patients themselves – patients' expectations may be increasing, they may be more informed on the relative merits of ED and primary care, and the reference points for decision-making in sourcing care may be changing (e.g. preference for a "one stop shop" or declining interest in a family doctor)
  - *Changing Referral Patterns*. For those ED patients who did not self-refer, e.g. patients who were referred to the ED by a GP or from a nursing home, there may be changes to healthcare practice that are increasing the rates of referral
  - *Changing Financial Barriers.* A commonly held view is that upfront costs to patients in accessing primary care are a key factor in patient decision-making, particularly for specific "price-sensitive" socio-economic groups. Another factor considered important to test was the possibility that patients were

considering the future costs of "downstream" services, e.g. diagnostic services such as pathology and imaging, in choosing their access point to primary care

- *Supply Side Factors:*
  - *Changing Primary Practitioner Numbers.* Clearly, a reduction in GP numbers or a change to the demographic mix of the GP workforce, e.g. ageing and more females, could result in an overall reduction in the effective GP which might be making access to general practice more difficult
  - *Changing Primary Practitioner Distribution.* Mal-distribution of primary care services, particularly between different areas in Australia's capital cities, and between metropolitan and rural regions of Australia, might result in GP under-servicing in some areas that may be prompting patients to source their primary care from EDs
  - *Changing Primary Care Practice.* The BEACH and other reports have pointed to the changing nature of primary care practice. These changes, e.g. reduced after hours care and fewer home visits, the "specialisation" of primary care, the introduction of multi-disciplinary teams incorporating practice nurses and allied health practitioners, together with the introduction of diagnostic services in larger practices, may be affecting access and patient choices
  - *Changing Primary Care Industry Structure.* The corporatisation of primary healthcare, the decline of solo practice and the emergence of larger group practices, including vertically integrated health businesses that include diagnostic and other specialist services, are factors that could be driving changes to the sourcing of primary care
  - *Changing Public Hospital ED Services.* EDs themselves have been a focus of business process improvement in recent years, more resources are being invested, and there has been an up-skilling of professional medical services in EDs. Improved ED services may be a factor encouraging patients to come to an ED rather than go to a GP
  - *Changing Private Hospital ED Services*. While private hospitals with EDs are relatively few in number, any closures or reduction in services could result in localised demand transfer to public hospital EDs, including primary care patients
  - *Emergence of Health Help Lines.* Health call centres or help lines have been introduced in some states, and more recently with a Federal Government initiative. While an important rationale for these was to reduce inappropriate ED attendances, there was uncertainty as to whether they were achieving this or actually driving increased ED attendances
  - *Changing Ambulance Policy and Practice.* There was a suggestion that changes to ambulance protocols and more risk averse behaviour by ambulance officers, might be driving a reduction in "Do Not Transport" rates

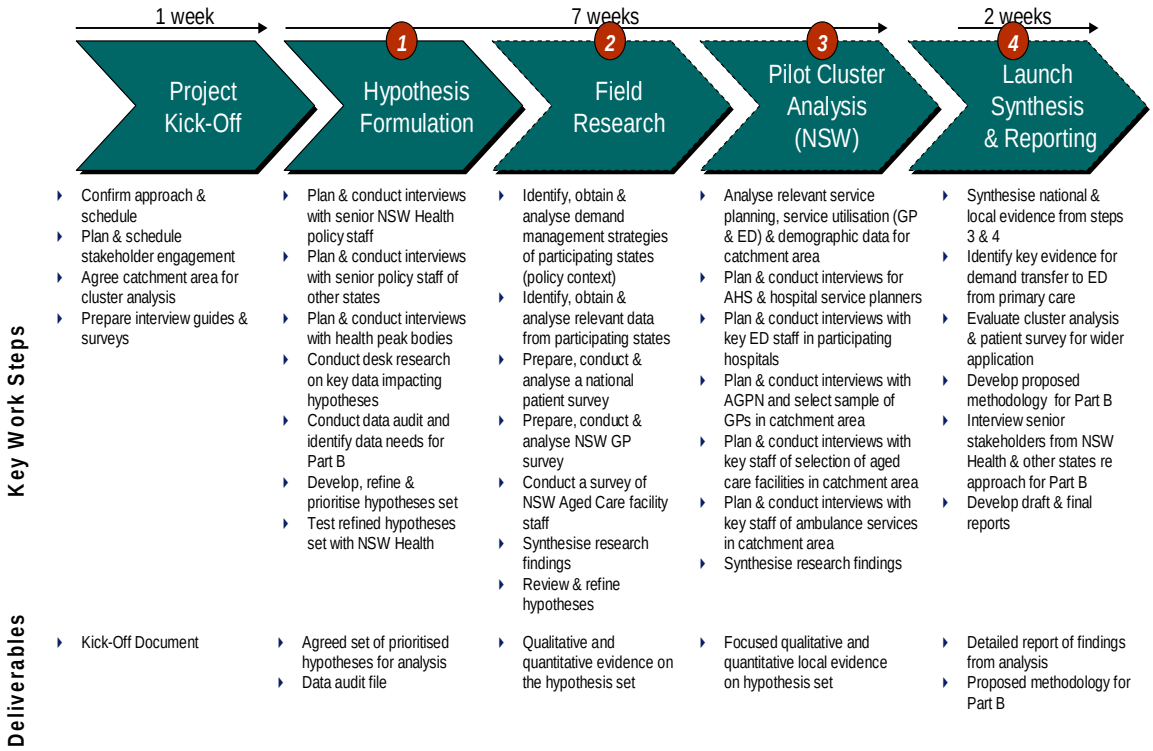
Figure 4: Initial Hypotheses Set



The revisions made to the initial hypotheses set it in response to stakeholder input are discussed in Section 5.

The study was completed in four major steps shown in Figure 5 below, preceded by a project kick-off phase.

Figure 5: Study Work Plan



The principal research tools used in the study are as follows:

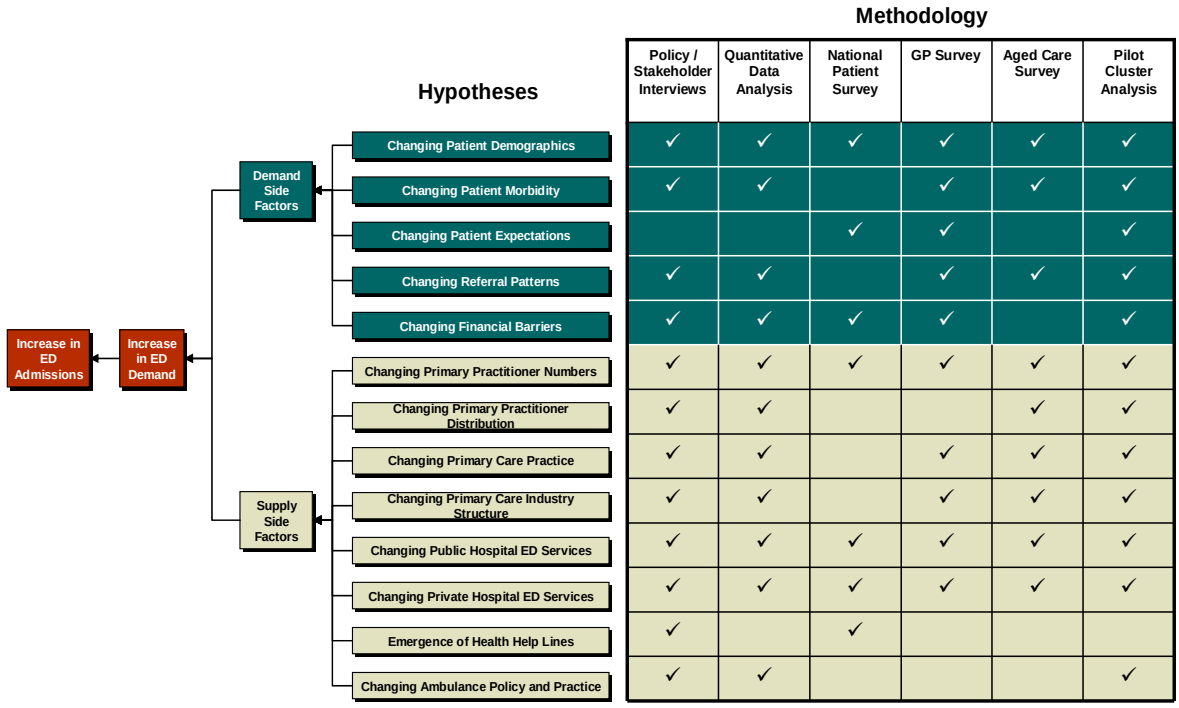
- *Hypotheses formulation:*
  - **Literature review** – a review of the published literature of most direct relevance to the study was conducted
  - **Stakeholder interviews** – a comprehensive series of interviews was conducted with key policy stakeholders in the participating states to seek comments on the initial hypotheses set and to identify sources of data to test hypotheses
- *Hypotheses testing:*
  - **Data analysis** – this included detailed analysis of data from the NSW Health Emergency Department Information System (EDIS), the Commonwealth Department of Health and Ageing, Australian Institute of Health and Welfare (AIHW), Australian Bureau of Statistics (ABS), Medicare Australia and Australian General Practice Network (AGPN)
  - **National Patient Survey** – an online survey was developed and fielded to elicit key determinants behind patient decision-making in electing to seek primary care from EDs rather than GPs (401 responses)
  - **NSW GP survey** – an online survey was developed and fielded with the support of the Central Sydney and Macarthur Divisions of the AGPN to supplement other research tools with qualitative GP opinion on the changing nature of general practice and on the hypotheses set (28 responses)
  - **NSW Residential Aged Care Facility Survey** – an online survey was developed and fielded with the support of the Aged Care Association of Australia (NSW) to elicit the opinion of clinical staff on the changing nature of healthcare in residential aged care facilities and on the hypotheses set (62 responses)
  - **Cluster Analysis** – a detailed study of the catchment areas around the Royal Prince Alfred Hospital and Campbelltown Hospital was conducted with the support of Sydney South West Area Health Service and the facilities concerned to test the application of hypotheses at a local level and analyse the interaction between general practice, residential aged care, ambulance and ED services

In excess of 80 interviews were conducted with stakeholders during the Hypotheses Formulation and Cluster Analysis phases of the study. A full list of stakeholders interviewed is attached in Appendix A.

Clearly, it was important to test individual hypotheses through multiple methodologies. This was particularly important given the complexity of the problem of ED demand and demand transfer, its multi-factorial nature and the predominance of anecdotal or qualitative evidence. In addition, different hypotheses could be more or less influential in different healthcare catchment areas. The more sources of evidence – both quantitative and qualitative – that could be found to validate or

reject a particular hypothesis, the greater the confidence in the conclusion drawn. The specific methodologies applied to test individual hypotheses are detailed at below.

Figure 6: Methodologies Applied to Hypotheses Testing



For each hypothesis, the intent was to make an informed judgement as to its validity as a driver primary care demand transfer to EDs. Noting that there could be differences in conclusions drawn at national, state or local levels, hypotheses were classified as follows:

- *Proved* – there are multiple points of quantitative and qualitative evidence supporting the hypothesis as a driver of primary care demand transfer to EDs
- *Not Proved* – there are multiple points of quantitative and qualitative evidence indicating the hypothesis is not a driver of primary care demand transfer to EDs
- *Further Investigation Required* – the qualitative and quantitative evidence was mixed or there was insufficient information to make a judgement as to the validity of the hypothesis and further testing is required

3 The Policy Context

3.1 Introduction

The States and the Commonwealth have implemented a wide range of policies that are intended to influence, either directly or indirectly, the demand for and supply of primary health care, whether that care be sourced from a general practitioner or from a public hospital ED.

