Primary health care has been described by health ministers in Australia as 'the frontline of Australia's health care system, encompassing a large range of providers and services across public, private and non-government sectors' (SCoH 2013). The primary health care system sets out to provide equitable, high quality and financially sustainable services that are: universally available; delivered appropriately by a suitably skilled workforce; offered as a first point of contact with the health care system in the community near where people live; part of a long-term relationship with patients and their families; and integral in referring patients on to other health or community services (Department of Health 2011; DoHA 2009; Health Canada 2012; Institute of Medicine 1994; New Zealand Ministry of Health 2001; Starfield 2005; WHO 1978).

Health ministers have also recognised that the primary health care system 'needs to be easy for consumers to access and use, and designed towards actively supporting them to manage their health care needs and stay as healthy as possible' (SCoH 2013).

The financial and other challenges faced by the Australian health care system have led governments to reconsider the way the system is structured, which has indicated the need for an increased focus on primary health care and its central role in improving the health of the population (DoHA 2010).

This article provides a brief overview of primary health care in Australia and the extent to which it meets the objectives and challenges outlined above.

What is primary health care?

In Australia, primary health care is typically the first health service visited by patients with a health concern. It includes most health services not provided by hospitals and involves:

- a range of activities—such as health promotion, prevention, early intervention, treatment of acute conditions and management of chronic conditions
- various health professionals—such as general practitioners (GPs), dentists, nurses, Aboriginal health workers, local pharmacists and other allied health professionals
- services delivered in numerous settings— such as general practices, community health centres, allied health practices including physiotherapy and dietetic practices, and more recently via telecommunications technologies such as health advice telephone services, video consultations and remote monitoring of health metrics through electronic devices.

Funding for primary health care services comes from multiple sources, including:

- Australian Government programs such as Medicare, the Pharmaceutical Benefits Scheme (PBS), Aboriginal and Torres Strait Islander-specific health services, and preventive health and quality improvement programs
- state and territory government programs, including health and community services
- local government programs such as immunisation

- fees charged directly to patients and clients
- private health insurers and workers' compensation insurers
- non-government funding sources such as private charities focused on specific issues.

Figure 8.4 illustrates the central role of primary health care in the Australian health care system and the key health, community and aged care services with which it interacts.
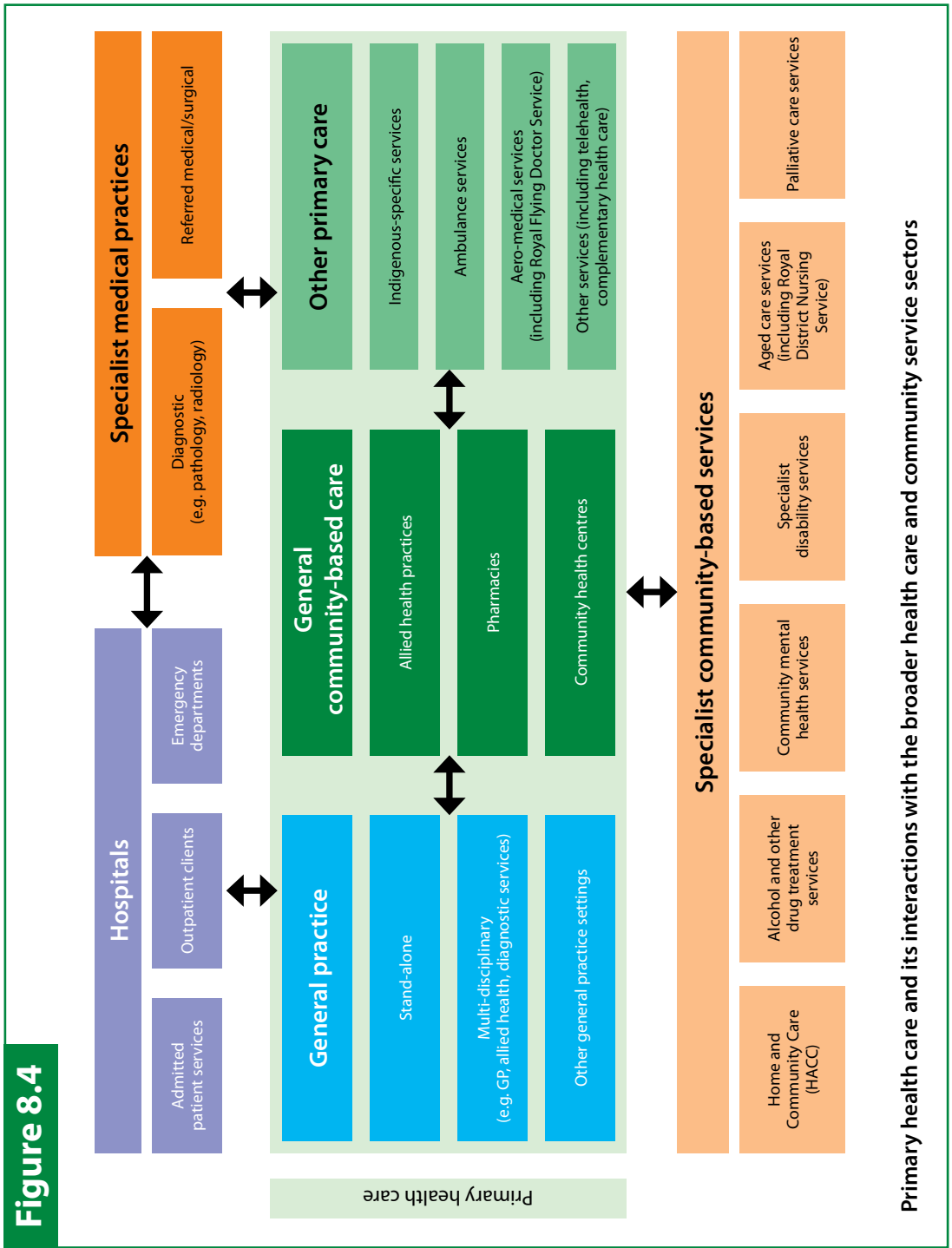
Australia's primary health care service delivery system has been described as complex, fragmented and often uncoordinated, with implications for the services people receive and how they are paid for (DoHA 2009). Given this complexity, navigating through this system can be difficult for some people, particularly those with poor health, disability, lower English proficiency or other socioeconomic barriers (see Chapter 2 'Australia's health system' and AIHW 2012a, Section 7.1 'Navigating the health system').

