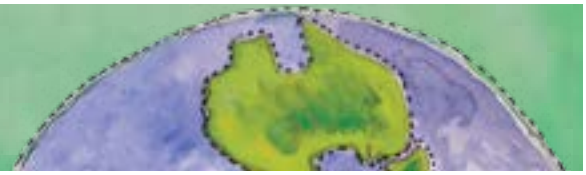
8.8 Emergency departments: at the front line



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Emergency departments are a critical component of the health system because they provide care for patients who have life-threatening or other conditions that require urgent medical care. For some patients, they serve as the first or only point of contact with the health system, due to combinations of patient preference, unavailability of other services, and lack of need for ongoing care after the care provided in the emergency department. For some patients, they serve as a gateway to care as an admitted patient in a hospital, or to other specialised or ongoing health care.

Because of their important front-line role, the role and performance of emergency departments is under constant public scrutiny, and is the subject of a range of public performance reporting.

Lengthy waiting times have caused concern for patients and the Australian community more generally. Accordingly, emergency department waiting times are key performance indicators under a number of national health agreements with a focus on improving accessibility of health services. The quality of emergency department care is an emerging area of interest, with a measure of unplanned re-attendances at emergency departments having been agreed as a first step towards better information being available on this important topic.

The performance of emergency departments is influenced by other components of the health-care system. People sometimes attend emergency departments for reasons that could be addressed by non-hospital services such as general practitioners. Similarly, many presentations involve an admission of a patient to hospital and are dependent on the hospital's capacity to admit the patient. Hence, information on these types of interfaces between emergency departments and other health-care providers is important to understanding the role and performance of emergency departments.

This article highlights the activities of emergency departments in Australia and the changes in these activities over time. It also presents information on waiting times for emergency department care and describes work under way on other indicators of emergency department performance.

Emergency department services

How many presentations were there?

There were more than 6.7 million emergency department presentations (see Box 8.3) reported in Australian public hospitals in 2012–13, equivalent to just over 18,000 presentations each day. About 86% of these occurred in *Principal referral and specialist women's and children's* hospitals and *Large* hospitals.

Between 2008–09 and 2012–13, the number of emergency department presentations increased by 16.9%, with an average annual increase of 4.0% (Figure 8.13). However, over this period the coverage of the National Non-Admitted Emergency Department Care Database (NNAPEDCD) collection also increased, with the number of hospitals reporting rising from 184 to 204. This coverage change should be taken into account in interpreting changes over time. After adjusting for coverage changes, the number of presentations increased by an average of 2.9% each year.

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Box 8.3

Terms and definitions relating to emergency department presentations

Most larger Australian public hospitals have a formal emergency department. Smaller public hospitals do not, but can provide emergency services through more informal arrangements.

The data presented in this article apply to care in the 204 formal emergency departments in public hospitals in Australia. These data are provided to the AIHW's National Non-Admitted Emergency Department Care Database (NNAPEDCD). For information on emergency department services in private hospitals, see Chapter 8 'The rise of private hospitals'.

Patients can present to an emergency department for an emergency, a return or planned visit, or a pre-arranged admission. Patients can also be provided with care while in transit, or may be dead on arrival.

A patient presentation at an emergency department is regarded as occurring following the arrival of the patient at the emergency department and is the earliest occasion of being registered clerically or triaged.

The triage category assigned to a patient indicates the urgency of the patient's need for medical and nursing care. It is usually assigned by an experienced registered nurse or medical practitioner at, or shortly after, the time of presentation to the emergency department. The National Health Data Dictionary (AIHW 2012a) defines 5 categories— based on the Australasian Triage Scale (ACEM 2013)—that incorporate the time by which the patient should receive care:

- *Category 1 Resuscitation:* immediate (within seconds)
- *Category 2 Emergency:* within 10 minutes
- *Category 3 Urgent:* within 30 minutes
- *Category 4 Semi-urgent:* within 60 minutes
- *Category 5 Non-urgent:* within 120 minutes.

