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Coordination of health care: experiences of barriers to accessing health services among patients aged 45 and over

2016



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Summary

Timely access to quality health care is important in preventing, treating and managing diseases. When patients are unable to obtain appropriate health care when they need it, they face barriers to accessing health care.

Many factors can impede or prevent a patient accessing health care. Some relate to the individual, such as:

- their understanding of the urgency of their need
- their attitude toward accessing health care
- their work commitments
- other life pressures.

Other factors relate to the health system. For example:

- a service might not be available where the patient lives
- the cost might be too high
- there might be a long waiting list.

These barriers can delay a patient receiving appropriate care, and lead to poorer health outcomes.

The 2016 Survey of Health Care focused on Australians aged 45 and over who had seen a general practitioner (GP) between November 2014 and November 2015.

This report uses results from the survey to look at the associations between selected patient characteristics—such as age, sex and the language they speak at home—and patients' self-reported experiences of selected barriers to accessing health care. It focuses on access to GPs and specialists.



1 in 4 people did not see a GP when they felt they needed to

In 2016, an estimated 1 in 4 (24%) patients aged 45 and over reported there was a time when they felt they needed to see a GP but did not go, while 1 in 8 (13%) reported that there was a time when they felt they needed to see a specialist but did not go.

Those who needed to use health services the most, were more likely to not see a GP or specialist when they felt they needed to

In 2016, after adjusting for the effects of other patient characteristics, patients with high health needs were:

- 3.3 times as likely as those with low health needs to report that there was a time when they felt they needed to see a GP but did not go
- 3.6 times as likely as those with low health needs to report that there was a time when they felt they needed to see a specialist but did not go.

	Did not see a GP when needed 	Did not see a specialist when needed 
High health needs	31%	18%
Low health needs	19%	9%

Patients with high health needs also had more GP visits (13.8 per person), on average, than patients with low health needs (4.6 per person).







Half of the patients who did not see a GP when they felt they needed to said they could not get an appointment

In 2016, of the 24% of patients who felt they needed to see a GP but did not go, half (50%) said that being unable to get an appointment when needed was a reason.

Of the 13% of patients who felt they needed to see a specialist but did not go, nearly half (45%) said that cost was a reason.

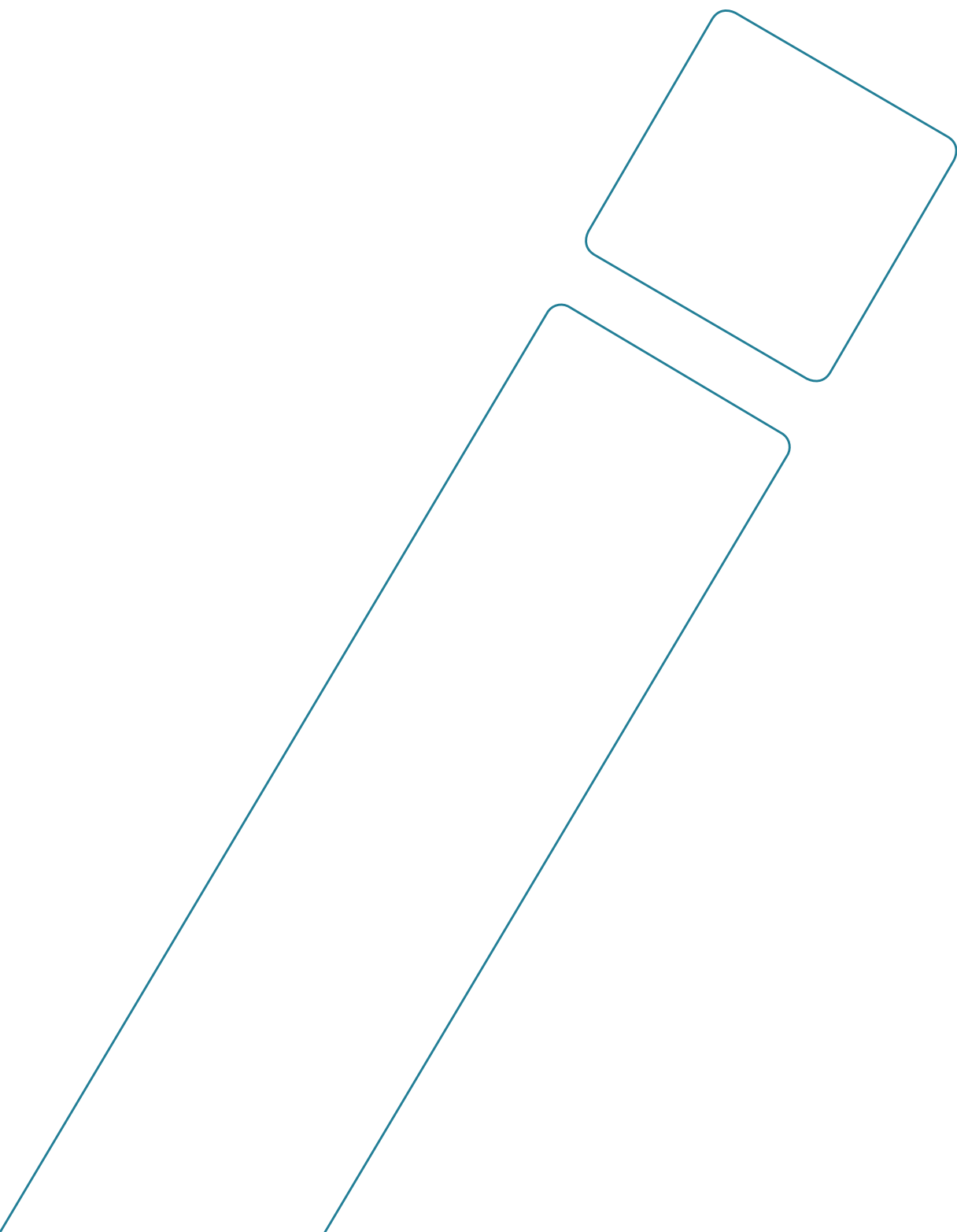
Lack of nearby health services is a bigger barrier for people living in remote Australia

In 2016, the proportion of patients who said that a reason they did not see a GP or specialist was that there were no health services nearby rose with increasing remoteness.

	No GP nearby 	No specialist nearby 
Major cities 	3%	6%
Inner regional 	5%	22%
Outer regional 	9%	31%
Remote and very remote 	20%	61%

After adjusting for the effects of other patient characteristics, patients living in *Remote and very remote* areas were:

- 8.2 times as likely as those living in *Major cities* to report that not having a GP nearby was a reason for not seeing a GP when needed
- 24.4 times as likely as those living in *Major cities* to report that not having a specialist nearby was a reason for not seeing a specialist when needed.



1 Introduction

Timely access to health-care professionals and services when a person needs it is crucial to preventing, treating and managing health conditions.

Services and health professionals must be accessible, affordable and acceptable, if people are to access health care (see Box 1.1). When cultural, social, environmental and personal factors prevent people from getting the care they need, these factors are barriers to accessing health care.

Patient-reported experiences of accessing health care are an important way to capture and understand these barriers, and can provide evidence for improving service delivery to patients.

Box 1.1: What is 'access' to health care?

'Access' to health care can be defined using 3 dimensions:

- accessibility—the availability of good health-care services within reasonable reach of patients, as well as the ability of patients to obtain services when they need them (such as hours of operation)
- affordability—the ability of patients to pay for health-care services, including when considering the indirect costs associated with seeking health care (such as cost of transportation and time taken for travel and away from work)
- acceptability—the patient's willingness to seek health care, which can be affected by the patient's perception of how effective a service is, as well as factors such as age, sex, ethnicity and religion of the health-care provider (Evans et al. 2013).

Barriers to health-care access can occur at any time, from before a person seeks care to when they are receiving it (Corcadden et al. 2017). The health literacy of a person can influence how they make decisions about their health, such as when to access health care and what services to access (AIHW 2018a). Health literacy is a person's ability to understand and use health information and services in ways that promote and maintain good health. It can be influenced by factors such as age, sex, socioeconomic status, level of education, employment and health status (Sørensen et al. 2012). The structure and operations of the health-care system and the wider social and cultural norms also affect the health literacy of a population.

Once a person has identified a need for health care, there are many geographical, cultural and social barriers that can prevent them from obtaining it. The impacts of barriers will vary depending on a patient's needs. Patients with multiple and/or complex conditions often have high health needs (see Box 1.2) and need frequent contact with the health-care system, but barriers can make it particularly difficult for them to access the care they need to manage their conditions.

These patients usually need to access various health services, making them more likely to experience fragmented care or barriers to accessing health care. By understanding the access barriers that patients with different health needs face, health-care providers can improve policies and practices to address these gaps.

Box 1.2. What are the different levels of health needs?

The definitions for 'level of health needs' used in this report are as follows:

People with **high needs** are those with:

- at least 3 long-term health conditions, with or without daily activity limitations
- 1 or 2 long-term health conditions, who are limited *a lot* in their daily activities due to their condition(s).