Challenges facing primary health care

The Australian health care system overall faces a number of challenges in providing effective, timely, coordinated health care now and into the future. Some of these challenges are listed below, with most covered in some detail elsewhere in this *Australia's health 2014* report, as indicated:

- an ageing population which is changing the nature of demand for health care services (see Chapter 6)
- rising levels of risk factors such as obesity and physical inactivity (see chapters 5 and 6)
- increasing prevalence of chronic disease and multiple chronic diseases (comorbidity) (see Chapter 4)
- increasing patient expectations for high quality health care and involvement in their care
- disparity in access and outcomes for people in various population groups such as those living in areas of lower socioeconomic status (SES), people living in more remote areas, and Aboriginal and Torres Strait Islander Australians (see chapters 5 and 7)
- ensuring access to an appropriate mix of skilled workforce across all Australian regions (see Chapter 2)
- an uncertain economic climate, which may influence choices of governments and individuals as to how much they spend on health (see Chapter 2).

These factors increase the importance of the health system delivering cost-effective outcomes (see Chapter 2 'How much does Australia spend on health care?'). As a result, there has been a renewed focus on the importance of primary health care and its role in delivering better health outcomes at lower cost (Australian Government 2013; DoHA 2009). This has included a range of strategies to improve access to services, for example, through increased access to after-hours primary health care services and multidisciplinary clinics where patients can access GP, allied health and diagnostic services (DoHA 2013a).

Figure 8.4

Hospitals

- Admitted patient services
- Outpatient clients
- Emergency departments

Specialist medical practices

- Diagnostic (e.g. pathology, radiology)
- Referred medical/surgical

Primary health care

General practice

- Stand-alone
- Multi-disciplinary (e.g. GP, allied health, diagnostic services)
- Other general practice settings

General community-based care

- Allied health practices
- Pharmacies
- Community health centres

Other primary care

- Indigenous-specific services
- Ambulance services
- Aero-medical services (including Royal Flying Doctor Service)
- Other services (including telehealth, complementary health care)

Specialist community-based services

- Home and Community Care (HACC)
- Alcohol and other drug treatment services
- Community mental health services
- Specialist disability services
- Aged care services (including Royal District Nursing Service)
- Palliative care services

Primary health care and its interactions with the broader health care and community service sectors

There have also been structural reforms designed to better integrate and coordinate the range of organisations and service providers operating within and beyond the primary health care system. For example, Medicare Locals were established in 2011 to provide an integrated model of care at the local level (see Box 8.1) (DoHA 2010).

A strong and readily accessible primary health care system is also considered vital in reducing pressure on public hospitals through access to advice and services in the early stages of disease and a broader geographic distribution of suitably skilled health professionals compared to the concentration of specialists in urban areas (Australian Government 2013).

Box 8.1

Medicare Locals

In 2011, the Australian Government established 61 new primary health care organisations known as Medicare Locals, to plan and fund extra health services in communities across Australia and to ensure that decisions about health services could be made by local communities in line with their local needs (DoHA 2013b).

Building on the pre-existing divisions of general practice networks, key priority areas for Medicare Locals are improving access and reducing inequity, better management of chronic conditions, an increased focus on disease prevention and improving quality, safety, performance and accountability (Pearce et al. 2012).

Medicare Locals are also subject to performance monitoring and reporting requirements, including a Needs Assessment Report, which is used to inform their planning and decision-making (DoHA 2012).

In December 2013, Australia's former Chief Medical Officer, Professor John Horvath AO, was appointed to oversee a review of Medicare Locals to ensure that Commonwealth health funding is used as productively as possible (Dutton 2013). Following the release of the report in May 2014, the Australian Government announced that Medicare Locals would be replaced with a smaller number of primary health networks.

Similar challenges have been faced internationally in terms of reorienting health systems towards primary care. Also important is developing suitable primary health care information systems to yield performance information and describe the sector's achievements (see Box 8.2 for an example of information development in Canada).

In this article we present a range of available information to illustrate what we know about how Australia is meeting these primary health care objectives and challenges.

> ### Box 8.2
>
> **Canadian primary health care information**
>
> The Canadian primary health care experience is of particular relevance to Australia given some similarities in terms of our federated systems. The Canadian primary health care information program highlights the benefits of having an overarching performance indicator framework in combination with both primary care patient experience surveying at the population level and administrative extract data from clinical care systems. It covers:
>
> - a primary health care Electronic Medical Record (EMR) content standard
> - a primary health care voluntary reporting system
> - two sets of primary health care indicators (for policy makers and health system managers)
> - a Canadian Survey of Experiences with Primary Health Care (CIHI 2013).

What is the scale and nature of primary health care in Australia?

How much is spent on primary health care?

Primary health care accounts for almost as much health spending as hospital services. In 2011–12, primary health care accounted for 36% (or $51 billion) of total health expenditure compared with 38% ($54 billion) for hospital services (see Chapter 2 'How much does Australia spend on health care?').