How did people access emergency departments?

In 2012–13, the majority (almost 75%) of people presenting to emergency departments arrived by private transport, public transport, community transport or taxis (Table 8.3). Ambulance and aero-medical transport services made up 24% of arrivals.

The means of arrival to the emergency department varied with the triage category (see Box 8.3). For example, the proportion of presentations where the patient arrived by ambulance and aero-medical transport services ranged from 4% for *Non-urgent* patients to 85% for *Resuscitation* patients.

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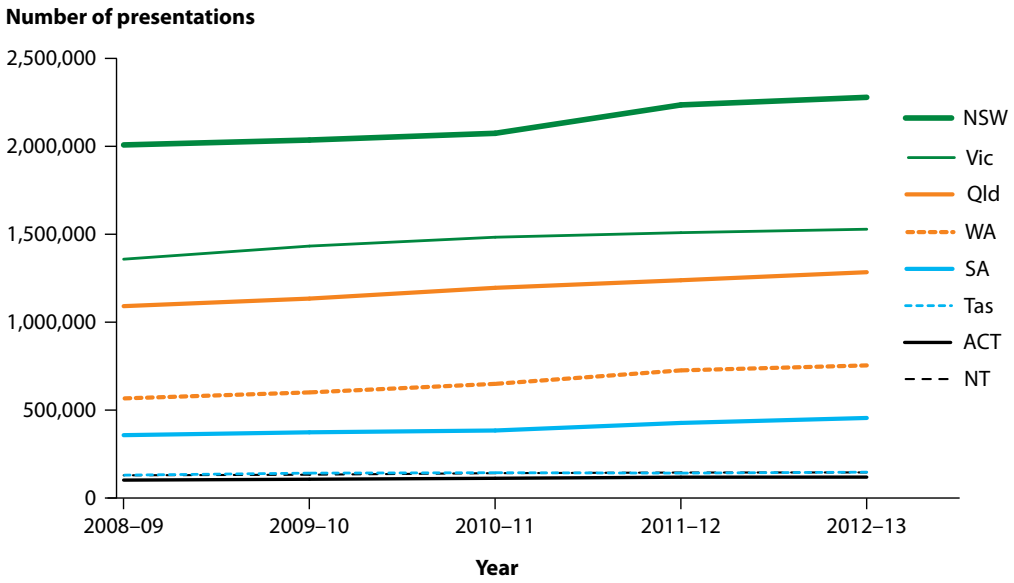
Figure 8.13



Source: AIHW 2013a.

Note: The number of public hospital emergency department presentations for the Northern Territory is very similar to Tasmania and is partially obscured in the above figure.

Public hospital emergency department presentations, by state and territory, 2008–09 to 2012–13

Who used emergency departments?

Males accounted for just over half of emergency department presentations, and there were more presentations for males than females in each age group, except those aged 15–34 and those aged over 74 (Figure 8.14).

People in the 15–24 year age group accounted for 15% of emergency department presentations. This group was consistently responsible for the highest numbers between 2008–09 and 2012–13. This age group represents just under 14% of the total population so is slightly over-represented in emergency department presentations.

People aged under 5 years and those aged 75 and over were also over-represented. They accounted for 12% and 11% of emergency department presentations, respectively, and 7% and 6% of the total population, respectively.

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In 2012–13, there were more than 260,000 emergency department presentations in public hospitals — over 5% of the total— for Indigenous Australians, who represent 3% of the total Australian population. An AIHW study showed that the actual number of hospital admissions for Indigenous Australians was estimated at about 9% higher than currently recorded (AIHW 2013b); it is possible that presentations to emergency departments are similarly underestimated for Indigenous patients. In addition, because most of the data available relate to formal emergency departments in hospitals in major cities, emergency presentations may not all be captured in regional and remote areas where the proportion of Indigenous people (compared with other Australians) is higher than average.