People with **moderate needs** are those with:

- 1 or 2 long-term health conditions, who are limited *moderately, a little, or not a lot* in their daily activities by their condition(s).

People with **low needs** are those with:

- no long-term health conditions.

Daily activity limitations are those that limit a person's core activities, meaning they might need assistance from another person, or to use an aid or item of equipment (ABS 2015). Daily activity limitations might include:

- limitations to a person's ability to understand family or friends (communication activities)
- getting in and out of bed (mobility activities)
- showering and dressing (self-care activities).

Purpose of this report

This report is the third in the Coordination of Health Care series that uses results from the 2016 Survey of Health Care (the survey). It links survey results with Medicare Benefits Schedule (MBS) data (Box 1.3) and looks at the following questions:

- How are selected patient sociodemographic characteristics (such as age, sex, whether a person has private health insurance, and household structure) associated with the likelihood of patients reporting experiences of not seeing a GP or specialist even when they felt they needed to?
- How are selected patient sociodemographic characteristics associated with the likelihood of patients reporting different types of barriers to seeking GP and specialist care?
- How do patient-reported barriers to access affect actual use of MBS-subsidised GP services?

All data presented in this report refer to people aged 45 and over who had at least 1 GP visit in the 12 months between November 2014 and November 2015. Their MBS-subsidised GP use and self reported experiences relate to the care they did or did not receive during 2015–16. These people are referred to as 'patients' throughout the report.

The first 2 reports in this series focused on patients' experiences with:

- The care provided by their usual GP or a usual place of care, the relationship they had with their usual GP/usual place of care and the overall quality of the care they received (AIHW 2018b)—*Coordination of health care: experiences with GP care among patients aged 45 and over 2016* found that the vast majority (98%) of patients surveyed had either a usual GP or usual place of care.
- The sharing of information between their usual GP/usual place of care and other health professionals and services, such as specialists, other allied health professionals, and hospital emergency departments (AIHW 2019a)—*Coordination of health care: experiences of information sharing between providers for patients aged 45 and over 2016* found that nearly all (98%) patients who had visited either a usual GP or place of care said that their usual GP or others in their usual place of care were aware of their health-care history.

Box 1.3: Data sources

The Coordination of Health Care Study

The Australian Institute of Health and Welfare (AIHW) and the Australian Bureau of Statistics (ABS) developed the Coordination of Health Care Study to provide information on patients' experiences of the coordination and continuity of care of health services across Australia.

Coordination of care is 'the deliberate organisation of patient care activities between 2 or more participants involved in a patient's care to facilitate the appropriate delivery of healthcare services' (Victorian Department of Health and Human Services 2018).

The first stage of the study was the 2016 Survey of Health Care. The survey selected more than 35,000 Australians aged 45 and over who had seen at least 1 GP in the 12 months before being selected.

Participants were asked about their experiences of coordination and continuity of care across different sectors of the health-care system. The survey oversampled high users of GP visits (those who had seen a GP 12 or more times in the previous 12 months) to provide a robust sample of people aged 45 and over who had seen a GP in the 12 months before the survey, and who likely have high health-care needs and experience with multiple types of health-care providers.

In the second stage of the study, consenting patients' survey responses were linked to their Medicare data, Pharmaceutical Benefits Scheme data and admitted hospital and emergency department data for 1 January 2014 to 30 June 2018.

This report uses the survey responses linked to the Medicare data only for 2015–16.

Medicare data

Medicare is an Australian Government program that subsidises various health services, such as GP and specialist appointments and diagnostic tests. Linking survey and Medicare data enables patient-reported experiences of coordination of care to be looked at in the context of their actual use of MBS-subsidised services. This report uses the linked survey and Medicare data to calculate the proportion of bulk-billed services as an indicator of general access to bulk-billed services in Australia.

See the Appendix for more details on the data sources.

2 What patient characteristics can affect access to care?

Key findings

- nearly 1 in 4 (24%) patients reported that there was a time when they felt they needed to see a GP but did not go
- after adjusting for the effects of other patient characteristics, patients with high health needs were 3.3 times as likely as patients with low health needs to report that there was a time when they felt they needed to see a GP but did not go
- half (50%) of patients who did not see a GP when they felt they needed to said that not getting an appointment when needed was a reason
- after adjusting for the effects of other patient characteristics, patients living in *Remote and very remote* areas were 8.2 times as likely as those living in *Major cities* to report that no GPs nearby was a reason for not seeing a GP when they felt they needed to
- nearly 1 in 8 (13%) patients reported that there was a time when they felt they needed to see a specialist but did not go
- after adjusting for the effects of other patient characteristics, patients with high health needs were 3.6 times as likely as patients with low health needs to report that there was a time when they felt they needed to see a specialist but did not go
- more than 4 in 10 (45%) patients who did not see a specialist when they felt they needed to said that the cost of the appointment was a reason
- after adjusting for the effects of other patient characteristics, patients living in *Remote and very remote* areas were 24.4 times as likely as those living in *Major cities* to report that no specialists nearby was a reason for not seeing a specialist when they felt they needed to.

In this report, odds ratios (Box 2.1) are used to represent the likelihood of a patient—with one of the 9 selected sociodemographic characteristics—reporting that:

- there was a time when they felt they needed to see a GP but did not go
- there was a time when they felt they needed to see a specialist but did not go
- the cost of appointment was a reason for not seeing a GP or specialist when they felt they needed to
- no GP nearby or no specialist nearby was a reason for not seeing a GP or specialist when they felt they needed to
- being unable to get an appointment when needed was a reason for not seeing a GP or specialist when they felt they needed to
- not having a GP referral was a reason for not seeing a specialist when they felt they needed to.

The 9 patient characteristics were:

- sex
- age
- level of health needs (Box 1.2)
- main language spoken
- whether or not they were privately insured
- whether or not they lived alone
- where they lived, by socioeconomic area
- where they lived, by remoteness area
- state and territory of residence.

Box 2.1: What are odds and odds ratios?

'Odds' is a numerical expression for the likelihood of an event occurring. The odds of an event occurring is defined as the ratio of the probability that the event will occur over the probability that the event will not occur.

For example, the odds of rolling a 3 on a die is 1:5, which can be interpreted as 1 occurrence of rolling the number 3, to 5 occurrences of rolling another number.

An odds ratio is used to measure the odds of an event occurring given an exposure, or characteristic—for example, smoking—compared with the odds of the event or outcome occurring in the absence of that exposure. It also represents the magnitude of the association between the event and the exposure:

- An odds ratio of 1 means that the exposure does not affect the odds of the event occurring.
- An odds ratio of greater than 1 means that the exposure is associated with higher odds (or more likelihood) of the event occurring.
- An odds ratio of less than 1 means that the exposure is associated with lower odds (or less likelihood) of the event occurring.

In this report, where odds ratios are less than 1, the inverse of the odds ratio is reported so that it is easier to interpret the results. For example, if the odds of contracting a disease for people with exposure A is 0.3 times the odds for people with exposure B, then the inverse interpretation is that the odds of contracting the disease for people with exposure B is 3.3 times the odds for people with exposure A.

Odds ratios and their 95% confidence intervals are calculated using a statistical technique called logistic regression, which allows the associations between the event and an exposure to be measured, while controlling for the effects of confounding.

Confounding factors are other characteristics that can distort the relationship between the main event and the exposure, so can create false associations. Adjusting for confounding factors by adding them into a logistic regression model can control their effects on the association.

For more details of the logistic regression modelling method used for this report, see the Appendix.

Box 2.2: How were the types of barriers to accessing GPs and specialists collected by the survey?

For respondents who reported that there was a time when they felt they needed to see a GP or specialist but did not go, the survey asked them to select all the reasons they did not.

The options were:

- cost of appointment
- no GP/specialist nearby
- could not get an appointment when needed one
- GP did not provide referral (for specialists only)
- other.

This means that respondents could select more than 1 reason (Figure 2.1).