Which primary health care services are most commonly used?
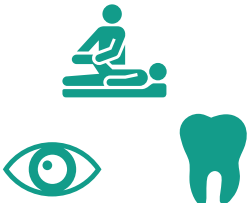
In 2011–12, 84% of Australians had consulted a GP at least once in the previous 12 months (ABS 2013a). Most had multiple consultations—67% made at least 2 visits in the last 12 months, 37% made at least 4 visits and 10% made at least 12 visits (ABS 2013b).

Over the same period, 47% of Australians had visited a dentist and 21% had consulted another health professional (ABS 2013a). Of these other health professionals, people most commonly reported consulting physiotherapists or hydrotherapists (6.4%), opticians or optometrists (5.8%), chemists for advice only (5.8%) and chiropractors (4.5%).

By comparison, in the same period, 12% of the population were admitted to hospital, 8% visited a hospital outpatient clinic, 12% an emergency department and 6% a day clinic.

How many primary health care services are delivered?

The vast majority of health care services are delivered in primary health care settings. For example, in 2011–12:

	304 million out-of-hospital Medicare services were claimed, of which 123 million were for non-referred encounters with GPs (DoH 2014).	↑ **19%** from 256 million out-of-hospital services in 2007–08.
	208 million prescriptions were subsidised by the PBS and Repatriation Pharmaceutical Benefits Scheme (RPBS) (DHS 2013).	↑ **12%** from 185 million prescriptions in 2007–08.
	73 million general treatment (ancillary) services were reimbursed through private health insurance – including 9.5 million physiotherapy services, 9.6 million optical services and 30.7 million dental services (PHIAC 2013).	↑ **23%** from 59 million services in 2007–08.
	1.6 million patients were transported to public hospital emergency departments by ambulance services (ambulance, air ambulance, helicopter rescue services) (AIHW 2012b).	↑ **22%** from 1.3 million patients in 2007–08.
	2.6 million episodes of care were delivered by Aboriginal and Torres Strait Islander-specific services.	↑ **25%** from 2.1 million episodes of care in 2008–09.
	273,731 patient contacts were made with the Royal Flying Doctor Service (Royal Flying Doctor Service 2012).	↑ **4.6%** from 261,801 patient contacts in 2007–08.

In the same year (2011–12), Australian hospitals:

- treated admitted patients during 9.3 million hospitalisations
- responded to 7.8 million emergency department presentations in public hospitals
- delivered 16.9 million specialist outpatient services in public hospitals
- provided 19.3 million outpatient services relating to pharmacy, pathology, radiology and organ imaging in public hospitals (AIHW 2013b).

Why do people seek primary health care services?

There is limited information about the reasons people present for primary health care, and the health actions recommended. The Bettering the Evaluation and Care of Health (BEACH) ongoing survey of GPs shows that in 2012–13 patients presented to GPs with an average of 1.6 reasons for the visit, and that requests for prescriptions, general check-ups and test results were the most frequently recorded reasons (Britt et al. 2013a).

For every 100 GP–patient encounters, GPs provided, on average, 83 prescriptions, 37 clinical treatments, undertook 17 procedures, made 9 referrals to specialists and 5 referrals to allied health services, and placed 47 pathology test and 10 imaging test orders (Britt et al. 2013a).

What does primary health care achieve?

Evidence suggests that a strong primary health care system is associated with reduced costs and increased efficiency, lower rates of potentially preventable hospitalisations, reduced health inequities, increased patient satisfaction with care, and better health outcomes, including lower rates of potentially avoidable mortality (DoHA 2009; Macinko et al. 2003; Mosquera et al 2012; Starfield & Shi 2002). In Australia, primary health care aims to achieve these objectives through the provision of accessible and well-delivered services that are effective and appropriate. What do we know about the extent to which we achieve these objectives?
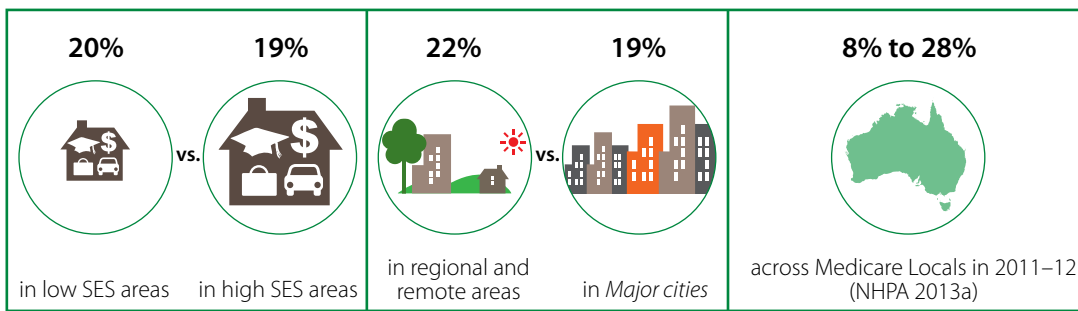
Is it accessible?

Primary health care is intended to be universally accessible regardless of an individual's health, socioeconomic or other circumstances. A primary health care system that provides access according to health need will target services to those in greatest need.

However, there is some evidence that this is not the case. Analysis of GP attendances across Medicare Locals shows that there are some metropolitan areas where healthier populations (as indicated by the proportion of adults with long-term health conditions) receive higher than average GP services and some regional areas where less healthy populations receive lower than average GP services (NHPA 2013b). It is difficult to fully gauge the meaning of these differences without examining the distribution of GPs and the extent to which a shortfall in GP services is met by alternative primary health care services such as community health and Indigenous-specific health services.