Table 8.3: Emergency department presentations, by arrival mode and triage category, public hospital emergency departments, 2012–13

	Triage category					
Arrival mode	**Resuscitation**	**Emergency**	**Urgent**	**Semi-urgent**	**Non-urgent**	**Total[a]**
Ambulance, air ambulance or helicopter rescue service	38,363	331,751	786,988	454,299	28,695	1,640,415
Police/correctional services vehicle	284	8,091	22,869	14,856	5,100	51,227
Other[b]	6,578	373,745	1,498,908	2,499,134	634,314	5,018,113
Not stated/unknown	45	205	571	1,178	423	2,469
Total	**45,270**	**713,792**	**2,309,336**	**2,969,467**	**668,532**	**6,712,224**

(a) Includes presentations for which the triage category was not reported.

(b) *Other* includes presentations where patients either walked into the emergency department or came by private transport, public transport, community transport or taxi.

Source: AIHW 2013a.

More information on ambulance services is in Chapter 8 'Ambulance services'.

When did people go to emergency departments?

Emergency department services are available 24 hours a day 7 days a week. In 2012–13, a higher number of presentations occurred over weekends and on Mondays than on other days. On average, over two-thirds (69%) of patients arrived between the hours of 8 am and 8 pm. (Figure 8.15).

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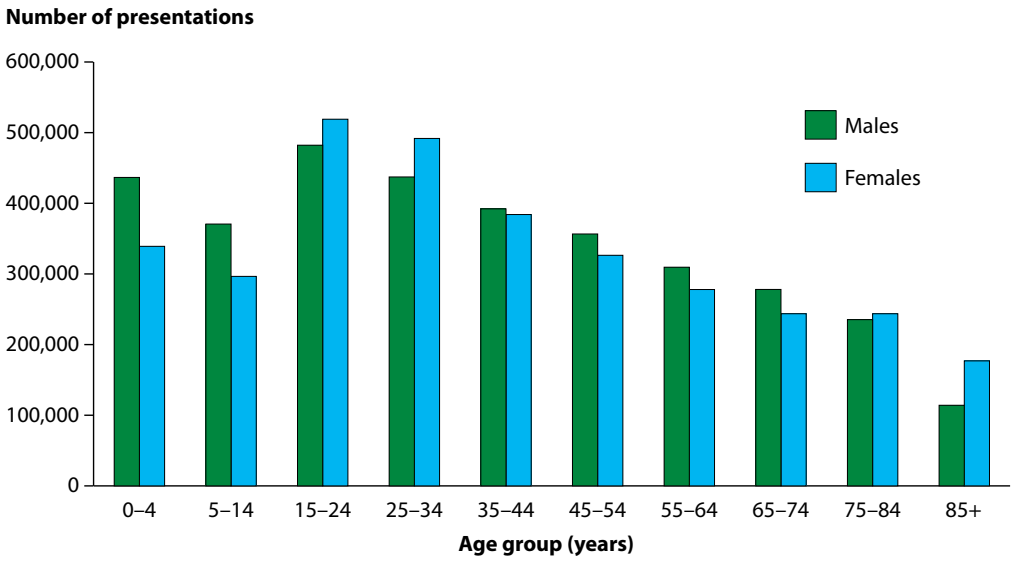
Figure 8.14



Source: AIHW 2013a.

Public hospital emergency department presentations, by age and sex, 2012–13

How urgent was the care?

The triage category indicates the urgency of the patient's need for medical and nursing care (see Box 8.3). In 2012–13:

- fewer than 1% of presentations were in the *Resuscitation* triage category
- 11% of presentations were in the *Emergency* category
- 35% of presentations were in the *Urgent* category
- 44% of presentations were in the *Semi-urgent* category
- 9% of presentations were in the *Non-urgent* category.

Since 2007–08, the number of emergency department presentations has increased every year for all triage categories with the exception of *Non-urgent* presentations, which have steadily decreased (AIHW 2012b).