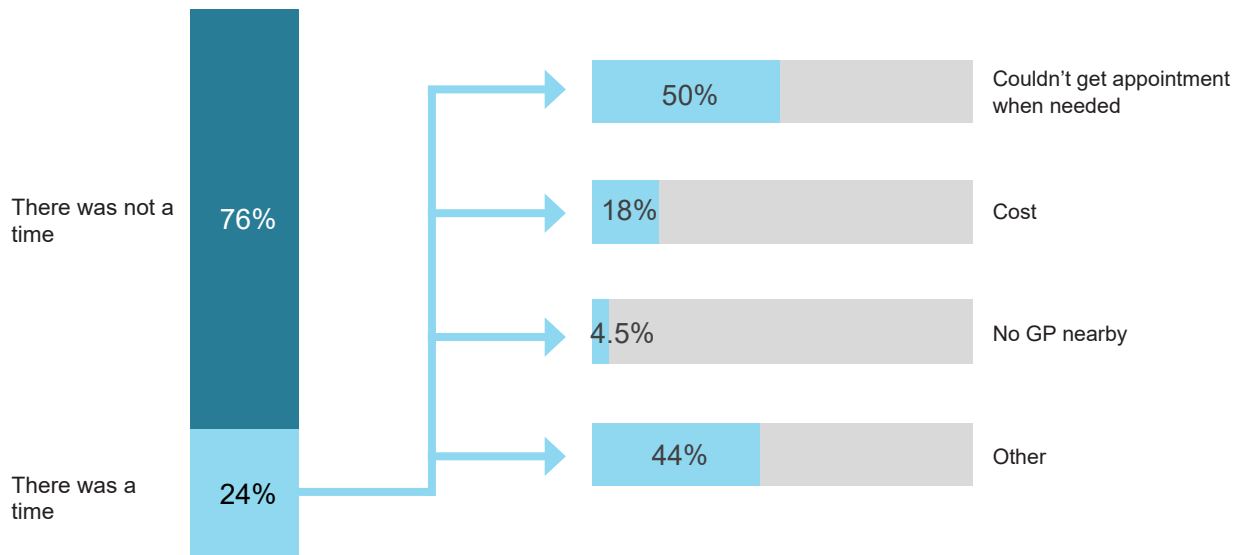
This report did not look at 'other' reasons as there were no opportunities to expand on what these other reasons were in the survey. For people who reported there was a time they felt they needed to see a GP but did not go, 44% reported other reasons and for those who reported a time when they felt they needed to see a specialist but did not go, 34% reported other reasons (Figure 2.1).

Figure 2.1: Patients reporting they faced barriers to accessing health-care services in the previous 12 months and types of barriers, 2016

General practitioners

Patients reporting that there was a time they felt they needed to see a GP but did not go

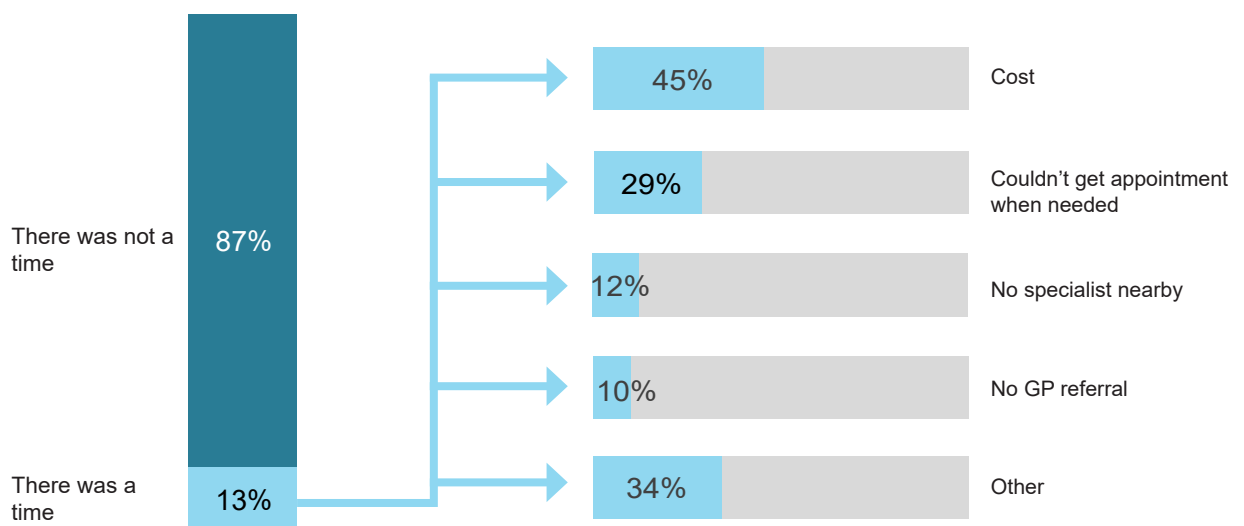
Of patients who felt there was a time they needed to see a GP but did not go, what were **all the reasons**^(a) they did not go?



Specialists

Patients reporting that there was a time they felt they needed to see a specialist but did not go

Of patients who felt there was a time they needed to see a specialist but did not go, what were **all the reasons**^(a) they did not go?



a) As respondents could choose more than one reason, proportions will not sum to 100%.

Note: For proportions of the whole study population reporting experiences of barriers to accessing general practitioners and specialists, see table S2.3 and S4.3.

Source: AIHW analysis of ABS Survey of Health Care 2016; tables S1.2, S2.2, S3.2 and S4.2.

Who was more likely to not see a GP when they felt they needed to?

GPs are most people's first point of contact with the health system for matters relating to personal health. They are the gateway to specialist health services and have an important role in coordinating the care of their patients.

In 2017–18, 90% of Australians aged 45 and over reported that they had consulted a GP at least once in the previous 12 months (ABS 2018). There was an average of 6.5 GP attendances per person for people aged 45–64, increasing to 11.8 GP attendances per person for people aged 65 and over (AIHW 2018c).

In 2016, an estimated 1 in 4 (24%) patients aged 45 and over reported that there was a time when they felt they needed to see a GP but did not go (Table S1.2—tables cited in this report are available at <https://www.aihw.gov.au/reports/primary-health-care/coordination-of-health-care-experiences-barriers/data>).

The largest variations were seen across age groups and level of health needs:

- A greater proportion of patients aged 45–54 (34%) reported this experience than patients aged 75 and over (13%).
- A greater proportion of patients with high health needs (31%) reported this experience than patients with low health needs (19%) (Table S1.2).

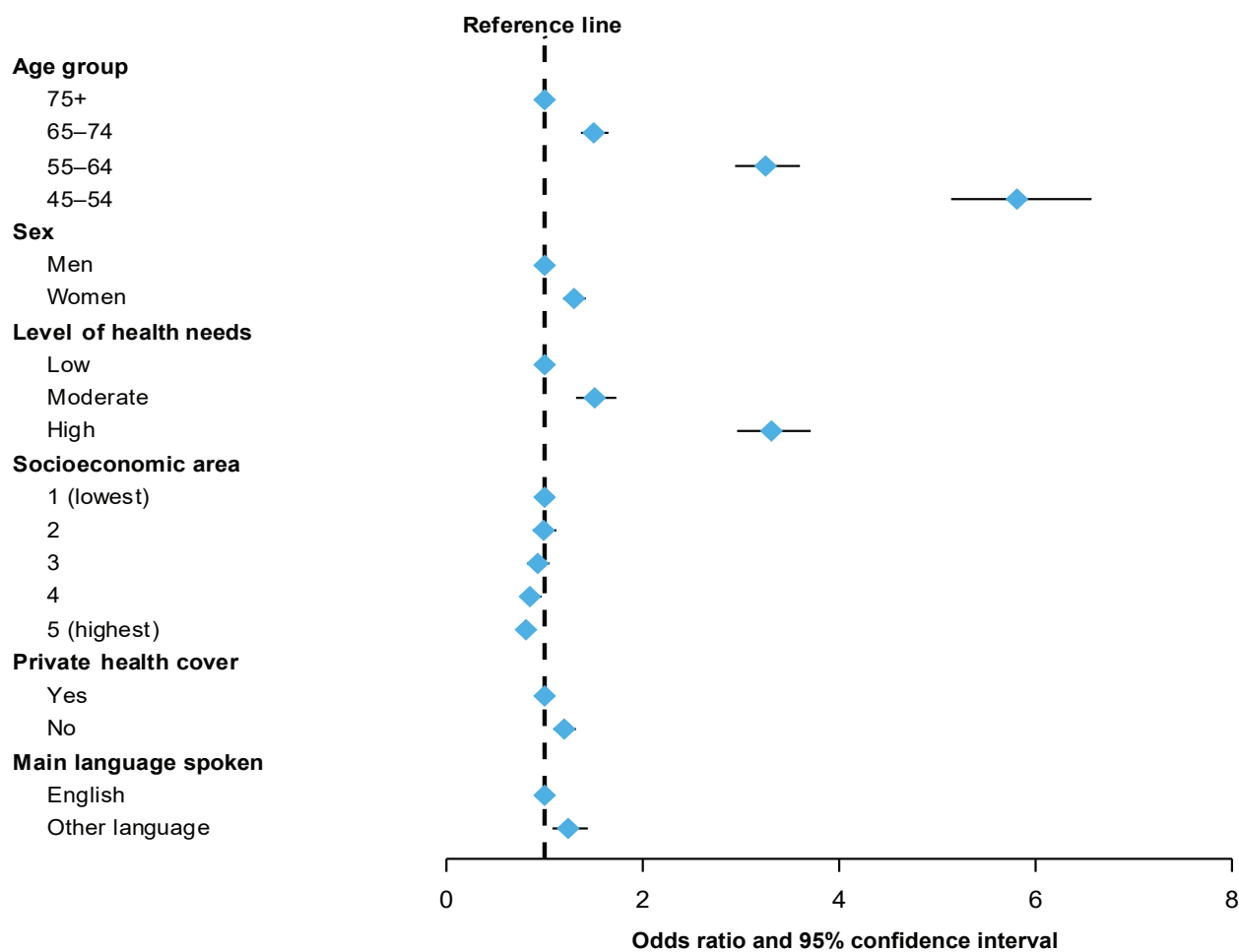
These proportions are the equivalent of the unadjusted associations (see Glossary) between age and the outcome of not seeing a GP, and the level of health needs and the outcome of not seeing a GP (Table S5.1).