What else do we know about the accessibility of primary health care? In this section we examine this question by presenting a selection of information—on waiting times for GPs, cost barriers, bulk-billing, after-hours services, Indigenous-specific health services and workforce distribution—examining variation by population groups and over time wherever possible.
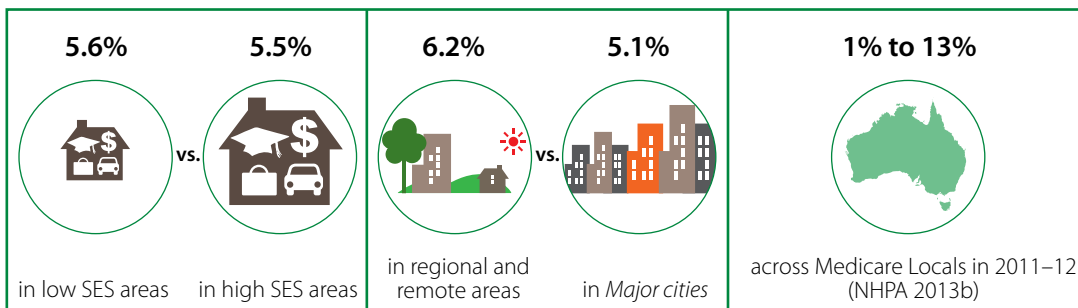
Waiting times for GPs

Most of the population (80%) believe that waiting times to see a GP are appropriate (ABS 2013b). In 2012–13, 20% of people believed they waited an unacceptable time to see a GP in the previous 12 months, a rate which fell midway between 2010–11 (15%) and 2011–12 (27%). The proportion of people waiting an unacceptable time to see a GP was:

20%	19%	22%	19%	8% to 28%
vs.		vs.		
in low SES areas	in high SES areas	in regional and remote areas	in *Major cities*	across Medicare Locals in 2011–12 (NHPA 2013a)

Cost barriers

Most of the population (over 94%) do not report cost as a barrier to accessing GP services (ABS 2013b). In 2012–13, 5.4% of people who needed to see a GP in the previous 12 months delayed seeing or did not see a GP at least once because of the cost, a rate which was down from 6.8% in 2011–12. The proportion of people who reported cost as a barrier to seeing a GP was:

5.6%	5.5%	6.2%	5.1%	1% to 13%
vs.		vs.		
in low SES areas	in high SES areas	in regional and remote areas	in *Major cities*	across Medicare Locals in 2011–12 (NHPA 2013b)

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In contrast, around one-fifth of the population reports cost as a barrier to accessing dental services (ABS 2013b). In 2012–13, 18% of people delayed or did not see a dentist due to cost, a rate which was down from 21% in 2011–12. The proportion of people who reported cost as a barrier to seeing a dentist was:

24%	12%	22%	17%	11% to 34%
in low SES areas	in high SES areas	in regional and remote areas	in *Major cities*	across Medicare Locals in 2011–12 (NHPA 2013b)
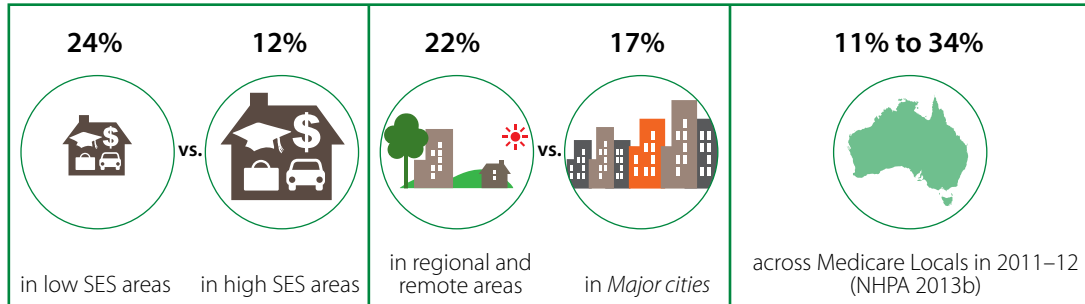
In 2011–12, 9.6% of Australians reported delaying or not getting a prescription filled in the previous 12 months due to cost, and 5.1% deferred getting pathology or imaging tests. There was no statistically significant difference across remoteness areas (COAG Reform Council 2013a) (Figure 8.5).

Figure 8.5

Per cent

Note: Data for 'See a GP' and 'See a dentist' taken from ABS 2012–13 Patient Experience Survey. Data for 'Fill a prescription' and 'Pathology imaging test' taken from ABS 2011–12 Patient Experience Survey.

Sources: ABS 2013b; COAG Reform Council 2013a.