Most of these policies have as a central tenet the need to reduce demand on the public hospital system generally, and to help ensure that patients whose conditions can be treated effectively and safely in the community, are indeed treated in the Community.

3.2 State Government Policies and Programs

3.2.1 New South Wales

The major policies or programs developed by NSW Health with most potential to impact on the primary care / ED interface are the models of care (MOCK) developed under the Clinical Services Redesign Program (CARP)[8]:

- *Aged Care and Chronic Care:*
  - *Healthy at Home.* This MOCK (formerly the SATE Care Pilot Program) was developed as a response to the rapid growth in the ageing population. It aims to provide an effective model of care that provides a better alternative to inpatient care and supports older people in their home environment. It is an inter-agency model that provides integrated community care for people aged over 65 years (over 45 years for Aboriginal and Torres Strait Islander people) with emerging acute care needs. It provides: a combined assessment by a health clinician and Compacts Case Manager within 48 hours of referral; fast tracking of diagnostics and assessment; and up to 6 weeks of case management to set up access to long-term, sustainable, patient and career support
  - *Transitional Aged Care.* This program addresses the needs of older people who, in the absence of the program, would require residential aged care. It involves a time-limited (12 weeks) period of support and low intensity therapy in a residential or community setting. It provides older people who have been assessed by an Aged Care Assessment Team (ACT) as eligible for admission to residential aged care with an opportunity to optimize their functional capacity and determine their appropriate long-term care requirements. Key to the model is the provision of a goal-oriented therapy program which aims to help patients achieve their goals in their own home

[8] *Australian Resource Centre for Healthcare Innovations website*

environment or a home-like environment. Support is provided for activities in which the patient is not fully independent. Services are tailored according to each individual patient's requirements and are adjusted as the patient's function improves

- *Acute Care of the Elderly (ACE).* This is a shared care model between physicians, geriatricians and their teams. It integrates comprehensive geriatric assessment into the optimal medical and nursing care of patients in a multidisciplinary environment. The multidisciplinary team focuses on providing the right care at the right time, patient function and patient safety. Consideration is given to the entire patient journey from admission, through the hospital and discharge to appropriate community resources
- *Geriatric Rapid Acute Care Evaluation (GRACE).* This MOCK was developed to improve the health care journey of aged care residents. Under the GRACE model, hospital staff works in collaboration with general practitioners and aged care facilities to avoid hospital admissions and reduce access block and length of stay for older patients at Hornsby Ku-ring-gai hospital. Data indicates that GRACE is having positive effects and enhancing the journey of aged care facility residents. It is also helping to improve communication and trust between the hospital, general practitioners and aged care facilities
- *Older Person Chronic Disease MOCK.* In order to understand the kind of MOCK that can assist an individual in maintaining their health and well being, the idea of a 'suitcase' was developed. The 'suitcase' represents the kinds of resources an individual requires to assist them in their journey. Seven journeys have been developed to date
- *Falls Prevention - 'Stand Tall, Don't Fall' MOCK.* This program has processes in place across the continuum of care for screening, assessment of risks and referral to balance and falls prevention programs. Implementation strategies have been established and training provided to raise general awareness and provide specific skills to implement the program. It is characterised by integration and collaboration across the continuum of care
- *Aged Care Services in the Emergency Team (ASET).* This MOCK is under development
- *Delirium Prevention MOCK.* The Recruitment of Volunteers to Improve Vitality in the Elderly (ReViVe) program at the Prince of Wales Hospital provides an opportunity to enhance the older person's journey. A pool of volunteers helps the ward staff to provide additional care to older patients. The interventions include volunteers providing patients with orientating information as to the 'here and now', practical assistance with mobility, meals and hydration, glasses and hearing aids and activities to maintain alertness and decrease boredom during hospitalisation

- *Older Person's Evaluation Review and Assessment (OPERA) MOCK*. This program at Westmead Hospital places the older person at the centre of the care pathway to achieve better processes of care and improved outcomes. The key component of this MOCK is the specialist evaluation, review and assessment of the older person at the beginning of the hospital care pathway. The skills of senior clinicians with expertise in the care of the older person are aligned to the needs of the unwell older person with minimum delay. In the ED context, these skills provide an added focus on the identification of underlying chronic diseases and / or the ageing process in addition to the acute presenting condition

- *Community Care:*
  - *Referral and Information Centre (RIC) MOCK*. The Hunter New England Area Health Services has established a RIC for the Newcastle cluster of community health services. It aims to improve access to timely, safe, consistent and appropriate level health care information and advice to clinicians and the community. The RIC improves the care journey of patients and support clinicians in their role as health care providers. It is able to direct and coordinate between services and users, and provides advice that reflects local services. The establishment of a single entry point health contact centre such as the RIC is a service delivery solution designed to address the changing health care environment using highly trained staff and sophisticated technology
  - *Compacts MOCK*. Compacts is a joint discharge program between multi-disciplinary health teams and non-health community case managers. It is designed to assist patients to leave hospital and return to functionality in a timely manner. The focus is on maximising patient independence and capacity in line with their preferences and goals while helping to manage demand across the health system. Compacts clients are patients whose hospital length of stay may have been extended, or is at risk of being extended, because of difficulties or concerns about the availability of community support services needed to allow the person to leave hospital. Compacts aims to optimize patient access to the community services they need for a safe and supported return home
  - *Community Acute/Post Acute Care (CAPAC) MOCK*. Under this MOCK, selected types of acute / post acute care are delivered to suitable, consenting patients at their home as an alternative to inpatient (hospital) care. The essential functions of CAPAC services are to provide the most appropriate care setting, avoid hospital admissions or reduce patient length of stay through the immediate provision of multidisciplinary care. The GP and the APAC team work closely together to manage the patient in the community. The GP's role is to establish the clinical diagnosis, prescribe and administer the first dose of treatment. The APAC team, under the ongoing clinical management of the GP, continues the care. This model ensures that where possible the patient does not need to go to hospital for initiation of clinical

care. Conditions specifically targeted in this model are those that have not responded to oral antibiotics or other interventions or therapies

- *Advance Care Planning (ACP) MOCK*. This model works to improve the journey of patients, particularly older people, through the health system. ACP takes into account the patient's wishes, values and beliefs about medical treatment in order to prepare for end-of-life situations. In essence, ACP aims to reach a clear and agreed understanding between the individual, their 'person responsible' (if appropriate) and treating medical practitioner. A crucial component of successful ACP is that the individual understands that they have choices. As such, discussion is a focus of the model

- *Emergency Care:*
  - *Third Door MOCK*. This MOCK is under development
  - *Fast Track MOCK*. This MOCK provides an alternative option for emergency care and provides access to timely care for those with minor injury or illness. On arrival at Triage, patients are assessed against pre-determined criteria that identify them as ambulatory, non-complex and with the potential to have their emergency care initiated using clinical treatment protocols by the clinical team. These patients are treated in the Fast Track zone. In Fast Track zones the emphasis is on a clinical team commencing care, rather than 'waiting to see a doctor'. The aim is to discharge within two hours of presentation for non-admitted lower acuity patients
  - *3-2-1 MOCK*. The 3-2-1 process breaks down a patient's journey through the ED into manageable 'chunks' of time. It works by identifying measurable time points for each part of the journey and uses pre-agreed protocols and policies to expedite admission or discharge. The underlying principle governing 3-2-1 is that patients should only stay in the ED for the minimum amount of time required to safely assess, stabilise and transfer care to the inpatient environment or discharge home safely. 3-2-1 assigns the following time targets: 3 hours for the ED to examine a presenting patient, run diagnostic tests, commence initial treatment and determine whether the patient is a likely admission; 2 hours for specialty medical teams to consult with a view to admission; and 1 hour for inpatient wards to be ready to take over the care of the admitted patient and move the patient
  - *Short Stay Units (SSU).* SSUs have been developed to provide a short period of assessment, course of therapy or observations for a group of patients who no longer require active ED care. In the past these patients would have just remained in the ED. These units are designed to provide short-term (<24 hours) assessment and / or therapy for select conditions in order to streamline the episode of care. SSUs front load resources to provide an intensive period of evaluation, treatment and supervision. The emphasis is on enhancing patient flow through ED by allowing for early transfer out and improving ED bed access.

- *Cardiology:*
  - *Chest Pain Evaluation.* This MOCK applies "good practice" chest pain processes, 7 days a week exercise stress testing, outpatient clinics, and data driven bed re-aggregation
  - *Integrated Chest Pain Management*. This MOCK applies a first responder scheme, integrated clinical management, basic clinical management by ambulance officer, 12 lead electrocardiogram (ECG) / ambulance administered thrombolysis, and early triage of acute myocardial infarction
  - *Bed Management.* This MOCK applies concepts such as 23 hour beds, hot beds, ward bypass for metropolitan hospitals, data-driven bed re-aggregation, co-location of cardiology related units, flex beds, day angioplasty and medi hotels.
- *Mental Health:*
  - *Assertive Patient Flow Mental Health MOCK*. This MOCK takes an Area Health Service (AHS) wide approach to bed management, rather than focusing on a single facility. This model will help AHSs to make timely decisions and optimize the use of acute beds. It will help staff to better manage the entire journey for patients using the range of services available across the continuum of care to ensure safe, high quality care. The model encompasses and joins a range of different initiatives, at an area level including bed management, community integration, assertive care progression, predicted bed model, transfers, repatriation plans and escalation plans
  - *Discharge Planning MOCK*. This MOCK is under development
  - *Integrated Mental Health MOCK*. This MOCK is under development
- *Surgery:*
  - *Extended Day Only MOCK*. This MOCK assists with reducing elective surgery delays, supports the management of waiting lists and reduces operating costs. The model is based on the premise that the majority of surgical care can be administered within a 24 hour period. The adoption of key components such as a simplified booking and management system, appropriate patient selection, pre-admission assessment and preparation, flexible admission times, the use of clinical protocols and the insulation of beds for planned surgical services can dramatically improve the patient journey and staff satisfaction.

3.2.2 Queensland

Queensland Health has identified a range of programs that have been introduced to assist in managing demand for patients presenting to public hospital EDs, including T4 and T5 patients. These programs aim to reduce hospital admissions by identifying patients who can be cared for in the community or hospital-based programs, reducing ED admissions, increasing available beds and relieving pressure on hospital staff.