In reality, many other factors can influence the likelihood of patients reporting a particular outcome, such as the selected patient characteristics examined in this report. The approach is to adjust for the influences of these characteristics to produce adjusted associations (see Glossary) using statistical methods like logistic regression.

After adjusting for confounding factors, the characteristics with the strongest associations were:

- age—those aged 45–54 were 5.8 times as likely as those aged 75 and over to not see a GP when they needed to and those aged 55–64 were 3.3 times as likely as those aged 75 and over.
- level of health needs—those with high health needs were 3.3 times as likely as those with low health needs to not see a GP when they needed to (Figure 2.2).

Figure 2.2: Odds ratios of patients reporting that there was a time they needed to see a GP but did not go, by selected patient sociodemographic characteristics, 2016



Note: Odds ratios were derived using logistic regression modelling and adjusted for age group, sex, level of health needs, socioeconomic area, whether or not covered by private health insurance and main language spoken. The reference groups used in the model were those aged 75 and over, men, low health needs, lowest socioeconomic area, those with private health insurance and English as main spoken language. Horizontal lines for each data point indicate 95% confidence intervals.

Sources: AIHW analysis of ABS Survey of Health Care 2016; Table S5.1.

People with high health needs were more likely than those with low health needs to report that they did not see a GP when they needed to.

This is in line with previous research. The Commonwealth Fund, in the United States of America, has shown that more than 4 in 10 (44%) patients with high needs delayed care because of access issues, compared with 2 in 10 (21%) patients without high needs. Only one-third (35%) of patients with high needs reported that it was somewhat or very easy for them to access medical care after-hours without going to the emergency department, compared with more than half (53%) of patients without high needs (Ryan et al. 2016).

Measuring service use, or realised access, does not provide the whole picture on barriers to health-care access. There are a multitude of factors, such as health needs, that affect service use. Patients who need to go more often might be more likely to encounter instances where they needed to see a GP but did not go.

In 2015–16, patients who said that there was a time when they needed to see a GP but did not go (24% of the study population) had more visits (9.6 per person), on average, than those who did not report this experience (8.4 per person).

Patients with high health needs had more visits (13.8 per person), on average, than patients with low health needs (4.6 per person), regardless of whether or not they reported that they needed to see a GP but did not go (Table S7.1). The fact that patients with high health needs go to see their GP more often, might explain why they were more likely than patients with low health needs to report that there was a time when they needed to see a GP but did not go.

In contrast, while younger patients were more likely than older patients to report not seeing a GP when needed, they had fewer GP visits than older patients.

The average number of GP visits per person increased with age, regardless of whether or not they reported that they needed to see a GP but did not go. Patients aged 75 and over who needed to see a GP but did not go had the highest number of visits per person (15.7). The difference in the number of visits between people who did not see a GP when they needed to go and those who always saw a GP when needed were statistically significant within each age group (Table S7.1).

Cost of appointment as a barrier to seeing a GP

In 2016, of the patients who reported that there was a time when they felt they needed to see a GP but did not go (24% of patients), more than 1 in 6 (18%) reported cost of appointment as a reason for not going—this equates to 4.1% of the total study population (tables S2.2 and S2.3).

This is higher than the 2.4% of patients aged 45 and over who reported that they did not see or delayed seeing a GP due to cost in the most recent 2018–19 ABS Patient Experience Survey (PEX). The 2 surveys had slightly different questions and scope—the PEX survey question also included *delayed seeing a GP*, whereas the 2016 Survey of Health Care did not. The scope for the PEX survey was also slightly broader, as it was not limited to those who had seen a GP in the previous year.

Of the patients who reported that there was a time they needed to see a GP but did not go, the proportion of patients who reported cost as a reason for not going varied by:

- age—a greater proportion of patients aged 45–54 (22%) reported this reason than patients aged 65–74 (10%) and 75 and over (5.1%)
- state and territory—about one third (36%) of patients living in the Australian Capital Territory reported this reason compared with patients living in New South Wales (13%), South Australia (15%), the Northern Territory (18%) and Victoria (18%)
- socioeconomic areas—a greater proportion of patients in the highest socioeconomic areas (22%) reported this reason than patients living in the lowest socioeconomic areas (12%)
- main language spoken—a greater proportion of patients who spoke English at home (19%) reported this reason than patients who spoke a language other than English (9.4%) (Table S2.2).

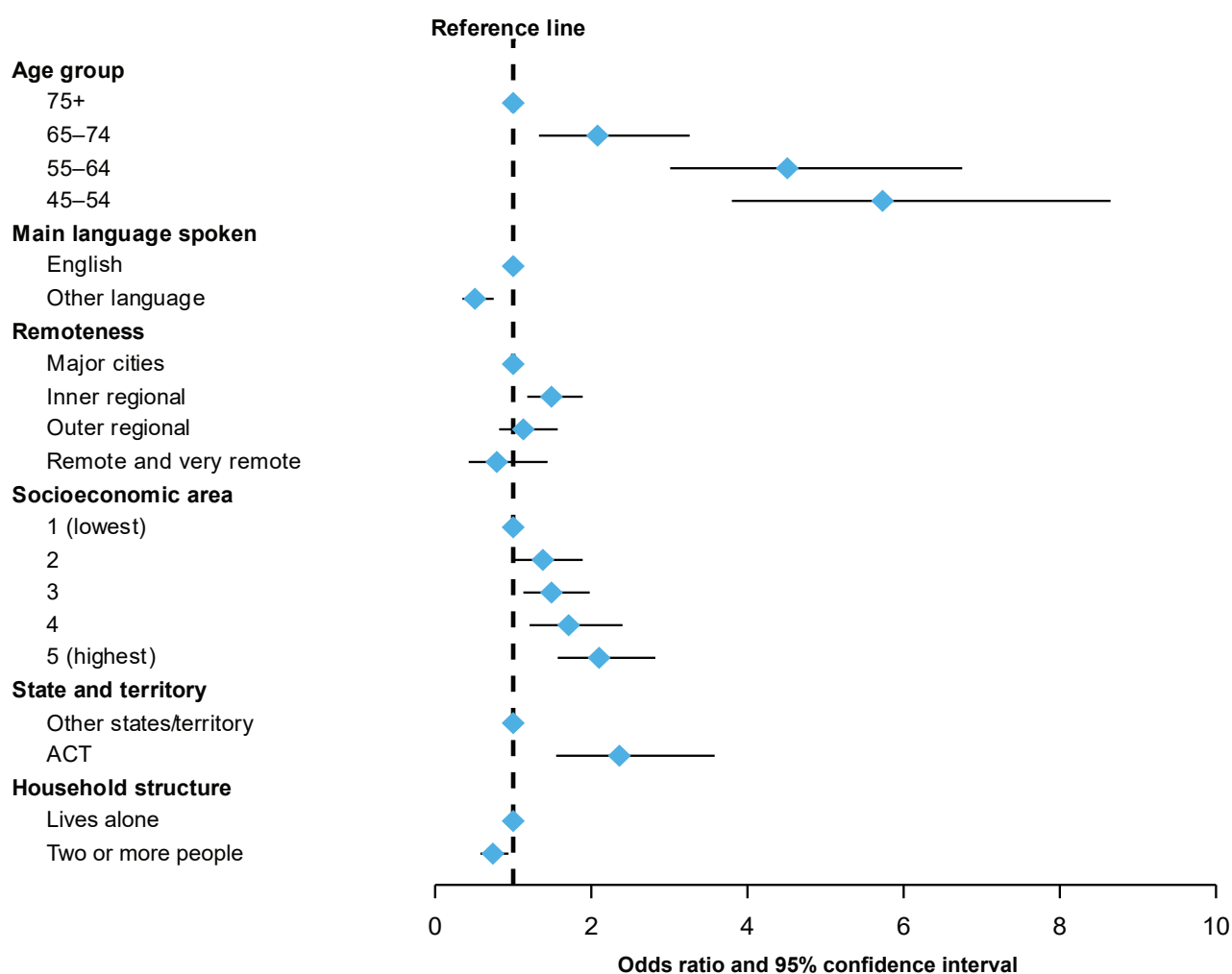
These proportions are the equivalent of the unadjusted associations between these characteristics and the outcome of reporting cost as a factor for not attending a GP when they needed to. For the unadjusted odds ratios, see Table S5.2.

For patients reporting cost of appointment as a proportion of the total study population by different sociodemographic characteristics, see Table S2.3.