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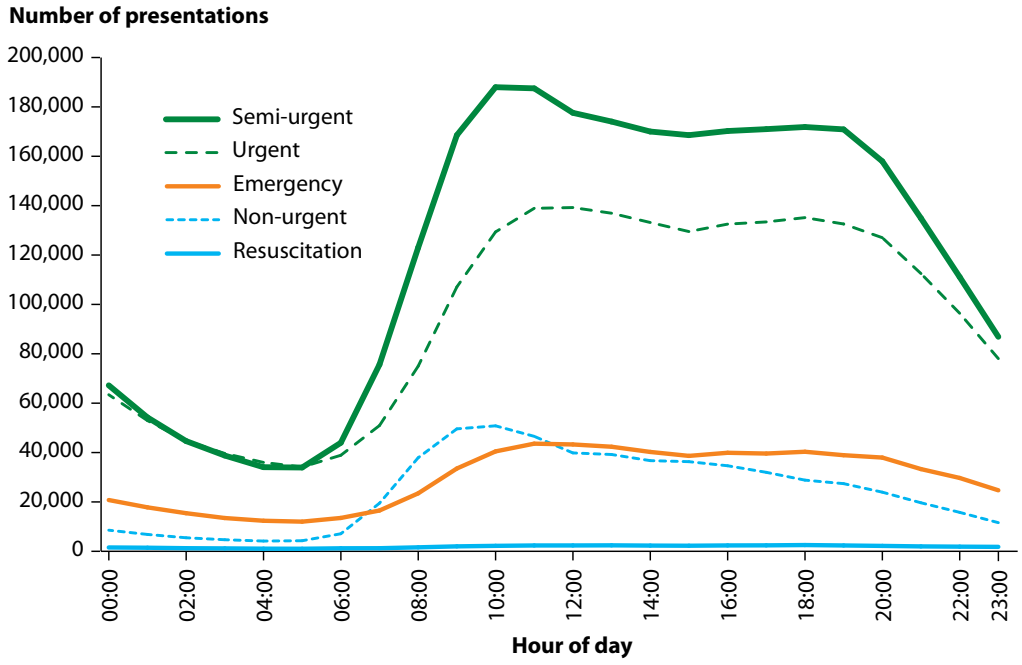
Figure 8.15



Source: AIHW 2013a.

Emergency department presentations, by hour of presentation and triage category, public hospital emergency departments, 2012–13

Waiting times for emergency department care

Emergency department waiting time is the time elapsed for each patient from presentation in the emergency department to commencement of clinical care. Information is presented in this section on the time elapsed during which half and 90% of emergency department patients were seen, and on the proportion of patients seen within the time specified for their triage category. The time elapsed during which half the patients were seen is also known as the 50th percentile or *median waiting time*.

How long did people wait?

Patients who present to an emergency department with a visit type of *Return visit*, *Planned*, *Pre-arranged admission* or *Patient in transit* (see Box 8.3) do not necessarily undergo the same processes as those for *Emergency presentations*, and their waiting times may rely on factors outside the control of the emergency department. Therefore, waiting time statistics are presented for *Emergency presentations* only.