- *Avoidable Hospital Admission Programs:*
  - *Hospital in the Home.* This program is designed to provide hospital-type care in patients' own homes, increase available hospital beds and allow earlier discharge
  - *Hospital in the Nursing Home.* This program is designed to minimise avoidable admission / re-admissions in older people, support aged care facilities and allow earlier discharge
  - *Post-Acute Care Programs.* This program assists patients recuperate after leaving hospital and prevents hospital re-admissions
  - *Healthy Ageing Clinics/Early Intervention Programs for over 65s.* This program is designed to minimise avoidable admissions / re-admissions
  - *Community Hospital Interface Programs.* This program allows elderly patients to be supported in their homes, reduces ED presentations and facilitates earlier discharge
  - *Chronic Disease Program.* This program reduces attendances and admissions at EDs and reduces pressure on EDs
  - *Home IV Therapy Program.* This program minimises avoidable admissions for patients requiring IV therapy
  - *Transition/Intermittent Care.* This program is designed to minimise avoidable admissions, reduce occupancy of public hospital beds by nursing home-type patients and facilitate earlier discharge
  - *Allied Health/Community Health Liaison Officers in ED.* This program is designed to assist in the placement of avoidable admission patients in nursing home-type patient care and reduce pressure on EDs
- *ED Patient Diversion Strategies:* These include the following:
  - Home Based Acute Care Functioning to manage aged / chronic disease patients with home and clinic assessment rather than ED presentation
  - Palliative Care Outreach Program providing home assessment for palliative care patients with direct admission to the unit rather than ED
  - Hospital in the Nursing Home Program implemented to reduce minor nursing home resident ED presentations
  - Direct admission for specific cohorts of patients, e.g. paediatric and limited medical patients, in early implementation
  - Home Ward for managing clients with specific diagnosis in the community and clinics rather than ED presentations and in-patient admission
- *ED Patient Flow Strategies:* These include the following:
  - Nurse practitioner role in EDs to decrease T4 and T5 waiting and in-department times
  - Pathology Priority System implemented to reduce delays in patient assessment

3.2.3 Victoria

The Victorian Department of Human Services (DHS) has identified a range of strategies and programs to assist in managing the primary care – ED interface. They include the following:

- *Victoria: A Better State of Health.* This strategy outlines five overarching principles that provide a vision for health care in Victoria:
  - Best place to treat
  - Together we do better
  - Technology to benefit patients
  - A better patient experience
  - A better place to work
- *Metropolitan Health Strategy (MHS).* This provides a five-year strategic policy and planning framework that focuses on fundamental system changes required to achieve sustainable delivery of health services that are safe, of high quality, responsive to individual needs, timely and efficient. The MHS identifies four strategic directions to meet future demand for services: increased capacity; redistribute and reconfigure capacity; service substitution and diversion; and new service models. DHS is currently updating the MHS through the Metropolitan Health Strategy Refresh project to reflect progress made in implementation, new policy initiatives and agreed new service and capital developments. Key challenges already identified for the future are:
  - Development of a strong whole-of-health-system approach to prevention
  - Reorientation of the health system around a primary health care model
  - Integration of service planning to promote greater integration across health services
- *Care in your Community.* This is a planning framework for integrated ambulatory care that provides a ten-year vision for an integrated and person- and family-centred health system. It is about refocusing and investing in the best mix of hospital and community-based care services to better meet the needs of Victorians. It focuses on integrating the component parts of the system and reforming existing systems, structures and processes to support flexible service delivery and person-focused continuity of care. The planning principles for the policy are:
  - Consolidate and improve the range, level and quality of community-based services
  - Services delivered in hospital settings to complement community-based services
  - Services delivered at people's homes or in the community are the preferred option
  - Maximise equitable distribution of services with a focus on addressing disadvantage

  - Maximise ease of access to services
  - Promote collaborative outcomes based on partnerships focused on a health-populations approach

- *Better Faster Emergency Care.* This strategy sets the policy direction for Victorian emergency services with the aim of ensuring equitable and timely access to quality emergency care within public hospitals. It identifies ten priorities:
  - Develop new service options
  - Improve coordination between ED and ambulance services
  - Improve the patient experience
  - Mainstream new models of care
  - Explore new ways of working
  - Enhance safety and quality of care
  - Promote better systems of care
  - Promote better management of care for people with mental health problems
  - Promote better management of care for older people
  - Promote better management and care of children

  The enablers to support the implementation of the ten priorities are systems improvements, service planning, funding policy reform, workforce development, information technology and data management solutions and partnership development.

  Some of the key programs and new models of care designed to address the demand for ED services are outlined in *Better Faster Emergency Care*, including fast track services, co-located after hours GP clinics, care coordination services, Medihotels, observation medicine, GP Liaison Program, day hospitals and initiatives for people with mental health problems.

- *Emergency Department Care Coordination.* ED care coordination is a multi-disciplinary service introduced into Victorian Health Services to facilitate and coordinate care activities for patients at risk of unnecessary hospital admission, delay in discharge from the ED or re-presentation to hospital.

  ED care coordination service activities target patients presenting to the ED who:
  - have complex health care needs
  - are older persons and / or frail
  - require complex discharge planning
  - are at risk of representation to ED and
  - frequently attend the ED or hospital.

  Activities of this service include:
  - patient identification and risk assessment

- comprehensive assessment of psychosocial and support needs
- coordinate multidisciplinary input into the care of target patients
- liaise with and link services to facilitate discharge planning
- liaise with and strengthen links with community service agencies.

- *Co-located After Hours General Practice Clinics.* The purpose of Co-located after-hours general practice (AHGP) clinics is to reduce the number of primary care type ED presentations outside business hours. Co-located AHGP clinics offer an alternative service choice for patients presenting to EDs. They are positioned within the public hospital, near or adjacent to the ED. Patients can choose to seek treatment in either the GP clinic or the ED.

  Co-located clinics are supported by local GPs through divisions of general practice. They are funded through a combination of Medicare Benefits Schedule (MBS), Round the Clock operating grants and hospital funding. Patients may be either bulk billed or charged a co-payment for the service.

  Co-located AHGP clinics provide:

  - episodic primary health care for people with minor injuries and illnesses
  - continuity of care and access to services through notifications to treating practitioners and referrals to other services
  - a no-appointment system where clients have walk-in access, can be redirected from the ED or referred by their GP
  - after hours care defined as "attendance on a public holiday, on a Sunday, before 8am or after 1pm on a Saturday, or anytime other than between 8am and 8pm on a weekday"

  A number of well-located AHGP clinics are also operating adjacent to or on major transport routes to acute hospital facilities. These facilities are located close to a hospital emergency department but do not have any formal relationship with the hospital.

- *Fast Track Services.* Fast track is a model of care to expedite the care of emergency department patients with less complex conditions and those likely to be discharged.

  Operational activities of fast track service include:

  - patient selection using predetermined criteria
  - targeted use of dedicated resources
  - clinical protocols and processes to promote timely interventions and activities
  - clearly defined roles and expectations for staff.

  Fast track services are expected to improve:

  - patient flow through the emergency department
  - congestion of waiting patients

- resource utilisation
- emergency access.

- *Medihotels.* The purpose of a Medihotel model of care is to provide supervised accommodation for self-caring guests who require access to acute hospital services.

  A Medihotel provides services for a defined group of self-caring patients that includes:

  - overnight accommodation close to or within a hospital
  - limited supervision by a health professional
  - facility for transfer to acute care facility if a guest's condition deteriorates.

  The benefits of a Medihotel model of care include:

  - patient satisfaction
  - alternative to multiday inpatient hospital care
  - free up acute hospital bed capacity
  - cost-effective model of care.

- *Urgent Care Centres.* Day hospitals in the outer metropolitan area provide urgent care services to patients with minor illnesses and injuries. These centres provide multi-disciplinary, episodic primary health care over extended hours. Patients are treated on a walk-in basis.

  The overall aims of the urgent care centres are to:

  - Maximise the accessibility of episodic primary health care for people with minor injuries and illnesses.
  - Promote a multi-disciplinary approach to episodic primary care.
  - Ensure continuity of care and access to services through notifications to treating practitioners and referrals to other services.
  - Provide an alternative to hospital emergency departments for episodic primary health care for people with minor injuries and illnesses.

- *Primary Care Physiotherapy.* Primary Care Physiotherapy in the ED is a physiotherapy service that provides advanced musculoskeletal diagnosis and management for selected patient groups presenting to the ED. The primary aim of this service is to expedite the management of musculoskeletal conditions.

  The activities of this service include:

  - direct service provision for patients presenting to the ED complaining of:
    - acute low back or cervical pain of mechanical origin
    - sporting injuries, e.g. ankle, knee
    - musculoskeletal pain of unknown origin,
    - degenerative disease

    - minor trauma
    - limited mobility.
  - assessment, treatment and discharge of patients by physiotherapists
  - fitting aids e.g. splints, crutches
  - patient education including advice on home management
  - follow up arrangements either in hospital or in the community.

  Primary Care Physiotherapy in the ED is expected to improve:

  - patient flow through the emergency department
  - congestion of waiting patients
  - resource utilisation
  - emergency access

- *Observation Medicine.* A number of observation medicine models have been established in hospitals across Victoria. Observation Medicine models include:
  - Short Stay Units
  - Medical Assessment and Planning Units
  - Psychiatric Assessment and Planning Units

  Common to these models is that they provide:

  - a dedicated model of care for specific groups of emergency patients
  - early intensive multi-disciplinary assessment, interventions and care planning.

  The observation medicine models of care are designed to improve care outcomes for patients by increasing the availability of targeted resources early in the patient's stay to expedite care and reduce overall length of hospital stay.

- *Short Stay Observation Units.* Short Stay Observation units (SOU) are generally co-located with emergency departments and provide an alternative to emergency department care or inpatient admission for patients likely to be discharged home within 24 hours.

  The activities of a SOU include:

  - intensive medical assessment and intervention
  - a location for patients to receive allied health and social support intervention, such as physiotherapy or social welfare services before discharge
  - providing a more quiet and comfortable setting than the general ED.

  The effectiveness of SOUs in managing patient flow can be monitored using emergency department length of stay data, allied health and multidisciplinary referral patterns.

- *Medial Assessment and Planning Units.* The purpose of a Medical Assessment and Planning Unit (MAPU) is to provide targeted interventions for patients with complex care needs during the first 48 hours of an emergency medical admission, prior to transfer to an inpatient ward for ongoing care or discharge.

  MAPUs provide intensive and collaborative multi-disciplinary assessment, observation, care and treatment.

  The objectives of the MAPU model of care are to initiate early management that will reduce the risk of prolonged hospital stay or readmission of patients requiring an emergency medical admission.

  The activities of MAPU include:

  – intensive and collaborative multi-disciplinary assessment and interventions during the first 48 hours of admission
  – access to short term specialist care (e.g. physician, geriatric, paediatric, psychiatric)
  – multidisciplinary input and engagement of appropriate allied health services
  – streamlined care-planning processes for high risk patients.

- *Psychiatric Assessment and Planning Units.* The purpose of a Psychiatric Assessment and Planning Unit (PAPU) is to provide targeted short term care for emergency patients with complex mental health care needs prior to discharge.

  The objective of the PAPU model of care is to initiate early management that will reduce the risk of hospital admission, or readmission, of patients with mental heath problems.

  The PAPU model of care targets patients presenting to the ED who:

  – have complex mental health care needs
  – require complex discharge planning
  – are at risk of representation to ED and
  – frequently attend the ED or hospital.

  Activities of this service include:

  – patient identification and risk assessment
  – streamlined care-planning processes for high risk patients
  – access to short term specialist mental health care
  – comprehensive assessment of psychosocial and support needs
  – intensive and collaborative specialist assessment and intervention
  – communication and collaboration between emergency departments, specialist mental health services and other relevant service providers to facilitate discharge planning.

The intended outcomes of PAPU model of care include:

- care pathways that improve clinical outcomes for target patient groups
- reduced ED and inpatient length of stay (LOS) for target patients
- improved ED and inpatient bed availability
- improved access and coordination of metal health services
- reduced unnecessary emergency presentations, hospital admissions and representations.