After adjusting for confounding factors, the patient characteristics with the strongest associations were:

- age—patients aged 45–54 were 5.7 times as likely as those aged 75 and over to say that cost was a barrier and those aged 55–64 were 4.5 times as likely as those aged 75 and over
- state and territory—patients living in the Australian Capital Territory were 2.4 times as likely as patients living in any other states or territory to say that cost was a barrier
- socioeconomic areas—patients in the highest socioeconomic areas were 2.1 times as likely as patients living in the lowest socioeconomic areas to say that cost was a barrier
- main language spoken—those who spoke a language other than English at home were less likely to report cost as a reason for not seeing a GP (odds ratio of 0.5) than those who spoke English at home. This corresponds to those who spoke English at home being twice as likely as those who spoke a language other than English to report cost as a reason. (Figure 2.3).

Figure 2.3: Odds ratios of patients reporting that cost of the appointment was a reason for not seeing a GP when needed, by selected patient sociodemographic characteristics, 2016



Note: Odds ratios were derived using logistic regression modelling and adjusted for age group, main language spoken, remoteness area, socioeconomic areas, state and territory and number of people in the household. The reference groups used in the model were those aged 75 and over, English as a main language spoken, *Major cities*, lowest socioeconomic area, all other states (New South Wales, Victoria, Queensland, Western Australia, South Australia and Tasmania) and the Northern Territory and those living alone. Horizontal lines for each data point indicate 95% confidence intervals.

Sources: AIHW analysis of ABS Survey of Health Care 2016; Table S5.2.

Bulk-billing is when a doctor accepts the Medicare rebate as the full payment for a service and the patient pays nothing. With non-bulk-billed attendances, doctors and other health-care providers set their own fees for services on top of the Medicare rebate, so patients might still need to contribute towards the cost of services. The total amount paid by a patient in the year will depend on a number of factors, such as the number of consultations they had that were not bulk-billed, as well as the fee set by the GP.

National Medicare data show that 85% of GP services (for all patients) were bulk-billed in 2015–16 (Department of Health 2019a). Similarly, for patients aged 45 and over who participated in the survey and had their records linked to MBS services data, 83% of GP services were bulk-billed in 2015–16.

Younger patients were more likely to report cost as a reason for not seeing a GP when needed and this is in line with other published data. The ABS's most recent Patient Experience Survey (2018–19) shows that, of people who did not see or delayed seeing a GP, 16% of those aged 45–54 reported cost as a reason, compared with 7% of patients aged 75 and over (ABS 2019).

Australians aged 65 and over may be eligible for a Pensioner Concession Card and although bulk billing patients with a concession card is not mandatory, the bulk-billing incentives introduced from 2004 as part of the Strengthening Medicare initiative encourage medical practitioners to provide bulk-billed services to vulnerable groups, such as, concession card holders (Department of Human Services 2019).

For people who participated in the survey and had their records linked to MBS services data, bulk-billing of GP services increased with age from 76% for patients aged 45–64 to 86% for patients aged 65–74 and 92% for patients aged 75 and over. This might partially explain why younger patients were more likely to report cost as a barrier to seeing a GP than older age groups.

Patients living in the Australian Capital Territory were more likely than those in any other state or territory to report cost as a reason for not seeing a GP. This might be due to the variation in bulk-billed GP services across jurisdictions in Australia. For people who participated in the survey and had their records linked to MBS services data, those living in the Australian Capital Territory had the lowest rate of bulk-billed GP services, at 54%, compared with 86% of those living in New South Wales, 84% in Queensland and 83% in the Northern Territory.

The relatively higher bulk-billing rate for GP services in low socioeconomic areas could partially explain why patients from high socioeconomic areas were more likely to report cost of the appointment as a reason for not seeing a GP. For people who participated in the survey and had their records linked to MBS services data, the bulk-billing rate for GP services in the lowest socioeconomic areas was 91%, compared with 73% in the highest socioeconomic areas. But, patients living in lower socioeconomic areas often have many indirect expenses on top of the cost of the appointment when seeking health-care services, such as for transport (Bywood et al. 2011).

Some patient characteristics had weak associations with reporting cost as a barrier. For example, the likelihood of patients saying cost was a barrier to seeing a GP did not vary greatly by remoteness, with patients living in *Remote and very remote* areas slightly less likely to report cost as a barrier (Table S5.2).

This does not necessarily imply that patients living in rural areas face fewer cost barriers. For these patients, the cost of seeing a GP not only includes the actual cost of the appointment, but can include many indirect costs, such as higher travel costs, needing to take more time off work, or even relocating, to cover long distances to the nearest health service.

The survey question was framed to investigate the cost of the appointment as a barrier to GP access, and might not have captured the indirect costs associated with seeking and attending GP appointments.

Patients who said cost was a reason for not seeing a GP had fewer GP visits per year (7.3 visits per person), on average, than those who did not report cost as a reason (10.0 visits per person). This difference was statistically significant (Table S7.2).

No GP nearby as a barrier to seeing a GP

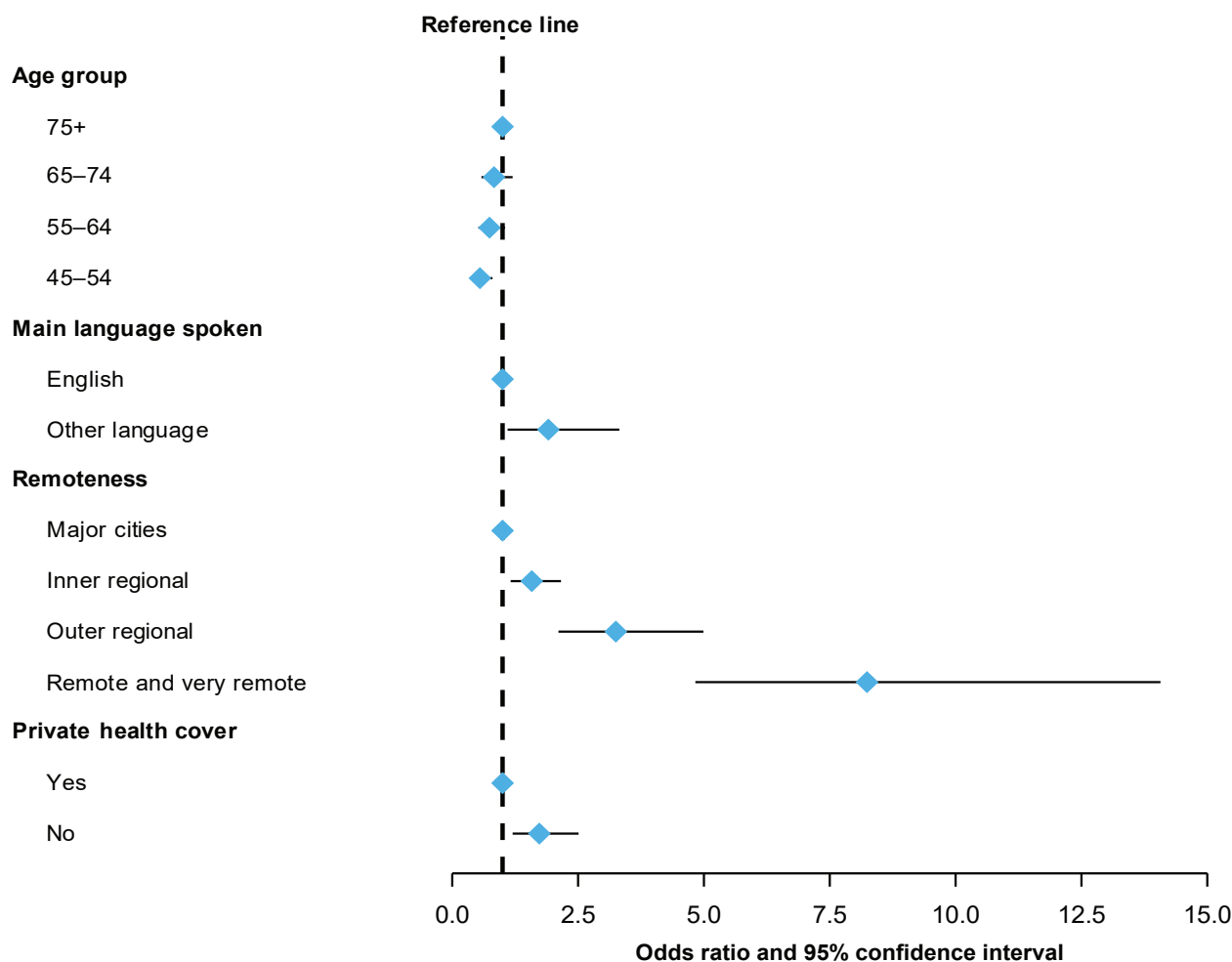
In 2016, of the 24% of patients who reported that there was a time when they felt they needed to see a GP but did not go, 4.5% said that not having a GP nearby was a reason—this equates to 1.0% of the total study population (tables S2.2 and S2.3).