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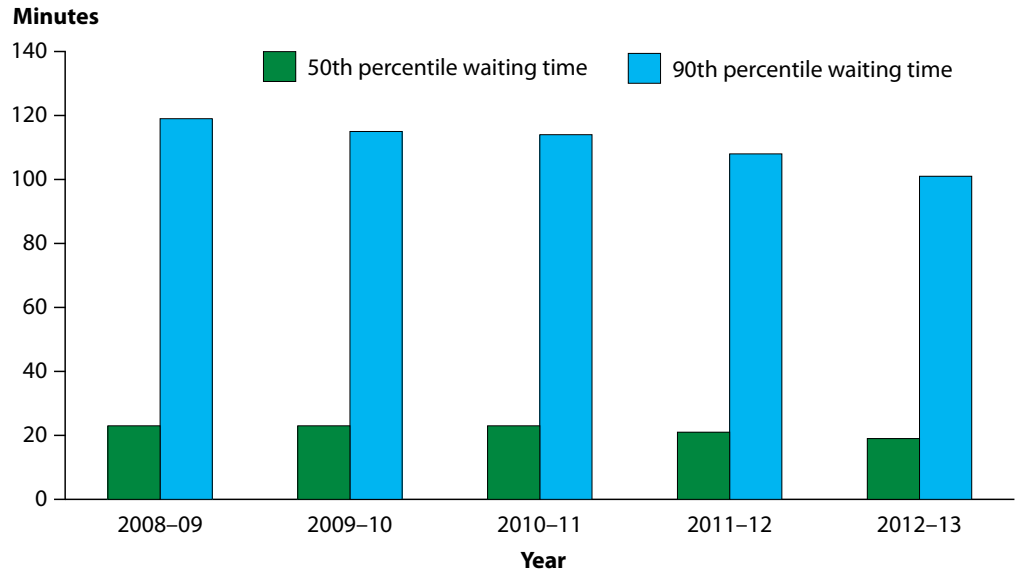
In 2012–13, 50% of patients received treatment by a medical officer or a nurse within 19 minutes of presenting to the emergency department (the median waiting time) and 90% received treatment within 101 minutes of presentation. From 2008–09 to 2012–13, the median waiting time decreased from 23 minutes to 19 minutes and the waiting time for 90% of patients reduced by 18 minutes from 119 to 101 minutes (Figure 8.16).

Figure 8.16



Source: AIHW 2013a.

Emergency presentation waiting times, public hospital emergency departments, 2008–09 to 2012–13

Were people 'seen on time'?

Waiting times for emergency department care: proportion seen on time is a National Healthcare Agreement (NHA) performance indicator in the outcome area of 'hospital and related care' (COAG Reform Council 2012). Its scope is emergency departments in public hospitals classified as *Principal referral and specialist women's and children's* hospitals and *Large* hospitals.

The proportion of patients 'seen on time' is the proportion of presentations for which the waiting time to commencement of clinical care was within the time specified in the definition of the triage category, usually represented as a percentage. From 2008–09 to 2012–13, the overall proportion of emergency patients 'seen on time' increased from 70% to 72%.

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In 2012–13, this proportion varied across the states and territories, from 50% in the Northern Territory, to 76% in New South Wales. The proportion of presentations seen on time also varied by triage category, with the more urgent presentations generally more likely to be seen on time. Almost 100% of *Resuscitation* patients and 82% of *Emergency* patients were seen on time.

Of emergency department presentations for Indigenous Australians, 70% were seen on time, compared with 72% for other Australians. (*Note:* The quality of the Indigenous status data has not been formally assessed and so should be interpreted with caution.)

See Chapter 9 'Indicators of Australia's health' for more information on the proportions of patients seen on time.

Time spent in the emergency department

Targets can be important tools to drive process and system improvements in health care delivery, and are used in monitoring emergency department activity. The National Emergency Access Target (NEAT), agreed by all jurisdictions under the National Partnership Agreement on Improving Public Hospital Services (NPA IHPS), sets an overall target that, by 2015, 90% of people attending an emergency department will be admitted to hospital, referred to another hospital, or discharged home within 4 hours of their initial presentation.

This target was based on advice from the Council of Australian Governments (COAG) Expert Panel established to review targets under the NPA IPHS to ensure clinical appropriateness and safety. The target is incorporated in the NHA financial year indicator *Waiting time for emergency hospital care: proportion completed within four hours*. The COAG Reform Council measures progress against this indicator, as well as progress for each state and territory against their own calendar year annual targets and against baseline data for 2010 (COAG Reform Council 2013b).