- *Day Treatment Centre.* A Day Treatment Centre (DTC) is a model of care that provides a wide range of medical services in a designated facility to meet the clinical needs of patients who need day only treatment.

  The activities of a DTC include:

  - treatments and interventions
  - simple same day procedures.

  The benefits of a DTC model of care include:

  - an alternative to emergency department and multiday inpatient hospital care
  - improved access to ED and inpatient beds
  - improved patient flow
  - increased acute hospital bed capacity
  - patient satisfaction
  - cost and resource savings.

- *Mental health care framework.* *Mental health care: Framework for emergency department services (2007)* has been developed to provide strategic direction for the delivery of emergency mental health care in Victoria's public hospital emergency departments (EDs).

  The framework is intended to assist health services to:

  - plan appropriate emergency department care for people who present with mental health needs
  - promote service coordination and collaboration between emergency departments, specialist mental health services and relevant service providers
  - promote best-practice management and care coordination.

  Activities under the framework include:

  - service planning and policy development
  - multidisciplinary collaboration in care planning
  - supporting best-practice management
  - communication and collaboration between emergency departments, specialist mental health services and other relevant service providers

- training and development of health care practitioners responsible for the delivery of mental health care.

- *Mental health Triage.* Mental Health Triage Guidelines were introduced into Victorian health services in 2006.

  The Victorian Emergency Department Mental Health Triage Tool is a guide to assist emergency clinicians triage patients with mental health symptoms. The tool provides descriptors of observed and reported behaviour to assist in allocation of the most appropriate triage category. It is used in conjunction with the Australasian Triage Scale (ATS).

  Use of the mental health triage tool is expected to ensure those presenting to Victorian emergency departments with mental health needs are prioritised appropriately and managed according to the principles set out in the *Victorian Emergency Department Mental Health Triage Project Training Manual.*

- *Improving the patient experience program.* The Improving the patient experience program is a suite of interlinked initiatives to assist health services and clinicians to respond to the needs of patients in the emergency department and support delivery of patient-centered care.

  Integral to successful implementation of the initiatives has been adoption of an integrated approach across health services. These activities include:

  - upgrade of emergency department physical amenities following completion of an emergency department audit
  - a communication enhancement strategy comprising consistent emergency department signage, consumer information materials (brochures, fact sheets and DVD) and communications workshops for frontline emergency department staff
  - a specific emergency department patient satisfaction monitor.

- *General Practice Liaison program.* The General Practice Liaison (GPL) program is comprised of health service based GPL units supported by a statewide program coordination service that is focused on systems change and improvement at the interface between hospitals and general practice.

  The role of the GPL Program is to promote an integrated, person-centred health care system providing quality care and better health outcomes for Victorians. In particular, the GPL Program has a role in:

  - improving access to services
  - promoting continuity of care across health services
  - building strong working relationships that promote sustainable collaboration and partnerships between services
  - improving the quality of health care

- contributing to a reorientation of the health system so that the mix of hospital and community-based services ensures care is provided in the most appropriate setting and minimises the need for acute care
- optimising resource use and the efficiency of care across multiple providers.

The core functions to be performed by the GPL Program reflect six functional areas identified in the role statement:

- access to services
- service integration
- service coordination and information exchange
- quality health care
- reorientation of the health system through service development and system redesign
- optimising resource usage.

- *Improving care for older people: a policy for health services.* As part of the Victorian Government's policy *Improving care for older people: a policy for health services,* the department is working with health services to address five key impact areas:
  - delivering person-centred care by ensuring the older person is an informed and valued participant in their health care
  - building best practice in the care of older people by using an evidence-based approach to understand the complexity of their specific health care needs
  - modifying environments to ensure they are 'older person friendly'
  - use training and development as a catalyst for culture change and a platform for up-skilling staff
  - coordination and integration of care for older people through improved partnerships and networks within and between health services.
- *Guidelines for reducing functional decline in older people in hospital EDs.* A key aspect of the implementation of the Council of Australian Governments Long Stay Older Patients' (COAG LSOP) initiative is the development of interventions and guidelines for minimising functional decline in older people in public hospitals. Victoria's implementation of the COAG LSOP initiative builds on existing work from the *Improving Care for Older People* initiative as well as the Hospital Admission Risk Program–Chronic Disease Management (HARP-CDM).

  The guidelines will support those responsible for the delivery of older patient care in all areas including in the ED. The purpose of this project is to increase the quality of care for older persons through meeting their specific needs and promoting a culture that provides a better experience for older patients within our health system, including in EDs.

  Ten health services will act as lead sites for the development of a specific functional domain resource.

- *Guidelines for ambulance presentations in the emergency department.* The purpose of these Guidelines is to provide direction for hospital and ambulance staff on the process for reception and handover of patients arriving by ambulance at Victorian public hospital emergency departments.

  The aims of implementing the guidelines are to:

  - ensure equitable and timely access to emergency care for ambulance patients
  - support best-practice management
  - assist with planning and care coordination within existing infrastructure and services
  - provide clear escalation procedures to respond to delays in emergency department access for ambulance patients.

  Guidelines for the reception of ambulance patients into the emergency department were published in 2007. These guidelines will be implemented in 2007-08.

- *Nurse-On-Call.* This is a statewide service staffed by registered nurses providing 24-hour telephone based health information to the community. The service commenced in March 2006, initially taking calls redirected from EDs. It provides:
  - Consumers with other health related information, such as details of health services in their area or the number of phone help lines
  - Access to professional health advice via a phone call, any time of the day or night
  - Access to interpreting services for callers not confident with English
- *Hospital Admission Risk Program (HARP).* This program was established in 2001 to address sustained increases in demand on the hospital system. The HARP evaluation found HARP had a positive overall impact upon the level of hospital utilisation in Victoria. The reduced need for hospital services was equivalent to approximately one ED attendance, two ED admissions and six days spent in hospital each year for every HARP patient. Following the evaluation HARP evolved into HARP Chronic Disease Management, a program designed to provide an integrated, effective and sustainable chronic disease and complex care program, providing the right care in the right setting, to reduce avoidable hospital admissions and contribute to better health outcomes for Victorians
- *General Practitioners in Community Health Services*. This strategy was launched in September 2004. It is designed to strengthen the valuable role played by GPs who work in or with Community Health Services (CHSs). The strategy is a key element of delivering quality medical care through the Community Health policy. The strategy aims to:
  - Improve access to general practice, particularly for Victorians experiencing difficulty accessing a GP
  - Generate genuine service integration and coordination between GPs and CHSs

- Improve workforce capacity of CHS clinical teams

The planned strategy outcomes include:

- Increased numbers and capacity of GPs and other medical staff in CHSs
- Increased quality bulk billing services, including extended hours, new medical sites and specialised medical services
- More financially viable and sustainable CHS GP services
- CHSs that are integrated and coordinated with general practices
- Diversion of low triage presentations from hospital emergency departments
- Increased CHS access to Medicare payments

- *Community Health Services - Creating a Healthier Victoria.* This strategy sets out the vision for CHS over the next decade, and describes the initiatives to achieve that vision. The five strategic directions for development over the next decade mean that CHS will:
  - Be a major platform for the delivery of a comprehensive range of primary health care and support services through community-based models of care
  - Be a significant provider of coordinated community-based disease management and ambulatory care, both directly and in partnership with acute care providers
  - Provide primary medical care through the development of general practices integrated with other primary healthcare services
  - Have an increased focus on child and family primary healthcare
  - Continue to provide leadership in health promotion
- *Primary Care Partnerships (PCPs).* This strategy was introduced in 2000 to improve the health of people using primary health care services and to reduce avoidable use of hospital services. The introduction of service coordination process and tools and an integrated health promotion framework have produced significant system improvements and strengthened the primary care sector. The current vision for PCPs includes:
  - An integrated healthcare system, based on partnerships, where providers see planning and working together to better meet the needs of their communities as core business
  - Widespread consumer, career and community participation in service design, implementation and evaluation
  - Consumers' needs identified early and appropriate services delivered promptly
  - Improved service coordination practice enhanced and embedded in agency practice, streamlining assessment and access to services
  - Widespread, efficient and effective referral and care coordination between GPs and other health care providers

- Reliable information and communications technology infrastructure and agreed standards in place enabling electronic communication, including e-referral
- A health system geared to health promotion, prevention and early intervention for at-risk individuals and groups, minimising the onset of disease and preventing hospital admissions

3.2.4 South Australia

The SA Department of Health has implemented a range of strategies for managing demand. These strategies are aimed at identifying patients who can receive care without the need for an acute hospital admission, reducing ED attendances and maximising existing bed capacity. Strategies have also been implemented to support improved work flow and work practices within EDs. They include the following:

- *GP Plus Networks.* Four of these have been established within the metropolitan area of Adelaide. They have the following objectives:
  - Establish partnerships and collaborative planning with providers to contribute to improvements in the health of local populations
  - Improve primary health care service delivery
  - Integrate services between general practice, community health and hospitals
  - Improve continuity of care for people with complex diseases and condition
  - Reach vulnerable populations, including low socio-economic status, Aboriginal and outer urban, rural and remote communities
- *GP Plus Healthcare Centres.* In these centres, health professionals are working with patients and their GP to provide integrated health care, linking acute and primary health care. Centres are in operation in Aldinga and Woodville, and centres in Marion and Elizabeth will be operational by 2009. A total of 10 centres are proposed for metropolitan Adelaide, with a target of one centre per 100,000 population
- *Chronic Disease Management Programs.* These are metropolitan-wide programs providing packages of care to patients with chronic diseases in order to reduce some of their unplanned hospital admissions. They also provide self-management programs to attempt to reduce the future pool of chronically unwell patients being admitted to hospital
- *Metro Home Link: Hospital Avoidance and Early Discharge.* Under this program, hospital avoidance packages of care enable patients presenting to EDs or GPs (and who would otherwise be admitted to hospital) to receive care in their place of residence (including residential care). Early discharge packages enable patients to leave hospital earlier than would otherwise occur and receive care in the place of residence (including residential care). These packages also target patients who are discharged from hospital but are assessed as being at risk of readmission. This metropolitan-wide program has been operating for 4 years

- *Transition Care.* This program, which has been implemented progressively since October 2005, provides an early discharge 12 week package for older people at the acute-aged care interface. The package of support can be in a residential care setting or in the community. The program seeks to reduce hospital readmission and maximise functional capacity through the provision of targeted therapy. The program also allows the opportunity to examine long-term care needs outside the hospital environment
- *Redesigning Care.* This program has included initiatives to stream patients based on the likelihood of them being admitted or being discharged, e.g. s*ee and treat*. It is aimed at improving patient flow and managing demand within ED and ward areas
- *RDNS Post-Acute.* This program provides specialised nursing care to clients following a hospital admission in order to enable safe discharge on time and / or to prevent hospital readmission
- *GP Plus Practice Nurses.* Funding is being provided over four years to employ up to 50 practice nurses per year across the Adelaide metropolitan area. A key aim was to reduce unnecessary admissions to hospital
- *Hospital at Home Programs.* These programs enable hospital-inpatients to receive their medical care in their home, thereby improving acute bed capacity
- *Funding for Metropolitan EDs.* This initiative is aimed at the seven metropolitan EDs to enable recruitment to additional medical, nursing, allied health and clerical positions to support improvement in waiting times
- *Lifestyle and Risk Factors Program.* This program will involve a statewide approach, with 50 Lifestyle Advisors / Coordinators to be appointed over the next four years, with the aim of 12 being operational by the end of 2007. Lifestyle Advisors / Coordinators will work with communities through GP Plus Health Care Centres and general practice to:
  - Provide programs for groups and individuals at highest risk
  - Assist people reduce their risk of developing a chronic disease
  - Provide a collaborative partnership with participant and a multidisciplinary team
  - Provide coordination and support for chronic disease prevention, early detection and ongoing monitoring
- *Self Management Programs.* Building on existing programs, these will develop a statewide approach to empower people to take an active role in the ongoing management of their chronic condition