For these patients, the proportion rose with increasing remoteness, from 3.4% of patients living in *Major cities* to 9.4% in *Outer regional* areas and 20% in *Remote and very remote* areas (Table S2.2). For the equivalent unadjusted associations between remoteness area and whether patients reported that there was no GP nearby, see Table S5.3.

After adjusting for confounding factors, the characteristics with the strongest associations were:

- remoteness area—patients living in *Remote and very remote* areas were 8.2 times as likely as those in *Major cities* to say that no GP nearby was a barrier to seeing a GP. While, patients living in *Outer regional* areas were 3.3 times as likely as those living in *Major cities* to say that no GP nearby was a barrier
- main language spoken—those who spoke a language other than English at home were 1.9 times as likely as those who spoke English at home to say that no GP nearby was a barrier (Figure 2.4).

Figure 2.4: Odds ratios of patients reporting that not having a GP nearby was a reason for not seeing a GP when needed, by selected characteristics, 2016



Note: Odds ratios were derived using logistic regression modelling and adjusted for age group, main language spoken, remoteness area and whether covered by private health insurance. The reference groups used in the model were those aged 75 and over, English as main language spoken, *Major cities* and those with private health insurance. Horizontal lines for each data point indicate 95% confidence intervals.

Sources: AIHW analysis of ABS Survey of Health Care 2016; Table S5.3.

The finding that remoteness area is strongly associated with reporting no GP nearby as a reason for not seeing a GP when needed is consistent with other research. The way people in rural and remote areas access primary health care often differs to those in metropolitan areas.

For example, facilities are generally smaller, have less infrastructure and provide a broader range of services to a more widely distributed population. GPs could be clustered in towns in remote areas so patients living outside of these towns would still need to travel very long distances to get the health care they need. Rural and remote populations also rely more on GPs to provide health-care services, as local specialist services are less readily available (Department of Health 2016; NRHA 2013).

The poorer health status and different levels of health needs of rural and remote populations should

also be considered. For example, people living outside of major city areas were more likely to have long-term health conditions, including arthritis, asthma, diabetes, and mental and behavioural problems (AIHW 2019b). The implication of this is that there is a greater need for more primary health-care access in these areas.

No appointment available when needed as a barrier to seeing a GP

In 2016, of the 24% of patients who reported that there was a time when they felt they needed to see a GP but did not go, 50% said that being unable to get an appointment with the GP when they needed to was a reason—this equates to 11.5% of the total study population (tables S2.2 and S2.3).

For these patients, the proportion varied the most by age. Younger patients (aged 45–54 and 55–64) were more likely to report this reason (both 51%) than patients aged 65–74 (45%) and 75 and over (44%).

This is consistent with previous data. The ABS General Social Survey found that, in 2014–15, of people aged 15 and over who faced barriers to accessing health care, 49% reported their main reasons as:

- no service was available at the time needed
- the waiting time was too long
- no appointment was available.

The ABS General Social Survey question on barriers to health-care access included GPs, specialists, hospitals, dental professionals and other health professionals, whereas the 2016 Survey of Health Care only asked about GPs.

No patient sociodemographic characteristics were strongly associated with being unable to get an appointment with the GP when they needed to.

Finding and booking an appropriate doctor's appointment time can be highly dependent on patient preference. Patients usually consider various individual factors before making an appointment, such as perceived urgency of the issue, fitting around work or carer responsibilities and public transport times. These were not specifically captured by the survey, so could not be considered in this report (see Box 2.2).

Who was more likely to not see a specialist when they felt they needed to?

Having timely access to specialists is important in treating and managing patients with chronic conditions. In 2017–18, almost half (47%) of people aged 45 and over reported that they had seen a specialist at least once in the previous 12 months (ABS 2018). Specialists need to work with GPs within a coordinated system of care in order to provide good quality of care and treatment for patients, particularly those with chronic conditions (Harris & Zwar 2007).

In 2016, 13% of patients said that there was a time when they felt they needed to see a specialist but did not go. The largest variations were seen across age groups and levels of health needs:

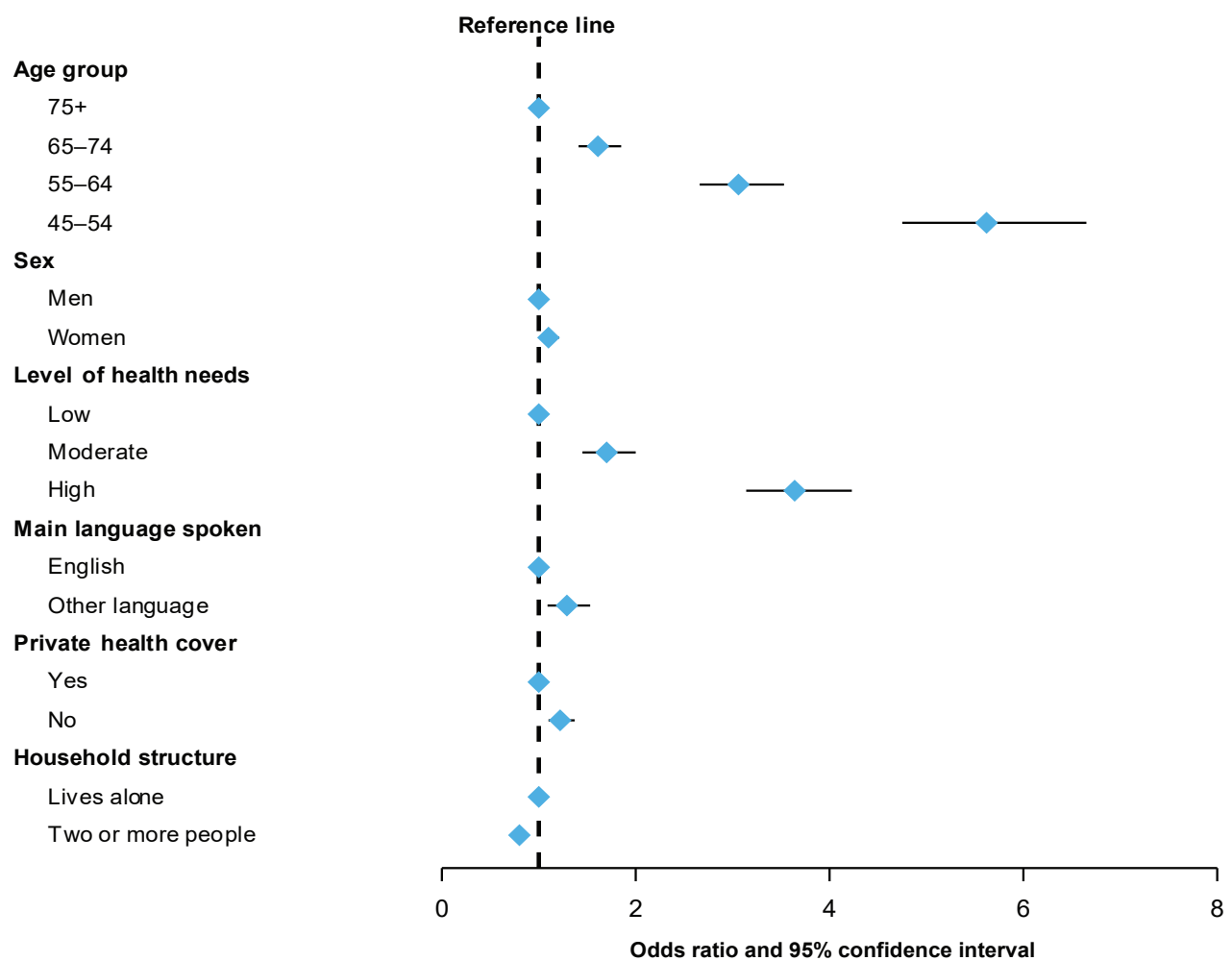
- More patients aged 45–54 (19%) reported this experience than patients aged 75 and over (6.7%).
- More patients with high health needs (18%) reported this experience than patients with low health needs (8.8%) (Table S3.2).

These proportions are the equivalent of the unadjusted associations (see Glossary) between age and the outcome of not seeing a specialist as well as the level of health needs and the outcome of not seeing a specialist. For the unadjusted odds ratios, see Table S6.1.

After adjusting for confounding factors, the characteristics with the strongest associations were:

- age—those aged 45–54 were 5.6 times as likely as those aged 75 and over to say they did not see a specialist when they needed to, and those aged 55–64 were 3.1 times as likely as those aged 75 and over to say they did not see a specialist when they needed to
- level of health needs—those with high health needs were 3.6 times as likely as those with low health needs to report they needed to see a specialist but did not go when they needed to (Figure 2.5).

Figure 2.5: Odds ratios of patients reporting that there was a time when they needed to see a specialist but did not go, by selected patient sociodemographic characteristics, 2016



Note: Odds ratios were derived using logistic regression modelling and adjusted for age group, sex, level of health needs, main language spoken, whether covered by private health insurance and number of people in the household. The reference groups used in the model were those aged 75 and over, men, low health needs, English as main language spoken, those with private health insurance and those living alone. Horizontal lines for each data point indicate 95% confidence intervals.