The calculation of this performance indicator includes all presentations to emergency departments (not just *Emergency presentations*). As stated previously, patients are considered to have started their visit to the emergency department when they are registered clerically or triaged, whichever happens first, and completed when they physically leave the department (regardless of whether they were admitted to the hospital, referred to another hospital, were discharged or left at their own risk).

During 2012–13, 67% of presentations nationally were completed in 4 hours or less. This was a small increase from 2011–12 (64%) (AIHW 2012b). Western Australia achieved the highest proportion (77%) of emergency department visits completed in 4 hours or less and the Australian Capital Territory had the lowest (57%).

Presentations for patients who required more urgent treatment were not as likely to be completed in 4 hours or less. For example, 53% of *Resuscitation* visits and 49% of *Emergency* visits were completed in 4 hours or less, compared with 75% of *Semi-urgent* visits and 90% of *Non-urgent* visits.

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The COAG Reform Council's assessment of performance for calendar year 2012 was that in Western Australia the proportion of patients admitted from the emergency department to hospital, referred on, or discharged, within 4 hours, was 78.5% and exceeded the 76.0% target for that state. Four jurisdictions partially achieved their targets—Queensland met 49.8% of its 2012 target, South Australia met 86.3%, Tasmania met 16.0% and the Australian Capital Territory met 11.2%. Performance in New South Wales, Victoria and the Northern Territory was below the 2010 baseline (COAG Reform Council 2013b).

How was care completed?

The episode end status describes the status of the patient at the conclusion of the non-admitted patient episode in the emergency department. The episode end status can be reported as:

- *Admitted to this hospital* (including to units or beds within the emergency department)
- Non-admitted patient emergency department service episode completed—*departed without being admitted or referred* to another hospital
- Non-admitted patient emergency department service episode completed—*referred to another hospital for admission*
- *Did not wait* to be attended by a health-care professional
- *Left at own risk* after being attended by a health-care professional but before the non-admitted patient emergency department service episode was complete
- *Died in emergency department* as a non-admitted patient
- *Dead on arrival*, not treated in emergency department.

For 2012–13, almost two-thirds of presentations (for all types of visit) reported an episode end status of *Departed without being admitted or referred*, and this proportion was higher for less urgent triage categories (Table 8.4). About 27% of all presentations were *Admitted to this hospital* at the conclusion of treatment in the emergency department, and this proportion was lower for less urgent triage categories—76% for *Resuscitation* patients and less than 5% for *Non-urgent* patients.

About 4% of emergency department presentations had an episode end status of *Did not wait*. This proportion varied by triage category, and was highest for *Non-urgent* patients.

Admission to hospital from emergency departments

A key issue for hospitals is 'access block', the term for when a person has presented to an emergency department and has been judged by the attending doctor to require admission for further care, but cannot be admitted promptly because of lack of beds available in wards (National Health and Hospitals Reform Commission 2009).

In 2011, the COAG Expert Panel noted that 'access block is associated with increased mortality, along with medical errors and adverse events, time delays and discomfort for patients, increased staff turnover, staff burnout and ambulance diversion' (Commonwealth of Australia 2011).

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Table 8.4: Emergency department presentations by triage category and episode end status, public hospital emergency departments, 2012–13

	Triage category					
Episode end status	**Resuscitation**	**Emergency**	**Urgent**	**Semi-urgent**	**Non-urgent**	**Total[a]**
Admitted to this hospital	34,263	411,587	886,250	450,635	32,342	1,815,209
Departed without being admitted or referred	4,883	263,798	1,283,104	2,241,537	547,068	4,341,593
Referred to another hospital for admission	2,612	25,501	45,779	22,042	1,979	97,918
Did not wait	10	1,405	49,998	180,558	60,320	294,045
Left at own risk	300	8,463	37,878	57,239	11,867	115,776
Died in emergency department	3,060	1,136	532	109	18	4,855
Total[b]	**45,270**	**713,792**	**2,309,336**	**2,969,467**	**668,532**	**6,712,224**

(a) Includes presentations for which the triage category was *Not reported*.