3.2.5 Western Australia

The WA Department of Health has implemented the following strategies to assist with managing ED demand:

- *Hospital in the Home (HITH).* This program has been introduced in the Perth metropolitan area to reduce demand for ED services by providing short term care

in the patient's home for conditions that traditionally need hospital admission. There has been a significant increase in HITH bed days in 2006-07, and the impact on ED demand is currently being assessed

- *GP After Hours Clinics.* Six after hours clinics have been established in metropolitan Perth to ease pressure on EDs by directing non-urgent patients to GP clinics. There has been a significant increase (over 45%) in the number of patients attending the after hours clinics in 2006-07 compared to 2005-06
- *Strategies for Chronic Disease Management Teams (CDMT).* Eight multidisciplinary CDMT teams have been established in the metropolitan area of Perth to reduce the number of ED attendances by patients with chronic disease. The teams target clients at high risk of hospitalisation due to chronic obstructive pulmonary disease, congestive heart failure and diabetes. The community based multidisciplinary teams provide care coordination, disease specific self management education and rehabilitation programs. Patient services commenced in April 2005. In 2006-07 there were 2,818 referrals to CDM teams. In 2007-08 the referrals target is 5,000.
- *Disease Management Units (DMU).* Two DMUs have been established in the Perth metropolitan area. They aim to stabilise the medical condition of a patient and provide a comprehensive management plan to the patient's GP to enable community based care. The DMUs aim to stabilise the medical condition of patients over a six month period and put a process in place for community based management of the medical condition. 150 clients have been seen since January 2007
- *Telephone Coaching.* This program has been established (mainly in the Perth metropolitan area) to provide telephone coaching to patients to support community based care. The program provides patient education and counselling based on need and behaviour. It is undertaken by a Disease Management Nurse who works with a patient's healthcare provider (GP or specialist team). At June 2007, 1,050 clients had been recruited to the program
- *Residential Care Line (RCL).* This is a statewide service established to provide 24x7 advice and support to registered nurses in residential aged care facilities to ease pressure on EDs. The service provides support for registered nurses in residential aged care facilities to enable them to better manage the medical conditions of patients and reduce attendances at EDs. In 2006-07, the service received 1,257 calls from residential aged care facilities. The service is expected to expand in 2007-08
- *Care Awaiting Placement Program (CAP).* CAP was established in 2001 in response to the need to create additional capacity in the acute sector, with particular focus on freeing bed capacity to ensure timely access to meet demand on emergency departments. At December 2007, there was a total of 223 beds occupied that are purchased from those providers in the Residential Aged Care Sector who have unused Australian government unlicensed beds.
- *Transition Care.* In 2005, the Federal Government allocated a total of 160 transition care places to Western Australia. Currently this jointly funded

program provides an early discharge 12-week package of care for the older person at the acute-aged interface. In WA the program has assisted approximately 50% of participants to achieve their goals and remain in their own home.

- *Home Care Packages (HCP).* HCP are short-term packages of care targeted at older people who are discharged from acute care. These packages include nursing, allied health and home care support. These packages are used to affect more timely discharge from hospitals and in some cases support patients at home while they wait for long-term care to become available.
- *Personal Enablement Packages (PEP).* These short term packages provide a rapid response to frail older patients immediately following discharge from hospital or the emergency department. An individual care plan is developed for a package of HACC services to be provided for up to 8 weeks after discharge in the person's home. The package may provide nursing care, personal care, domestic assistance and allied health input.
- *Long Stay Older Patient Program (COAG).* In February 2006 COAG agreed to a reform package to provide better care for older people in hospitals. In Western Australia through emergency departments in the metropolitan area this is being achieved by risk screening / assessment / packages. These initiatives support the AHMC National Action to provide age-friendly services to the older person across health service sites, enhance system-wide coordination and improve their management. The COAG package in emergency departments is utilised to provide the assistance of support services, therapy and / or non-therapy by brokering services needed in the short-term to reduce avoidable admissions and facilitate earlier discharge.

3.3 Commonwealth Government Policies

The Commonwealth Government, which has responsibility for primary care through its funding of the Medicare and the Pharmaceutical Benefits Scheme, has initiated a range of programs directed at improving access to, and quality of, primary healthcare, and reduce demand on state-funded public hospitals, including the following:[9]

- *After Hours Primary Medical Care Program*. The purpose of this program is to improve access to quality after hours primary medical care and progress systemic reform by trialling key interventions, including a National Health Call Centre Network
- *Australian Primary Care Collaboratives Program*. This program aims to improve clinical health outcomes, reduce lifestyle risk factors, maintain health for chronic and complex conditions, and improve access to Australian general practice

[9] Source: Commonwealth Department of Health and Ageing website – Programs and Initiatives

- *Better Access to Psychiatrists, Psychologists and General Practitioners through the MBS.* This initiative provides better access to mental healthcare by GPs, psychiatrists, clinical psychologists and other appropriately trained allied mental health professionals. It will encourage team-based mental healthcare in the community with psychologists working alongside GPs, psychiatrists, mental health nurses and other allied mental health professionals. Training will be available to improve the detection of mental illness and quality of services for patients
- *Enhanced Primary Care Program.* This program was introduced to provide more preventive care for older Australians and improve coordination of care for people with chronic conditions and complex care needs. The program provides a framework for a multidisciplinary approach to health
- *National Health Call Centre Network.* The Australian Government has provided funding as part of the After Hours Primary Medical Care Program, to facilitate this collaborative approach and to trial after hours care models which include telephone triage
- *Investing in After Hours GP Services Program.* This consists of new targeted and strategic measures to help restore after hours GP care as a valued and accessible service in metropolitan and regional Australia
- *Aged Care GP Panels Initiative.* This initiative aims to ensure better access to primary medical care for residents of aged care homes, and to enable GPs and allied health service providers to work with residential aged care facilities on quality improvement strategies for the care of all residents
- *5 Year Overseas Trained Doctor Recruitment Scheme.* This scheme facilitates the recruitment of overseas trained doctors to work in rural areas by reducing the 10 year moratorium on access to Medicare benefits
- *After Hours Other Medical Practitioners Program.* This program provides access to the A1 Medicare rebate to non-vocationally recognised medical practitioners providing after hours GP services
- *Approved Medical Deputising Service Program.* This program aims to improve public access to after hours home visit services by giving medical practitioners without postgraduate qualifications access to Medicare if they work for an approved deputising service
- *Approved Private Emergency Department Program.* This program meets the short-term need for emergency specialists in the private hospital system by giving medical practitioners without postgraduate qualifications access to Medicare if they work in an approved ED
- *Investing in After Hours GP Services - Supplementary Grants.* Supplementary grants are available under the Investing in After Hours GP Services Program to assist established after hours services to meet their marginal costs and keep them financially viable

- *More Doctors for Outer Metropolitan Areas Program*. This program provides financial incentives for doctors to relocate to, or remain in, outer metropolitan areas
- *National Falls Prevention for Older People Initiative*. This initiative aims to reduce the incidence, morbidity and mortality associated with falls in people aged 65 years and over (55+ Indigenous) living in community and aged care homes, as well as those being treated in hospitals
- *Nursing in General Practice Programs*. These programs support the work of general practice nurses
- *Outer Metropolitan Other Medical Practitioners Program*. This program provides incentives for non-vocationally recognised GPs to move to, or remain in, outer metropolitan areas
- *Outer Metropolitan Registrars Program*. This program provides financial assistance to GP registrars when they undertake the compulsory six month training placement in an outer metropolitan area
- *Outer Metropolitan Specialist Trainee Program*. This program allows trainees to work in supervised positions in outer metropolitan private practice as a formal part of their specialist training
- *Prevocational General Practice Placements Program*. This program encourages junior doctors to take up general practice as a career by providing placements in outer metropolitan, regional, rural and remote areas
- *Rural and Remote General Practice Program*. This program provides funding for activities to recruit and retain general practitioners to/in rural and remote areas, e.g. community assistance, finding placements, costs of relocation, family support, infrastructure and training
- *Rural Locum Relief Program*. This program aims to increase availability of rural locum services by giving medical practitioners without postgraduate qualifications access to Medicare if they are on approved rural locum placements
- *Temporary Resident Other Medical Practitioners Program*. This program aims to preserve access to Medicare for a small number of long-term temporary resident doctors
- *Workforce Support for Rural General Practitioners Program*. This program provides support for GPs in rural areas, including training, professional development and locum coverage

4 The Baseline – Scope and Nature of Increasing ED Demand

4.1 Introduction

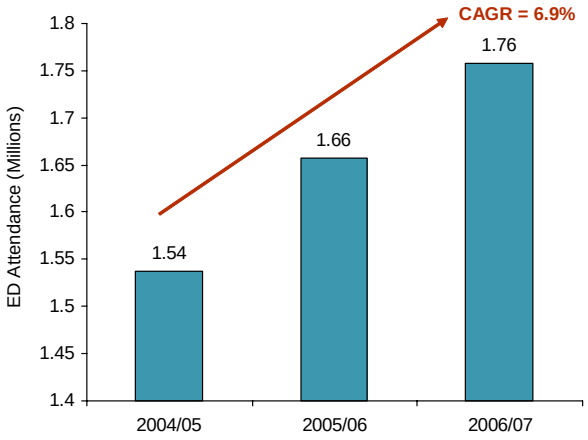
All states in Australia have reported an increase in emergency department demand over the past two years. This section will provide an overview of demand in New South Wales to understand more specifically the nature of attendances and key areas of highest growth.

4.2 ED Demand in NSW

4.2.1 ED Demand Generally

From 2004/05 to 2006/07 the number of ED attendances in the 59 hospitals whose data were used for this analysis increased from 1.54 million to 1.76 million, representing a 6.9% compound annual growth rate (CAGR) in ED attendances in New South Wales. Over the same period the number of attendances as a proportion of the New South Wales population has also grown from 26% in 2004/05 to 30% of in 2006/07. This indicates a strong trend towards use of the emergency department for an increasing part of the population.