Proportion of people who reported cost barriers to accessing primary health care services
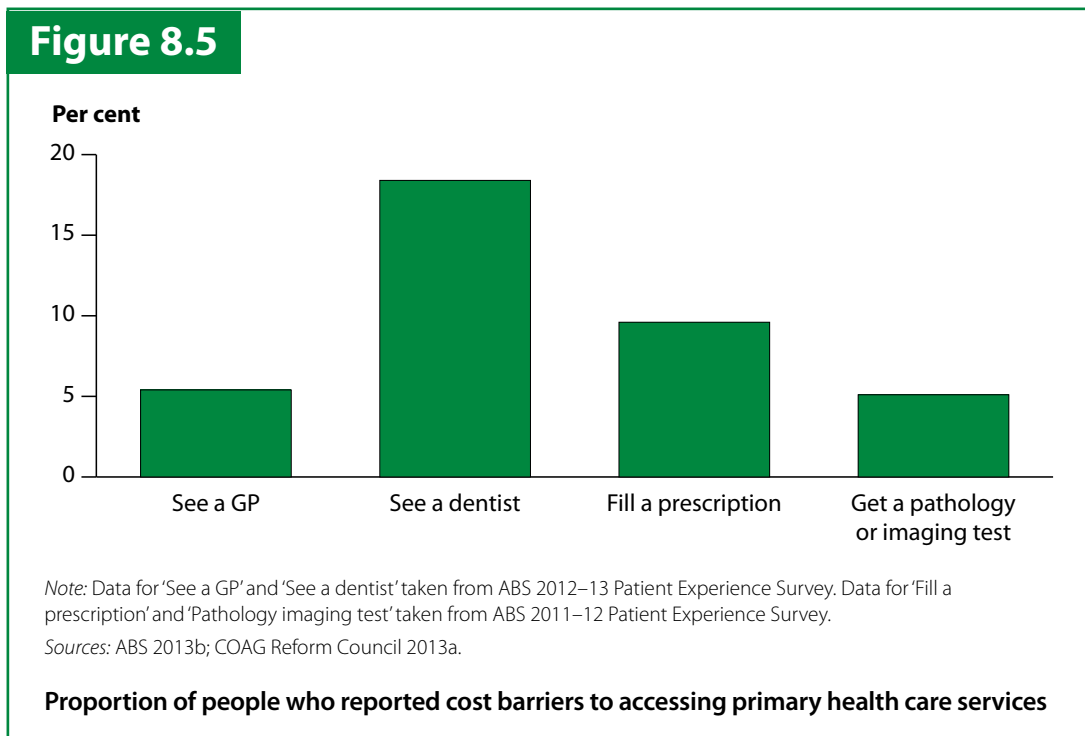
Bulk-billing

Access to bulk-billed GP attendances (that is, GP visits for which no co-payment is charged to the patient) is a component of Australia's Medicare system (DHS 2014a). In 2012–13, 82% of GP attendances were bulk–billed. The bulk-billing rate was the highest since 1990–91, with the lowest rate recorded in 2003–04. The rate was:

86%	81%	80%	79%	83%	50% to 96%
in *Very remote* areas	in *Remote* areas	in *Outer regional* areas	in *Inner regional* areas	in *Major cities*	across Medicare Locals in 2011–12 (NHPA 2013b)
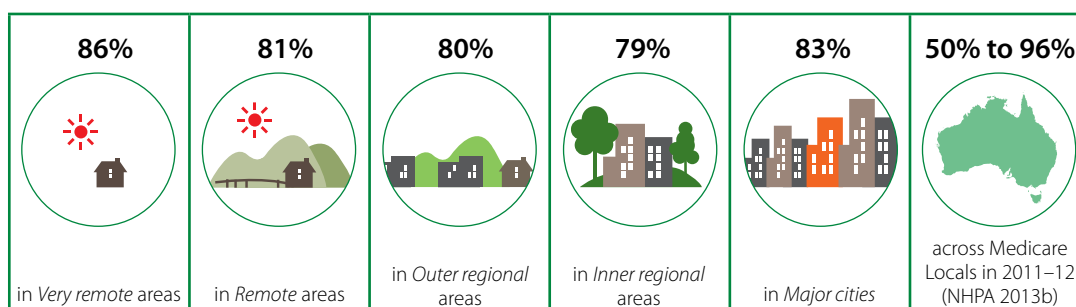
After-hours services

There has been substantial policy interest in recent years in improving access to after-hours primary health care services, particularly to reduce the pressure on public hospital emergency departments (DoHA 2010). In 2012–13, 360 after-hours GP visits per 1,000 population were reimbursed by Medicare (DHS 2013), a rate which:

• gradually increased from 230 per 1,000 population in 2005–06

• ranged from 30 to 710 visits per 1,000 population across Medicare Locals in 2011–12 (NHPA 2013a).

Some evidence links the availability of after-hours GP services to reduced rates of emergency department presentations in the same area (Buckley et al. 2010; Gafforini & Carson 2013; Hossain & Laditka 2009; O'Malley 2012). However, other factors contribute to emergency department presentations, including patient perception of urgency and/or seriousness of the problem (Masso et al. 2007), the availability of a preferred primary care physician, and distance to hospital (Gunther et al. 2013; NMML 2013). There is also a range of interpretation and data quality issues that makes it difficult to fully assess whether rates of emergency department presentations are falling and what this says about primary health care accessibility (COAG Reform Council 2013b; Nagree et al. 2013). (See Chapter 8 'Emergency departments: at the front line' and Chapter 9 'Indicators of Australia's health' for further information.)

Uptake of telephone health services also provides an indicator of access to services outside business hours. These services provide a substantial and growing volume of health advice to the public (Ng et al. 2012). Healthdirect Australia, established to provide round-the-clock online and telephone advice has responded to:

• 4.5 million calls to nurses since the inception of this service in 2007

• 450,000 calls to the after-hours GP helpline since its inception in 2011

• 130,000 calls to the Pregnancy, Birth and Baby service since its inception in 2010

(Department of Health unpublished data, February 2014).

10

In the first quarter of 2013 (January to March), there were over 208,000 calls to Healthdirect Australia, of which call frequencies were highest after 8pm and on weekends. The most frequent types of advice given by triage nurses were 'self care at home' (20%) and 'refer to after-hours GP helpline' (17%). Of the more than 40,000 calls received by the after-hours GP helpline, approximately 60% of patients were provided with self-care advice by telephone GPs (Healthdirect Australia 2013), thereby potentially preventing unnecessary visits to emergency departments and after-hours services.