Sources: AIHW analysis of ABS Survey of Health Care 2016; Table S6.1.

As with GPs, younger patients and patients with high health needs were more likely to report that there was a time when they needed to see a specialist but did not go.

Cost of appointment as a barrier to seeing a specialist

In 2016, of the patients who said that there was a time when they felt they needed to see a specialist but did not go (13% of patients), 45% reported the cost of the appointment as a reason—this equates to 5.7% of the total study population (tables S4.2 and S4.3).

Of the patients who reported that there was a time they needed to see a specialist but did not go, the proportion of patients who reported cost as a reason for not going varied by:

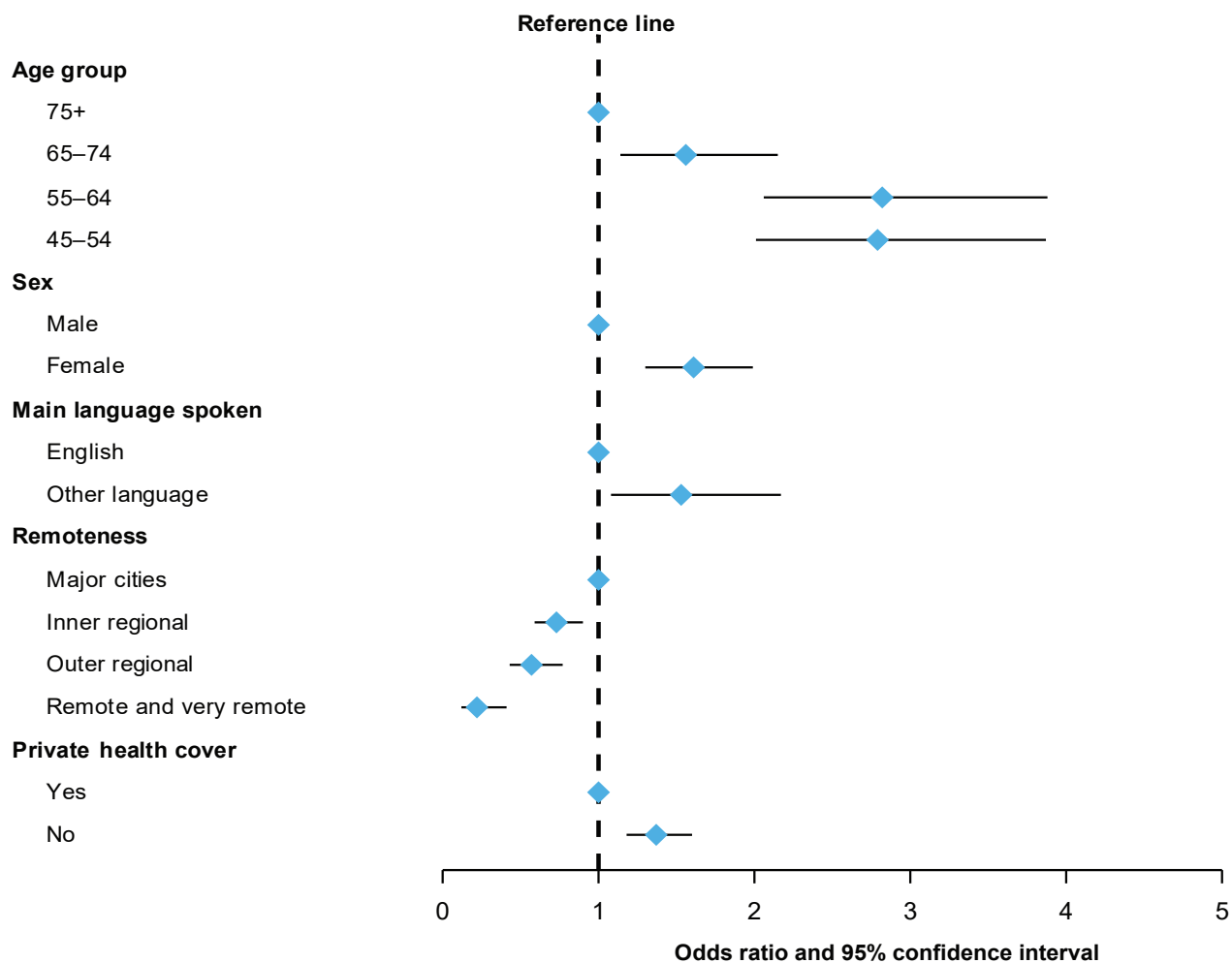
- remoteness area—a greater proportion of patients living in *Major cities* (49%) reported cost as a barrier than those in *Inner regional* areas (41%), *Outer regional* areas (34%) and *Remote and very remote* areas (17%)
- age—a greater proportion of patients aged 45–54 (49%) reported cost as a barrier than patients aged 65–74 (36%) and 75 and over (28%)
- sex—a greater proportion of women (50%) than men (40%) reported cost as a barrier
- main language spoken—a greater proportion of patients who spoke a language other than English at home (58%) reported cost as a barrier than patients who spoke English at home (44%) (Table S4.2).

For the equivalent unadjusted odds ratios, see Table S6.2.

After adjusting for confounding factors, the characteristics with the strongest associations were:

- remoteness—those living in *Remote and very remote* areas were less likely to report cost as a reason for not seeing a specialist (odds ratio of 0.2) than those living in *Major cities*. This corresponds to those living in *Major cities* being 4.5 times as likely as those in *Remote and very remote* areas to report cost as a reason for not seeing a specialist
- age—patients aged 45–54 and 55–64 were 2.8 times as likely as those aged 75 and over to say that cost was a barrier
- sex—women were 1.6 times as likely as men to say that cost was a barrier
- main language spoken—those who spoke a language other than English at home were 1.5 times as likely as those who spoke English at home to say that cost was a barrier (Figure 2.6).

Figure 2.6: Odds ratios of patients reporting that cost of the appointment was a reason for not seeing a specialist doctor when needed, by selected patient sociodemographic characteristics, 2016



Note: Odds ratios were derived using logistic regression modelling and adjusted for age group, sex, main language spoken, remoteness area and whether covered by private health insurance. The reference groups used in the model were those aged 75 and over, men, English as main language spoken, *Major cities* and those with private health insurance. Horizontal lines for each data point indicate 95% confidence intervals.

Sources: AIHW analysis of ABS Survey of Health Care 2016; Table S6.2.

Those living in *Major cities* were more likely than those living in other areas to report cost of appointment as a reason for not seeing a specialist when needed and this is consistent with other findings. Other research has found that out-of-pocket costs are higher for patients living in *Major cities* than those in rural and remote areas (AIHW 2018d).

Although out-of-pocket costs for specialist services can be greater in *Major cities*, patients living outside of major city areas, such as those in *Remote and very remote* areas, often also have more indirect expenses, on top of the cost of the appointment. For example, those living in rural and remote areas often have to spend more time travelling to their appointments due to the lack of nearby services, so might need to take more time off work and pay for accommodation. These reasons might not get captured as barriers, as the question asked about 'cost of appointment' only.

Younger patients (aged 45–54 and 55–64) were more likely than older patients (aged 65–74 and 75 and over) to report cost of the appointment as a reason for not seeing a specialist when needed. But other research has found older patients (aged 65 and over) are more likely to have multiple chronic conditions, so experience a higher financial burden, due to managing those on a reduced fixed income (van Gaans & Dent 2018).

No specialist nearby as a barrier to seeing a specialist

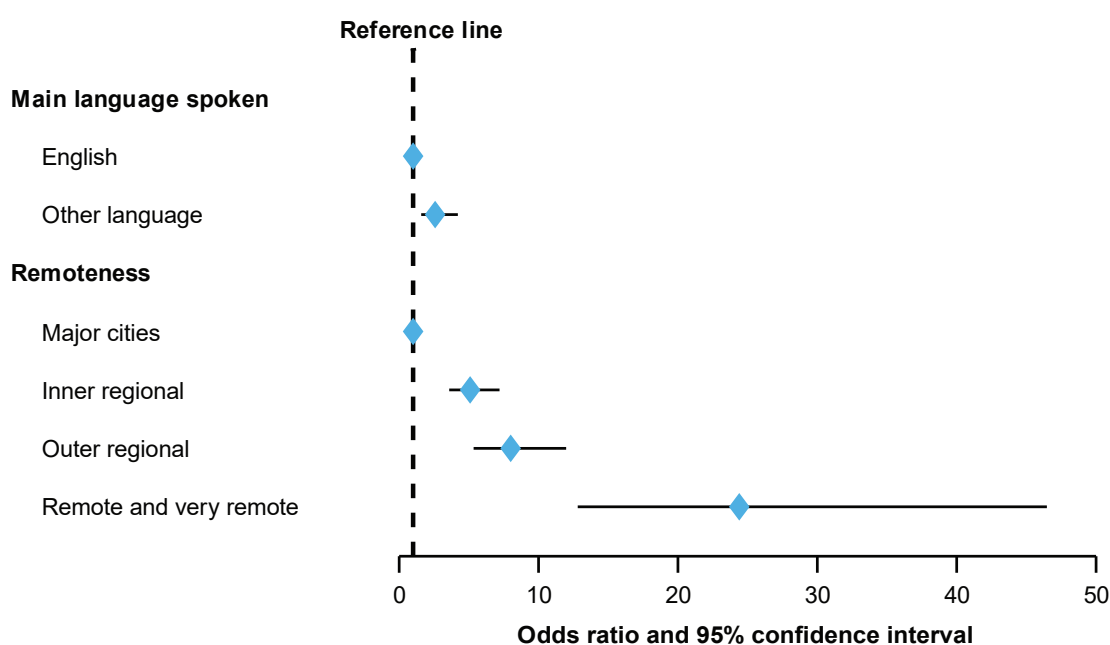
In 2016, of the 13% of patients who reported that there was a time when they felt they needed to see a specialist doctor but did not go, 12% said that not having a specialist nearby was a reason—this equates to 1.6% of the total study population (tables S4.2 and S4.3).