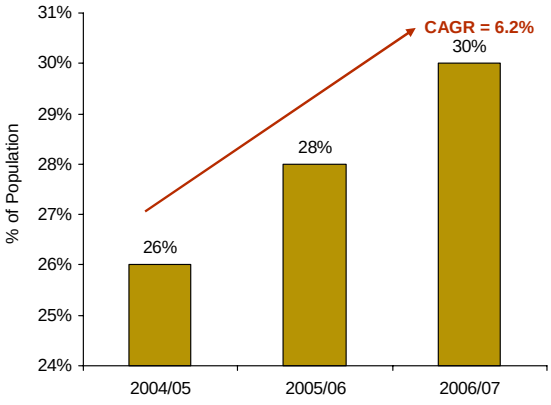
Figure 7: All ED Attendances 2004/05–2006/07



Source: NSW Health

Note: Includes EDIS data with the 59 hospitals that consistently provided data over the period

Figure 8: Rates of ED Attendances per capita



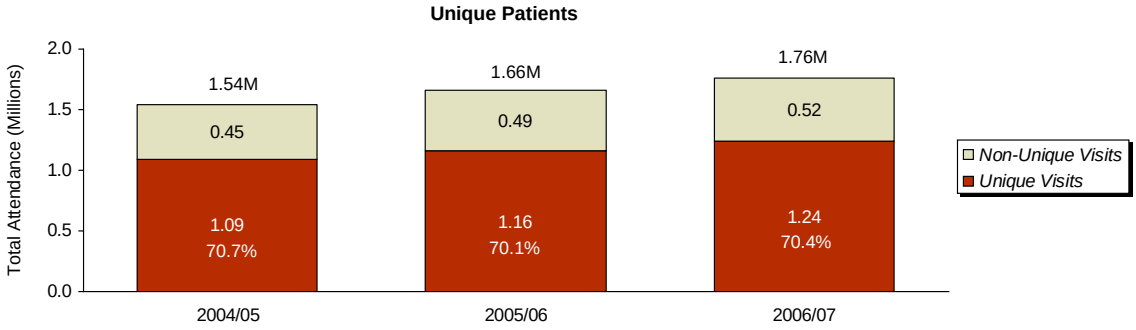
Source: NSW Health, Australian Bureau of Statistics

Note: Based on attendances rather than individual people to highlight the real volume of attendances. Population based on estimated population of each of the 59 hospitals' catchment area

4.2.2 Repeat Visitors

Of the 1.76 million attendances in 2006/07 there were only 1.24 million unique patients, which represent 70.4% of all attendances. Of these unique patients 76% visited one time and 24% visited on multiple occasions.

Figure 9: One Time Versus Repeat Visitors to ED



% of Unique Patients

	2004/05	2005/06	2006/07
1 visit	76.4%	76.1%	76.2%
2-4 visits	21.5%	22.0%	21.9%
5-9 visits	1.7%	1.7%	1.7%
10+ visits	0.2%	0.2%	0.2%

Source: NSW Health EDIS data

Note: A unique visitor was identified by their unique personal identifier together with the hospital they attended. Does not take into account people who visited multiple EDs.

Hospital records also indicate that in some cases patients are attending an emergency department more than 50 times per year for a variety of issues. 1.7% of patients are visiting the ED between five and nine times per year, and 0.2% are visiting more than 10 times in one year. These findings were also confirmed by the National Patient Survey.

Overall, this may point to the ED being used in some cases as a substitute for other ongoing clinical or institutional requirements. Such a high number of repeat visitors suggests that EDs are possibly managing people with potentially chronic problems who may otherwise have been treated in a specialist clinic or by their GP.

To illustrate the conditions for which patients are attending more than 50 times and to understand the purposes behind these visits we have identified two different cases.

Figure 10: Case Studies: Repeat Visitors[10]

Case Number	1	2
Number of Times Visited ED	249 (2005 / 06)	75 (2005 / 06)
Nature of Conditions	No clear diagnosis – possible mental health issue	Treatment of TB
Example Symptoms	Dizzy / shaky Emotional crisis Painful!!! Generally unwell Hungry and requests to see mental health Low sugar nearly fell over Sweaty	Medication Other general symptoms Presents for medication For TB medication Patient presents for medication For TB meds

[10] *Source: NSW Health EDIS data.*

4.2.3 Increase in Primary Care Cohort

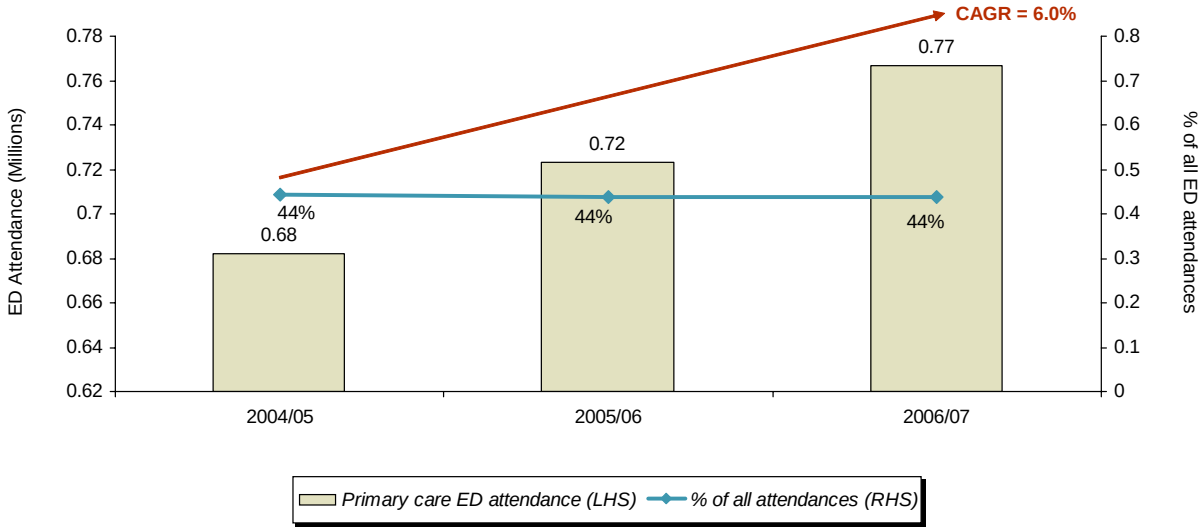
It is important to separate those who truly require ED services from those who could have potentially been treated in a primary care environment had these services been available at the time they were required. Our analysis of emergency department demand therefore focuses on primary care patients who are, for the purposes of this study, defined as":

1. Patients in triage categories four and five
2. Patients who did not arrive by emergency vehicle
3. Patients who were not admitted to any ward of the hospital

These primary care patients have consistently over the past three years made up 44% of all attendances in emergency departments, indicating that possibly 44% of demand in the ED could be the a result of transfer from primary care.

The Primary Care Patient cohort is growing at 6.0% annually which is marginally lower than the overall growth in EDs (6.9%).

Figure 11: Primary Care Patient Demand in EDs 2004/05-2006/07



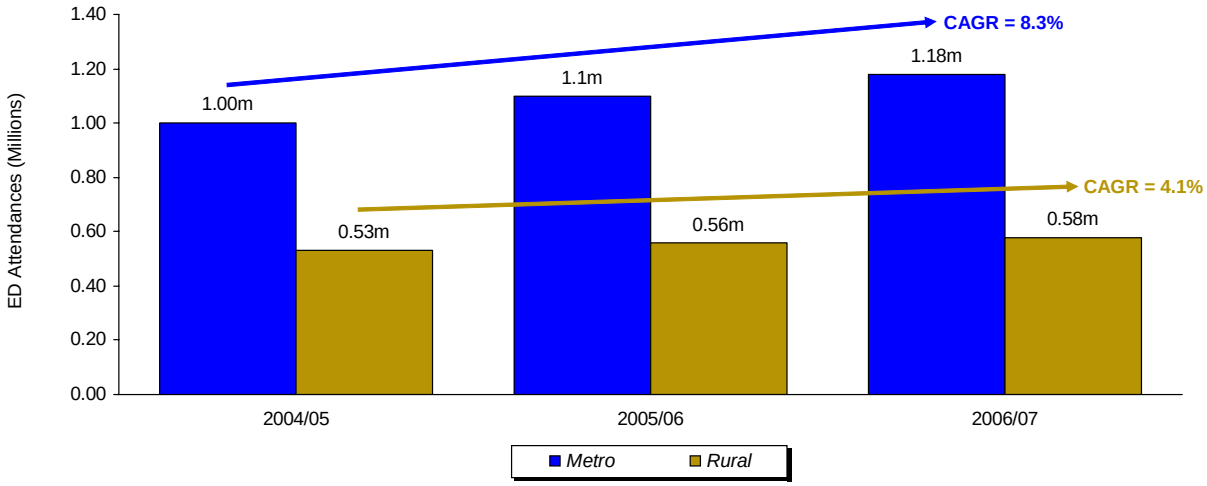
Source: NSW Health EDIS data

Note: Definition of Primary Care Patient adapted from Masso et al. 2007 in Emergency Medicine Australasia. "Primary care patients were defined as patients classified into category 4 or 5 of the Australasian Triage Scale, presenting for a new episode of care, which did not arrive by ambulance, were self-referred and who were not expected to be admitted". Our analysis allowed patients also referred from all sources as they include referrals from primary care. Patients presenting for a non-new episode of care were also included as they may be using the ED as a source of ongoing treatment that could have been treated through a primary care facility.

4.2.4 ED Demand In Rural vs. Metropolitan Areas

Growth in the ED demand has been significantly higher in metropolitan than rural areas with CAGRs of 8.3% and 4.1% respectively.

Figure 12: ED Demand in Rural vs. Metropolitan AHSs 2004/05 - 2006/07



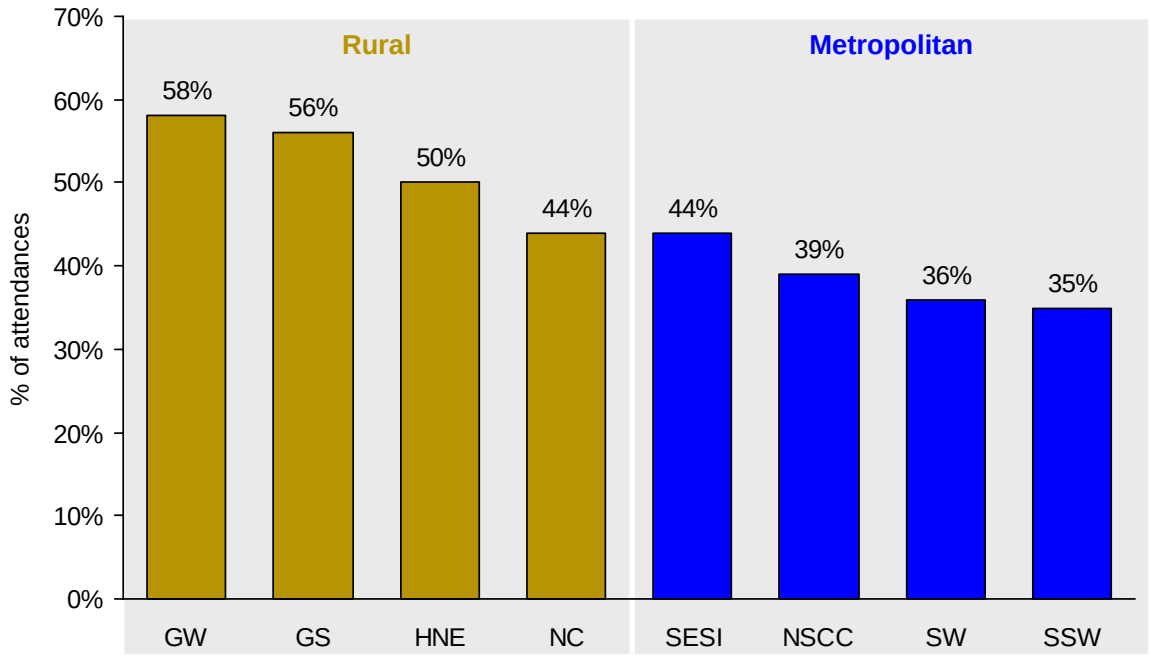
Source: NSW Health EDIS data

Note: The rural versus metropolitan split was made based on NSW Health's definition at the Area Health Service Level. EDIS data with the 59 hospitals that consistently provided data over the period .Metro AHSs: Sydney South West = 9 hospitals; Sydney West = 9 hospitals; South East Sydney/Illawarra = 10 hospitals; North Sydney/Central Coast = 7 hospitals; Rural AHSs: Hunter New England = 12 hospitals; Greater Southern = 4 hospitals; Greater Western = 4 hospitals; North Coast = 4 hospitals.