Aboriginal and Torres Strait Islander primary health care services

In addition to mainstream services, the Australian Government directly funds about 300 organisations to deliver comprehensive primary health care and other health services to Aboriginal and Torres Strait Islander people, of which around 60% are Aboriginal and Torres Strait Islander community-controlled or managed. These services are designed to enhance access to comprehensive primary health care for Indigenous Australians through access to doctors, nurses, allied health professionals, social and emotional wellbeing staff, and medical specialists. In addition, some receive funding to provide substance use services.

In 2011–12, these services provided 2.6 million episodes of health care to about 445,000 clients. This was a 5% increase in episodes of care compared with 2010–11 and a 3% increase in the number of clients reported. About 4 in 5 clients (79% or 350,000) were Indigenous (AIHW 2013d).

Distribution of health workforce

Access to primary health care services is dependent on there being enough primary health care practitioners to meet the needs of the population. There were nearly 26,000 GPs in Australia in 2012 (AIHW 2013c), or 112 full-time equivalent (FTE) GPs per 100,000 population. The supply of GPs:

- increased slightly from 109 FTE per 100,000 in 2008

- was greater with increasing remoteness, from 108 FTE per 100,000 population in *Major cities* to 134 in *Remote/Very remote* areas.

The increasing supply of GPs by remoteness does not necessarily mean there are enough GPs to meet demand in rural areas for medical care. The supply of all medical practitioners decreased with remoteness, with non-GP specialists tending to be concentrated in urban areas. This can mean that GPs in rural areas are called upon to perform a wider scope of services than in urban areas. Other factors that influence whether there is adequate supply of medical practitioners to meet demand include health seeking behaviour, professional scopes of practice and differing health system efficiencies.

The supply of nurses was also higher in regional and remote areas compared with *Major cities* (AIHW 2013f). Nurses and their interactions with other health professionals play a vital role in these areas.

In contrast, the supply of dentists, psychologists, pharmacists and other allied health practitioners decreased with increasing remoteness (AIHW 2013a, 2014a). Efforts to remedy these shortfalls in regional and remote areas include expanding or changing the scope of practice for the existing health workforce in these areas and promoting emerging health disciplines better suited to primary health care in regional and remote areas (HWA 2011).

There has also been a shift from standalone general practices to larger practices (AIHW 2012c, 2013e, 2014b; Britt et al. 2013b) and development of multidisciplinary clinics, all of which have the potential to enhance access to care.

How well is it delivered?

In addition to being accessible, the primary health care system strives to deliver care that is effective, coordinated, safe, of high quality, and responsive to patient needs (see Chapter 9, 'Indicators of Australia's health'). In the following sections we present selected information on these aspects of primary care in Australia, including variation by population groups and trends where possible.

Effective care

It is not possible to routinely assess the broad concepts of effectiveness or appropriateness of primary health care in Australia—for example, whether care adheres to clinical guidelines—using currently available primary health care data (Runciman et al. 2012).

One commonly used indicator of the effectiveness of primary health care is 'potentially preventable hospitalisations'—hospital admissions that could potentially have been prevented through the timely and effective use of non-hospital care (AIHW 2013b; COAG Reform Council 2013b; Jorm et al. 2012; OECD 2013; Rosano et al. 2013). Higher rates of potentially preventable hospitalisations may, however, not be a direct reflection of effectiveness of primary care. They may be a result of: an increased prevalence of particular health conditions in the community; consumer choice; poorer access to the non-hospital care system; or an appropriate use of the hospital system to respond to greater need.

In 2011–12, the rate of potentially preventable hospitalisations was higher for patients from low SES areas compared with high SES areas and increased with increasing remoteness (see Chapter 9 'Indicators of Australia's health'— 'Selected potentially preventable hospitalisations' performance indicator).

Primary health care has a vital role in preventing risk factors and disease through provision of early intervention, prevention and screening programs. Another important indicator of effectiveness of primary health care, therefore, is the extent to which these activities—such as immunisation programs, early childhood development checks and cancer screening—are being delivered across all population groups. Evidence is mixed. For example:

- *Immunisation* rates for children have been steady or improving over the last decade (see Chapter 4 'Immunisations and vaccine preventable disease') but Australia still has slightly lower rates than other developed countries, ranking 31 out of 34 OECD countries in 2009 (see Chapter 9 'International comparisons'). In contrast, Australia was placed third highest among the OECD countries in terms of influenza vaccination among people aged 65 and older, when this was last assessed in 2009 (OECD 2013).

- Regular *child health checks* are important for monitoring how children are developing and to identify and implement early intervention and treatment if required. While 22% of children had received a Medicare Benefits Schedule (MBS) reimbursed child health check in 2010–11, these data are considered flawed because they exclude the considerable volume of health checks delivered outside the Medicare system, such as through state and territory preschool and community health programs (COAG Reform Council 2013b).

- *Cancer screening* programs for breast, cervical and bowel cancer had participation rates of 55%, 57% and 35% respectively, among target groups in 2011–12 (see Chapter 8 'Cancer screening in Australia').

Information is not available about most other health promotion or prevention activities delivered to patients by primary health care professionals (AIHW 2009) . For example, GPs are encouraged to routinely assess patients' smoking status, and while this information is often recorded in general practice records, it is not routinely consolidated.

Coordinated care

Improved coordination of health care, particularly management of chronic diseases, is a key goal of the primary health care system in Australia. This is especially important where patient care involves multiple health professionals (Harris et al. 2011).

In 2012–13, 16% of the population aged 15 and over (or 3 million people) saw 3 or more health professionals for the same condition (ABS 2013b). Of these patients, 69% reported that a health professional helped coordinate their care—most likely a GP (54%), medical specialist (30%) or nurse (6%)—the majority of whom (69%) reported that the coordination helped to a large extent. The proportion of people with coordinated care was higher in low SES areas (73%) compared with high SES areas (64%) but they were less likely to report that coordination helped to a large extent (67% compared with 74% respectively).