(b) Includes presentations for which the episode end status was *Dead on arrival* or *Not reported*.

Source: AIHW 2013a.

Nationally in 2012–13, 36% of emergency department presentations resulting in admission were completed within 4 hours. The proportion ranged from 24% in the Northern Territory to 46% in Western Australia.

The percentage of emergency department stays completed within 4 hours varied by triage category. For patients subsequently admitted, resuscitation and non-urgent patients were more likely to be admitted within 4 hours than those in other triage categories.

Nationally, 90% of emergency department visits for patients subsequently admitted were completed within 13 hours and 41 minutes, ranging from 9 hours and 42 minutes in Western Australia to 20 hours and 47 minutes in Tasmania.

Potentially avoidable emergency department presentations

Potentially avoidable GP-type presentations to emergency departments indicate the number of attendances at public hospital emergency departments that potentially could have been avoided through the provision of non-hospital health services. This is an NHA performance indicator in the outcome area of 'Australians receive appropriate high quality and affordable primary and community health services' (COAG Reform Council 2013b); it is not an indicator of hospital performance.

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Such service use may reflect the availability and ease-of-access to primary and community health, and the lack of cost to the patient for emergency department attendance. This type of service use has important resource implications for hospitals.

Potentially avoidable GP-type presentations are defined for NHA reporting purposes as presentations to public hospital emergency departments in *Principal referral and specialist women's and children's* hospitals (peer group A) and *Large* hospitals (peer group B) with a type of visit of *Emergency presentation* where the patient:

- was allocated a triage category of *Semi-urgent* or *Non-urgent*, and
- did not arrive by ambulance or by police or correctional vehicle, and
- at the end of the presentation, was not admitted to the hospital, was not referred to another hospital, and did not die.

It should be noted that this is an interim specification and the definition of potentially avoidable GP-type presentations is presently under review (see 'What is missing from this picture?' below).

In 2012–13, potentially avoidable GP-type presentations were estimated to account for almost 2.2 million emergency department presentations: over 1.6 million in *Principal referral and specialist women's and children's* hospitals and almost 570,000 in *Large* hospitals (see Chapter 9 'Indicators of Australia's health' for more information).

When the Australian Bureau of Statistics (ABS) asked respondents to the 2012–13 Patient Experience Survey if they had been to a hospital emergency department for their own health in the last 12 months, 23% of people aged 15 and over who had visited an emergency department felt that a GP could have provided the care received instead (ABS 2013a).

What is missing from the picture?

As the scope of the NNAPEDCD includes all public hospitals with a formal emergency department, most of the data received relates to hospitals in capital cities or major centres. As noted in Box 8.3, smaller public hospitals, including those in more remote regions, provide some levels of emergency care for patients. Data on these services are not included in this article. For 2012–13, it is estimated that the emergency department presentations data reported to the NNAPEDCD captured 84% of all emergency occasions of service.

At present, the NNAPEDCD does not include information on the reason for presenting to an emergency department. From late 2014, national diagnosis information will be available as part of the NNAPEDCD, and work will commence on how best to use it to describe why patients attend emergency departments.

The AIHW is developing a number of new performance indicators to support the priorities agreed by the Australian Government and state and territory governments under the NPA IPHS. A performance indicator to measure unplanned re-attendances to emergency departments has been agreed. Indicators on the use of emergency department short-stay units, and patient access to emergency surgery, are under development. The AIHW is also leading work to revise the existing NHA performance indicator, *Selected potentially avoidable GP-type presentations to emergency departments*.

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This work is being undertaken in consultation with a range of stakeholders, including representatives from primary care and emergency department services, and is due for implementation in 2014.

Where do I go for more information?

More information on elective surgery in Australia is available on the AIHW website www.aihw.gov.au/hospitals. The report *Australian hospital statistics 2012-13: emergency department care* and other recent publications are available for free download.

Information on emergency departments in individual hospitals is available on myhospitals.gov.au.

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