While it is the metropolitan areas that have the highest demand growth, rural areas have a significantly higher rate of presentation of primary care patients to their EDs. Typically, female GPs have a higher representation in metro areas, than in rural areas. Female GPs work fewer hours and often part-time. Therefore access to GP is more challenging for patients in metro areas. We have identified that GP access - or rather the lack thereof - is one of the main drivers for demand transfer from primary care.

For example, the Greater Western AHS (rural) has 58% of all patients presentations in the category of 'primary care patients' whereas Sydney South West AHS (metropolitan) has only 35% of all patients that can be clustered as primary care patient presentations. Rural areas have also been shown to have a significantly worse GP to population ratio than metropolitan areas which is limiting rural patient access to primary care through their GP. This indicates a much higher demand transfer from primary care in rural than metropolitan areas.

Figure 13: Primary Care Patients Demand in Rural vs. Metropolitan AHSs[11]



Notes: EDIS data with the 59 hospitals that consistently provided data over the period .Metro AHS's: Sydney South West = 9 hospitals; Sydney West = 9 hospitals; South East Sydney/Illawarra = 10 hospitals; North Sydney/Central Coast = 7 hospitals; Rural AHS's : Hunter New England = 12 hospitals; Greater Southern = 4 hospitals; Greater Western = 4 hospitals; North Coast = 4 hospitals

Source: NSW Health EDIS data.

Interviews revealed that in many cases general practices are co-located or located within a very close proximity to a hospital and that it is the same GPs working in a practice and in the ED. It is understood that when patients attend the GP, the GP requests that they come to the ED for treatment. This instantly adds volume to rural EDs where GPs rely on the ED for diagnostic and other services.[12]

4.2.5 ED Demand by Age Group

The analysis of patients by age group indicates that the largest cohort and driving demand transfer into the emergency departments is the under 25s age group which make up 47% of all primary care patients in 2006/07. This is consistent with the National Patient Survey which highlighted that the under 25 age group are the strongest promoters of emergency departments and this is reflected in the over-representation as primary care patients.

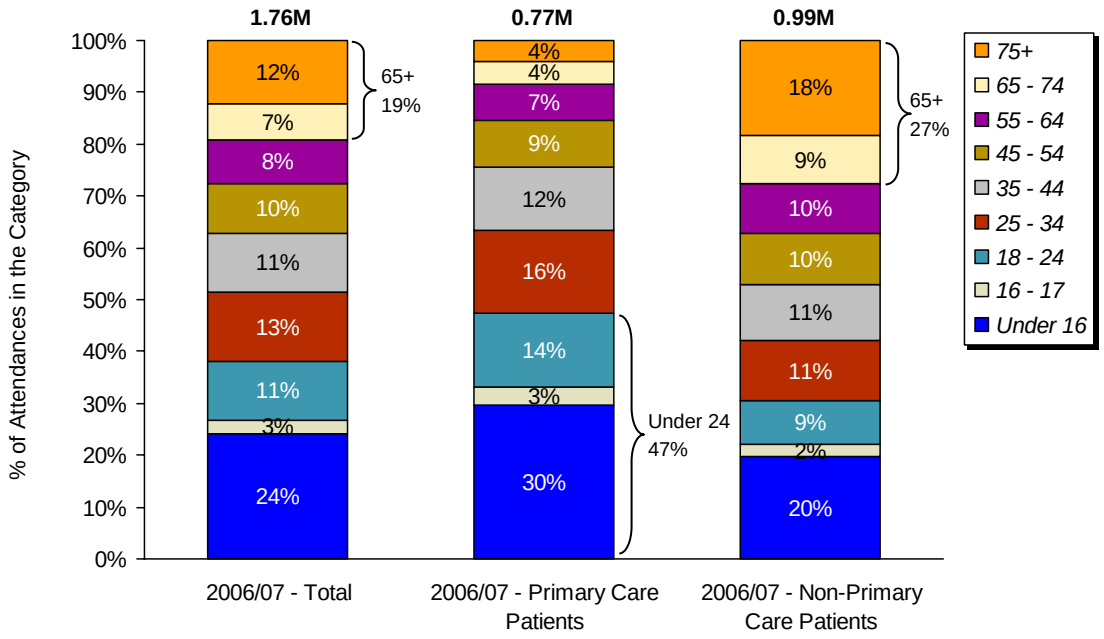
Older patients such as those at 65 and over are far more likely to use an emergency department as a true emergency patient. The 65+ year's group make up only 8% of primary care patients and are 27% of all other patients (not primary care patients). There is a dichotomy here of two major groups with different needs converging at the ED.

---

[11] *The graph shows the percentage of attendances in ED, defined as primary care patients contrasting rural versus metro*

[12] *Source: Interviews*

Figure 14: Primary Care and Non-Primary Care Patient Demand by Age Group 2006/07



Source: NSW Health EDIS data

Note: Primary Care Patient percentages do not add up to 100% due to rounding

4.2.6 Primary Care Patient ED Demand by Diagnosis and Age Group

4.2.6.1 Overall Primary Care Patient Population[13]

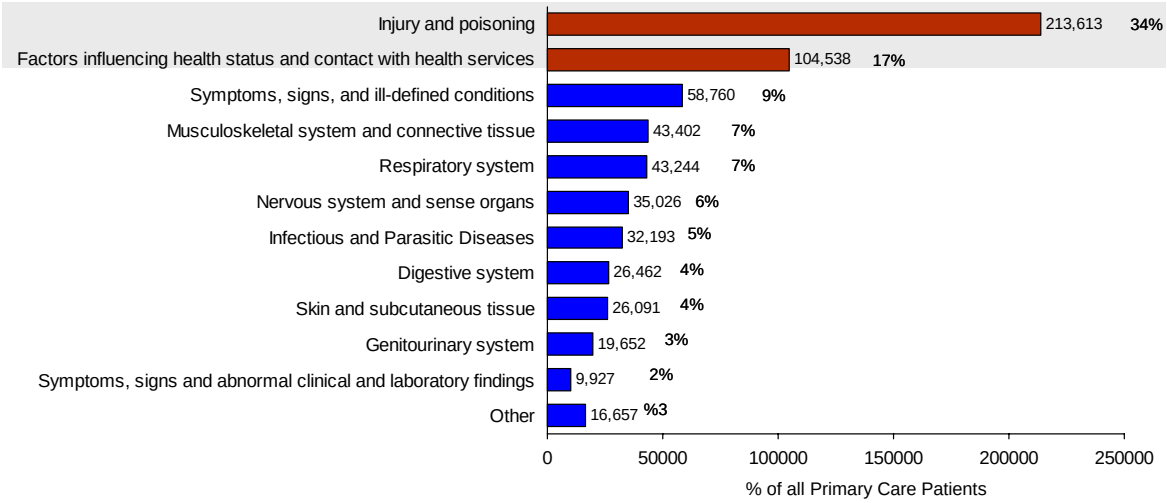
Overall, injury and poisoning was the most common diagnosis, making up 34% of ED demand in 2006/07. The data shown here are indicative for the potential reasons of patients seeking treatment, however due to data capture issues findings need to be viewed with caution.

Factors influencing health status and contact with health services[14] were the next largest diagnosis group, making up 17% of total demand.

[13] *The data needs to be interpreted with caution, since there may be issues around the accuracy of the data capture. Typically the nurse will fill in this field.*

[14] *Note: Factors Influencing Health Status and Contact with Health Services includes psychosocial factors, follow-up exams, procedures and aftercare, and administration purposes.*

Figure 15: Primary Diagnosis for ED Patients 2006/07



Source: NSW Health – Epidemiology Extract from HIE, October 2007

Note: N=629,565. Data includes 53 EDIS hospitals in NSW. The primary diagnosis records were provided for 95%, 93% and 92% of cases in 06/07, 05/06, 04/05 respectively

The two different patient cohorts (under 25 and 65+) are attending the emergency department for different conditions. The analysis below is high level and intended as an indication of what purposes the ED is being used.

4.2.6.2 Under 25 Years Age Primary Care Patient Population

The under 25 year's group are likely to be attending the ED for Injury and Poisoning with 34% of attendances related to this category. By contrast only 24 % of all attendance of the 65+ years old cohort were for Injury and Poisoning.

Figure 16: Primary Diagnosis for Under 25 years ED Patients 2004/05 - 2006/07

Diagnosis	2004/05	2005/06	2006/07
Injury and poisoning	92,638 34%	94,176 34%	102,532 34%
Factors influencing health status and contact with health services	40,654 15%	42,776 15%	39,954 15%
Diseases of the respiratory system	27,197 10%	28,208 10%	30,234 10%
Symptoms, signs, and ill-defined conditions	25,274 9%	26,624 9%	27,824 9%
Infectious and Parasitic Diseases	19,844 7%	20,908 7%	22,653 7%
Diseases of the musculoskeletal system and connective tissue	13,504 5%	14,154 5%	15,336 5%
Diseases of the nervous system and sense organs	13,834 5%	14,459 5%	13,587 5%
Diseases of the skin and subcutaneous tissue	9,693 4%	10,616 4%	11,682 4%
Diseases of the digestive system	9,268 3%	9,965 3%	11,413 3%
Diseases of the genitourinary system	6,491 2%	6,519 2%	7,456 2%
Symptoms, signs and abnormal clinical and laboratory findings	3,917 1%	4,413 1%	6,703 1%
Certain infectious and parasitic diseases	4,048 1%	5,338 1%	5,844 1%
Other	7,033 3%	6,776 3%	8,313 3%

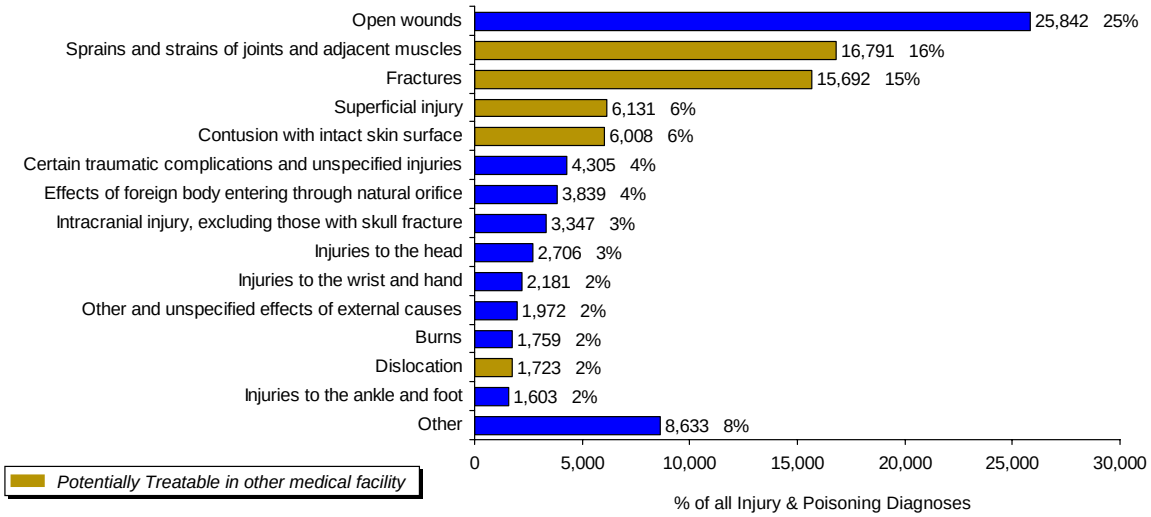
Number of Primary Care Patients Under 25 Years

Source: NSW Health – Epidemiology Extract from HIE, October 2007

Note: N= 303,531 in 2006/07. Data includes 53 EDIS hospitals in NSW. The primary diagnosis records were provided for 95%, 93% and 92% of cases in 06/07, 05/06, 04/05 respectively

For those under 25s who attend for Injury and Poisoning, 16% are sprains, 15% are fractures and 6% are contusions (bruises) which are potentially treatable in a sports medicine environment. This shows that younger patients are presenting more often for conditions which may be more suited to another primary care provider.