Another indicator of chronic disease management is use of specific chronic disease management plans, which are available under various arrangements (for example, MBS GP Management Plans and Team Care Arrangements). For a small number of chronic conditions (such as asthma, diabetes and mental illness) some information on the uptake of coordinated care plans can be derived using MBS data. However, there are various limitations when using this information to assess the effectiveness of care coordination, including that care may be coordinated through alternative non-MBS arrangements (for example, by a community or Indigenous-specific health service) and that the presence of a plan alone does not necessarily ensure care is effectively coordinated (see Chapter 9 'Indicators of Australia's health'—'Proportion of people with diabetes with a GP annual cycle of care'; 'Proportion of people with asthma with a written asthma plan'; and 'Proportion of people with mental illness with a GP care plan').

'Continuity of care' is a feature of coordinated care and involves continuity of: information (where patient information from past consultations is available and used in making decisions about current care); management (including adherence to standards and protocols); and relationships between the provider and the patient (Health Quality Ontario 2013). Effective continuity of care is associated with improved patient outcomes, reduced health service use and improved patient satisfaction (Bankart et al. 2011; Browne & Taylor 2013; Freeman et al. 2007; Gunther et al. 2013; Health Quality Ontario 2013; Kemp et al. 2013). The importance of continuity of care is recognised in Australian standards for general practitioners (RACGP 2010).

One indicator of continuity of care is the extent to which the population can access a preferred GP. In 2010–11, among adults who saw a GP in the previous 12 months there were marked differences across Medicare Locals, including:

- 64% to 95% of the population reporting having a preferred GP

- 23% to 54% of the population reporting they could not access their preferred GP in the preceding 12 months (NHPA 2013a).

There may also be opportunities to improve understanding of communication between hospitals and GPs through use of electronic discharge summaries developed under e-Health arrangements, but these data are not yet available.

Safety and quality of primary health care

There are several mechanisms through which high quality primary health care is pursued, including through health professional registration and accreditation processes, and through government payments to GPs and pharmacists as incentives for particular quality improvements (for example, the Practice Incentives Program for GPs). There are measures in place to promote and improve understanding of safety and quality in primary health care (see ACSQHC 2011; RACGP 2010) but there is currently no related national statistical reporting on this subject. This is in contrast to the situation in Australian hospitals, where there is regular reporting of some (albeit limited) safety and quality indicators such as serious adverse events (for example, see SCRGSP 2014).

We do, however, have some (again, limited) quality-related information on 2 of the most common high cost primary care activities—medication prescribing and ordering of diagnostic tests.

With medication prescribing, variation (over time or location) in prescription rates for specific conditions can indicate either differences in disease prevalence and/or differences in prescribing practices, with definitive conclusions being difficult to reach. For example, while there is some evidence that prescription rates for antidepressants in Australia are both increasing and high by international standards (OECD 2013), it is not clear whether this is being driven by over-prescribing, or treatment of previously undiagnosed untreated cases.

And while there is substantial evidence to support judicious prescribing of antibiotics because of the advent of antibiotic resistance issues (McKenzie et al. 2013; NPS 2012), it is not clear why the volume of antibiotics prescribed in Australia is higher than the OECD average (OECD 2013). There are a number of programs aimed at tackling antibiotic resistance and reducing infections in primary health care (NPS 2013) as well as in Australian hospitals (ACSQHC 2012) , but there is currently no systematic monitoring of the prescribing of antibiotics in primary health care settings. Opportunities may be explored for comprehensive monitoring of these and other medications as electronic prescribing is rolled out and matures.

The number of Medicare services claimed per person for imaging and pathology tests have increased in the past decade by 38% and 46% respectively (DHS 2014b). There is some limited evidence that some of this testing may not be necessary, either according to clinical management guidelines or where results are not accessible to health professionals in a timely manner. For example, one study showed that about 1 in 4 Australians presenting at primary health care for low back pain are sent for imaging tests and 5% are sent for pathology although clinical management guidelines discourage the use of these tests (Williams et al. 2010). However, there is no comprehensive authoritative statistical information on this subject.

New features of the national e-Health system, designed to support sharing of pathology and imaging results between health-care providers, may reduce the need for doctors to locate test results or unnecessarily repeat tests (Australian Ageing Agenda 2013), thereby saving time and money, and potentially improving safety and quality in patient care.

Responsiveness

In 2012–13, 90% of ABS patient experience survey respondents who saw a GP in the previous 12 months reported that the GP always or often listened carefully to them, while 93% reported that the GP always or often showed them respect (ABS 2013b).

The proportion of patients with positive experiences in Australia has increased in recent years (Commonwealth Fund 2004, 2007, 2010). In 2010, Australia was at about the OECD average in terms of patient ratings of regular doctors spending enough time with them, providing easy-to-understand explanations, giving opportunities to ask questions, and involving them in decisions about care and treatment (OECD 2013).

There is little national information about patient experiences with non-GP primary health care, with one exception being patient perceptions of waiting times for dental services. In 2011–12, among people who had seen a dental professional for urgent care in the previous 12 months, 20% were seen within 4 hours and 43% waited 2 or more days between making the appointment and seeing the dental professional (ABS 2012).

What are the outcomes?

As noted previously, international evidence suggests that a strong primary health care orientation within the health service system exerts a positive effect on both population health outcomes and overall health system costs. For this reason, various countries, including Canada, the United Kingdom and New Zealand, have embarked on health system reforms to reorient their health systems towards primary health care. For example, reforms in Canada (with similar objectives to those in Australia) over the last decade have been linked to the higher levels of health among Canadians compared to their US neighbours (Hutchinson et al. 2011; Starfield 2010).