Figure 17: Under 25 years ED Primary Care Patients with Injury and Poisoning 2006/07

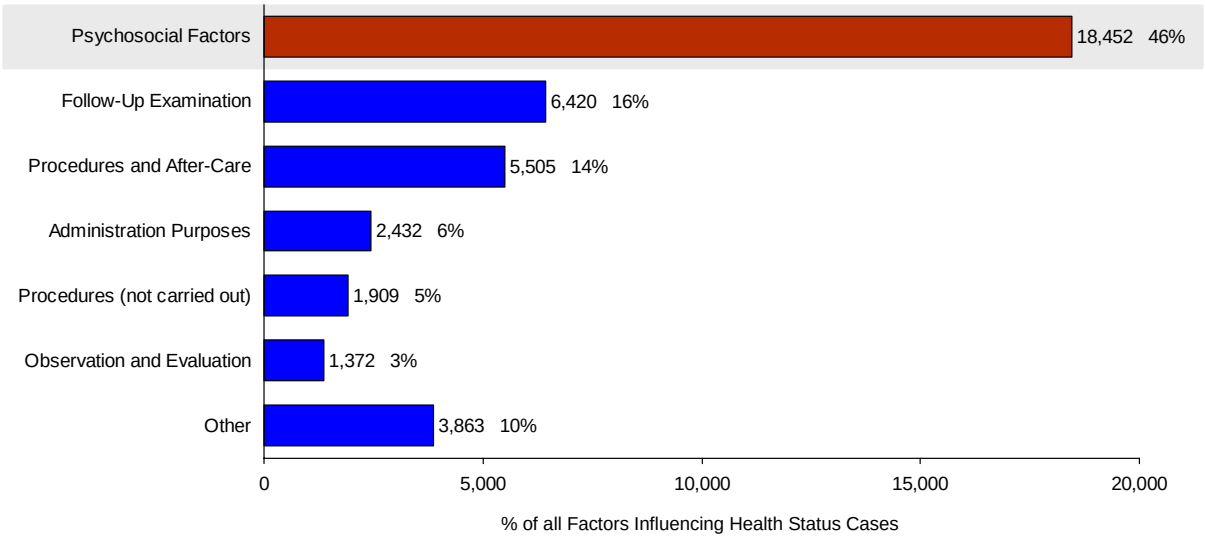


Source: NSW Health – Epidemiology Extract from HIE, October 2007

Note: N= 303,531 in 2006/07. Data includes 53 EDIS hospitals in NSW. The primary diagnosis records were provided for 95%, 93% and 92% of cases in 06/07, 05/06, 04/05 respectively

Of the under 25s attending for factors affecting health status and contact with health services, a very large group, 46%, are attending for psychosocial reasons which may be better treated through a specialised facility. In addition 30% in total are attending for follow up exams (16%) and procedures and after-care (14%) which could have possibly been provided through the patients' GP, community service or outpatient programs.

Figure 18: Under 25 years ED Primary Care Patients with Factors Influencing Health Status 2006/07



Source: NSW Health – Epidemiology Extract from HIE, October 2007

Note: N= 39,954. Data includes 53 EDIS hospitals in NSW. The primary diagnosis records were provided for 95%, 93% and 92% of cases in 06/07, 05/06, 04/05 respectively

4.2.6.3 65+ Years Age Primary Care Patient Population

The 65+ year's group are more likely to be attending the ED for factors affecting health status than the general primary care patient population, with 22% of attendances being for this reason.

Figure 19: Primary Diagnosis for 65+ years ED Patients 2004/05-2006/07

Diagnosis	2004/05		2005/06		2006/07	
Injury and poisoning	11,964	23%	12,728	24%	12,903	24%
Factors influencing health status and contact with health services	12,571	25%	12,825	24%	11,787	22%
Symptoms, signs, and ill-defined conditions	5,634	11%	5,781	11%	5,777	11%
Diseases of the musculoskeletal system and connective tissue	4,111	8%	4,352	8%	4,668	9%
Diseases of the nervous system and sense organs	4,852	9%	5,052	9%	4,241	8%
Diseases of the skin and subcutaneous tissue	2,427	5%	2,554	5%	2,807	5%
Diseases of the digestive system	2,264	4%	2,305	4%	2,500	5%
Diseases of the genitourinary system	1,846	4%	1,804	3%	2,078	4%
Diseases of the respiratory system	1,649	3%	1,798	3%	1,630	3%
Diseases of the circulatory system	1,402	3%	1,277	2%	1,412	3%
Infectious and Parasitic Diseases	1,120	2%	1,369	3%	1,049	2%
Other	1,954	3%	1,883	3%	2,579	5%

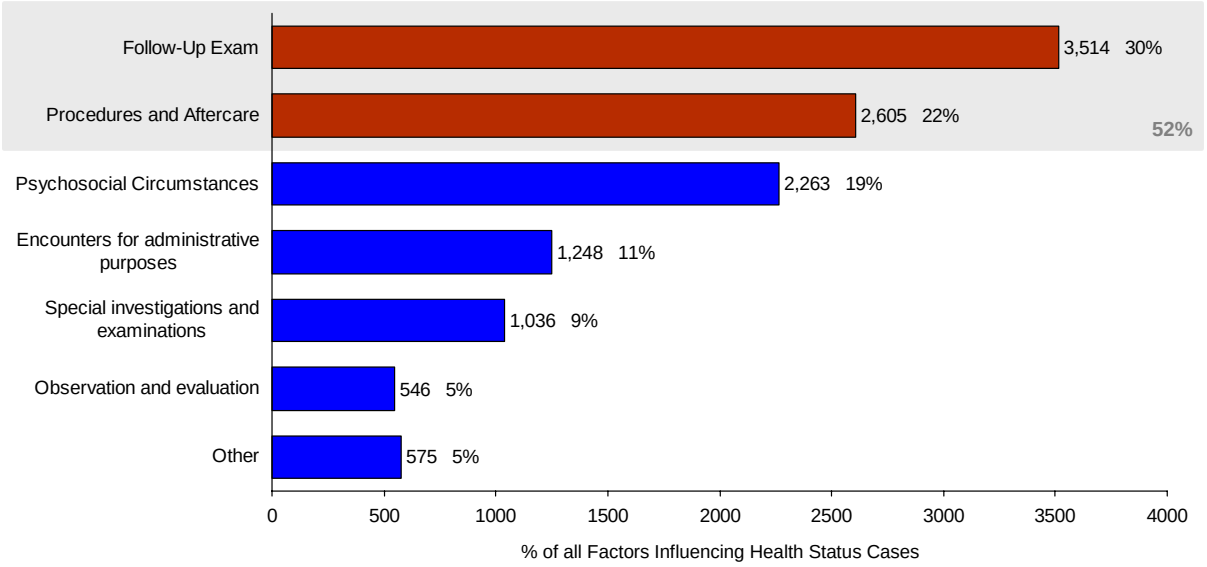
Number of Primary Care Patients 65+ Years

Source: NSW Health – Epidemiology Extract from HIE, October 2007

Note: N= 53,431. Data includes 53 EDIS hospitals in NSW. The primary diagnosis records were provided for 95%, 93% and 92% of cases in 06/07, 05/06, 04/05 respectively

Of the 65+ years patients attending for factors affecting health status and contact with health services, over half the group, 52%, are attending follow up exams (30%) and procedures and after-care (22%) which could have possible been provided through the patients' GP, community service or outpatient programs.

Figure 20: 65+ years ED Primary Care Patients with Factors Influencing Health Status

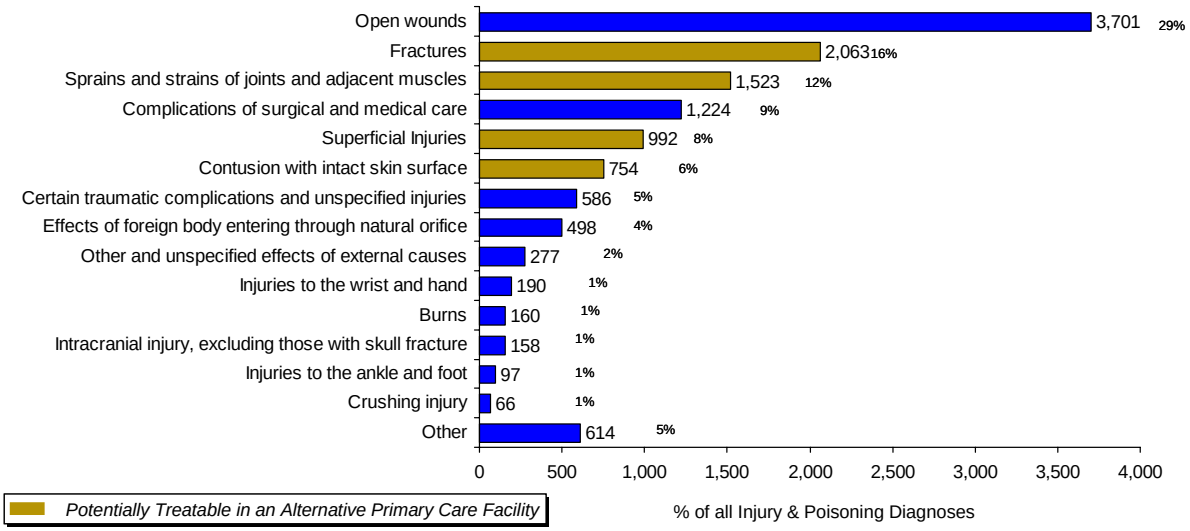


Source: NSW Health – Epidemiology Extract from HIE, October 2007

Note: N= 11,787. Data includes 53 EDIS hospitals in NSW. The primary diagnosis records were provided for 95%, 93% and 92% of cases in 06/07, 05/06, 04/05 respectively

For those 65+ years patients who attend for Injury and Poisoning, 16% are fractures, 12% are strains and 8% are superficial injuries which are potentially better treated through an alternative primary care facility.

Figure 21: 65+ years ED Primary Care Patients with Injury and Poisoning 2006/07



Source: NSW Health – Epidemiology Extract from HIE, October 2007

Note: N= 12,903. Data includes 53 EDIS hospitals in NSW. The primary diagnosis records were provided for 95%, 93% and 92% of cases in 06/07, 05/06, 04/05 respectively