The primary health care system in Australia is broad and complex and it is difficult to consistently define what services and health professionals it encompasses, and describe in detail the nature of the services delivered to patients. It is therefore not surprising that there are challenges in describing its contribution to improved population health outcomes and health system financial sustainability. What can we say about these high-level outcomes?

Improved health outcomes

There is great interest in better understanding health outcomes to ensure that people are receiving the best available care, and in order to invest in interventions that offer the greatest benefit. Primary health care is expected to improve overall health outcomes through strong contributions to reductions in tobacco smoking, excessive alcohol consumption and obesity, and by identifying and managing diseases early, thereby reducing disease incidence, prevalence and death.

Australia's health 2014 provides many examples of where health outcomes are improving (for example, increased cancer survival, reduced smoking levels) and deteriorating (for example, rising obesity levels). Ongoing monitoring of these outcomes will provide information about further progress. In addition, limited population health information is currently available at the Medicare Local level (see, for example, NHPA 2013c; PHIDU 2013).

Of more critical importance is the challenge of attributing improvements in health outcomes to the primary health care system or to the health system more broadly when responsibility for outcomes is shared across governments, non-government entities and individuals. In addition, the lag time between health interventions and improved health outcomes (for example, a reduction in deaths due to lung cancer) can be considerable. For this reason, there is often interest in measuring improvements in processes, such as the delivery of anti-smoking advice during GP consultations, where evidence demonstrates a given intervention is linked to improved outcomes. Australia's limited data on the activities of primary health care practitioners currently limits our capacity to describe this activity.

Improved financial sustainability of the health system

Ideally, a well-functioning primary health care system will deliver effective care at least cost, and avoid progression to more serious illnesses and more costly hospital care, with associated risks such as hospital-acquired infections, or the risks associated with surgery. While this makes intuitive sense, we currently have limited information about the efficiency of the Australian primary care system and the extent to which it is contributing to improved financial sustainability of the health system as a whole.

Much of hospital financing in Australia is moving toward a relatively sophisticated activity-based funding model, with significant effort being dedicated to determining a national 'efficient price' and cost-weighting for services based on their complexity and costliness. This has been possible because of the relatively high quality data that has been collected over a long time from hospitals on their activities and expenditure. This type of data is not collected from primary health care providers. General practice and some other primary health care services are funded on a less sophisticated activity-based model than applies in hospitals, with government funding (through Medicare) largely determined by the reported length of the consultation. Other areas of primary health care are funded through block payments or at a program or service level.

As a result of poor primary health care data quality in Australia, it is difficult to gauge the cost-effectiveness of different types of primary care providers, or to compare the primary health care sector generally with other parts of the health system, or to other countries. For example, if a patient cannot or will not use a particular type of primary health care service due to, say, lack of availability or cost, they may attempt to access alternative hospital or community health services that may be available free of charge—for example, hospital outpatient services, or nutrition advice from a state-funded community health centre. Or they may seek other private services, perhaps partly reimbursed through private health insurance. Gaps in primary health care information make it difficult to assess the extent of substitution between these services and thereby readily understand the extent to which the system is cost-effective.

What is missing from the picture?

Primary health care has not experienced the same national focus on data capture, collation and reporting as other parts of the Australian health system. As a result, there is:

- little or no information about why someone went to a primary health care professional, what occurred during the consultation, what actions were recommended and taken, and with what outcome and cost

- very limited national data (broad counts of patient contacts only) for ambulance, aero-medical services and allied health services (including those privately insured)

- no national data about state-funded community health activity

- great difficulty in routinely assessing the appropriateness of care with respect to clinical guidelines (see for example, Runciman et al. 2012) or assessing the effectiveness of care.

The statistical information that may be derived from Australia's emerging e-Health system may improve our understanding of primary health care. However, with the current participation arrangements, and legislative restrictions on the use of data, the contribution of e-Health to an improved understanding of population health and health care is not yet clear.

There are several opportunities to improve primary care information, including:

- **improving GP surveying arrangements**—for example, evaluate and update current survey methods to ensure they align with current information needs, use electronic collection methods, involve standardisation of data, and support production of Medicare Locals estimates

- **extracting and compiling core GP data**—as a by-product of information already held by many general practices in their electronic patient records (using agreed definitions and agreed privacy, confidentiality and data sharing arrangements)

- **making better use of existing data** in which Australia has already invested—for example, packaging existing administrative data such as MBS, PBS, Indigenous-specific health services, homelessness and disability data, at the Medicare Local level

- **assessing the benefits of data linkage** between existing data sources—to answer questions about patient journeys across settings

- **filling remaining gaps**—by exploring the feasibility of improved national use of existing private health insurance, state and territory, community health, and ambulance data

- **exploring other ways of measuring progress** towards key Medicare Local and national objectives—for example, through surveys and sentinel practice reporting.

Local and international experiences in primary health care information show that information improvement is possible. A number of Medicare Locals, through collaborative efforts, have used existing data to effectively support their needs assessment and quality improvement processes. This has been possible through the cooperation of member GPs and extraction of selected de-identified data from GP computerised electronic patient records (Monash University 2013).

Several other countries, such as Canada, the United States of America, the United Kingdom and New Zealand, have made significant progress in primary health care information development, which Australia could adopt or adapt (see, for example, CIHI 2013 Box 8.2).

Where do I go for more information?

See previous editions of *Australia's health* and *Review and evaluation of Australian information about primary health care: a focus on general practice* (AIHW 2008) at www.aihw.gov.au.

Search for 'primary health care' on the Australian Government Department of Health website at www.health.gov.au.

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