For these patients, the proportion steadily rose with increasing remoteness, from 6.2% of patients living in *Major cities* to 61% in *Remote and very remote* areas (Table S4.2). For the equivalent unadjusted associations between remoteness area and whether patients reported that there was no specialist doctor nearby, see Table S6.3.

After adjusting for confounding factors, the characteristics with the strongest associations were:

- remoteness area—patients living in *Remote and very remote* areas were 24.4 times as likely as those in *Major cities* to say that no specialist nearby was a barrier, while patients in *Outer regional* areas were 8.0 times as likely as those living in *Major cities* and patients in *Inner regional* areas were 5.1 times as likely
- main language spoken—those who spoke a language other than English at home were 2.6 times as likely as those who spoke English at home to say that no specialist nearby was a barrier (Figure 2.7).

Figure 2.7: Odds ratios of patients reporting that not having a specialist nearby was a reason for not seeing a specialist when needed, by selected characteristics, 2016



Note: Odds ratios were derived using logistic regression modelling and adjusted for main language spoken and remoteness area. The reference groups used in the model were English as main language spoken and *Major cities*. Horizontal lines for each data point indicate 95% confidence intervals.

Sources: AIHW analysis of ABS Survey of Health Care 2016; Table S6.3.

The shortage of specialists in rural and remote areas is clear in other data. In 2017, the clinical full-time equivalent rates of specialists declined with increasing remoteness from 143 per 100,000 population in *Major cities* to 54 per 100,000 population in *Remote* and 22 per 100,000 population in *Very remote* areas (AIHW 2019b).

The lack of specialist services in *Remote* and *Very remote* areas often means patients living in these areas have to travel long distances to reach a specialist health service. The impact of this specialist service gap is amplified by the poorer health outcomes experienced by people in rural and remote areas.

No GP referral as a barrier to seeing a specialist

In 2016, of the 13% of patients who reported that there was a time when they felt they needed to see a specialist but did not go, 10% reported that not having a GP referral was a reason—this equates to 1.3% of the total study population (tables S4.2 and S4.3).

For these patients, the proportion varied by:

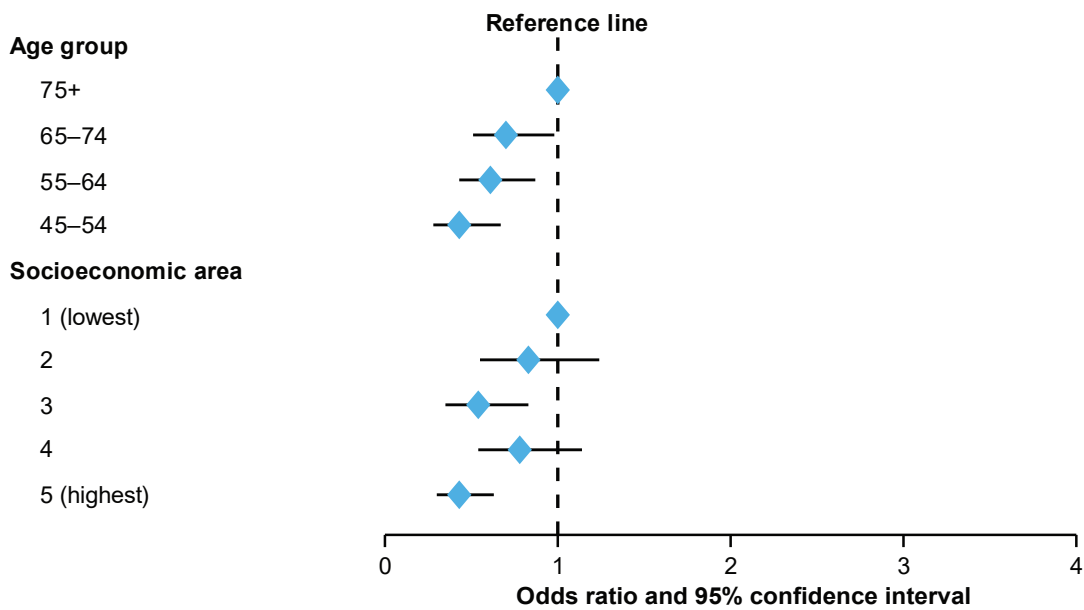
- socioeconomic areas—a greater proportion of patients in the lowest socioeconomic areas (14%) reported this reason than patients living in the highest socioeconomic areas (6.5%)
- age—a greater proportion of patients aged 75 and over (17%) reported this reason than patients aged 45–54 (7.8%) (Table S4.2).

For the equivalent unadjusted odds ratios, see Table S6.4.

After adjusting for confounding factors, the patient characteristics with the strongest associations were:

- age—patients aged 45–54 were less likely (odds ratio of 0.4) than those aged 75 and over to report that no GP referral was a barrier. This corresponds to patients aged 75 and over being 2.3 times as likely as those aged 45–54 to report that no GP referral was a barrier
- socioeconomic areas—patients in the highest socioeconomic areas were less likely (odds ratio of 0.4) than those in the lowest to report that no GP referral was a barrier. This corresponds to patients in the lowest socioeconomic areas being 2.3 times as likely as those in the highest to report that no GP referral was a barrier (Figure 2.8).

Figure 2.8: Odds ratios of patients reporting that not having a GP referral was a reason for not seeing a specialist when needed, by selected patient sociodemographic characteristics, 2016



Note: Odds ratios were derived using logistic regression modelling and adjusted for age group and socioeconomic areas. The reference groups used in the model were those aged 75 and over and lowest socioeconomic area. Horizontal lines for each data point indicate 95% confidence intervals.

Sources: AIHW analysis of ABS Survey of Health Care 2016; Table S6.4.

Patients from low socioeconomic background and elderly patients have been identified as being disadvantaged when it comes to primary health-care, with many underlying reasons as to why they do not access or use primary health-care services adequately (Bywood et al. 2011).

A 2014–15 study found that chronic problems were managed at a significantly higher rate at general practice encounters with patients in low socioeconomic areas compared with patients in high socioeconomic areas (Gordon et al. 2016). GPs were also less likely to refer patients in low socioeconomic areas to specialists than patients in high socioeconomic areas.

Reasons are likely to be multifaceted, but might indicate a cost barrier to accessing specialist services in low socioeconomic areas, or reflect health literacy levels in people from higher socioeconomic areas, or both. Health literacy enables patients to better navigate the health-care system, be able to identify a need for specialist care and advocate to receive such services (Gordon et al. 2016; Korda et al. 2009).

No appointment available when needed as a barrier to seeing a specialist

In 2016, of the 13% of patients who reported that there was a time when they felt they needed to see a specialist but did not go, 29% said that being able to get an appointment when needed was a reason—this equates to 3.6% of the total study population (tables S4.2 and S4.3).

No patient sociodemographic characteristics were found to be strongly associated with this reason. Finding an appropriate or available appointment time when needing care can depend on a multitude of factors that are very individual to a patient (see Box 2.2).

3 Discussion

This report looked at patient-reported barriers to accessing health-care services, to provide insight into the experiences of potential at-risk populations.

Having access to comprehensive and quality health-care services is a crucial component of an effective health-care system which contributes to improved health outcomes (Department of Health 2013). Optimal access to health care, defined as ‘providing the right service at the right time in the right place’ (Gulliford et al. 2002), is important in promoting good health and in preventing and managing diseases.

Although Australia’s health-care system produces good outcomes by international comparisons, there is evidence of inefficiencies in some parts of the system (Productivity Commission 2015), including reduced access to health care for some populations.

Vulnerable subpopulations—such as those living in regional and remote areas, and people with complex and/or chronic conditions—face challenges in accessing the health care they need.

This study found that, an estimated 1 in 4 (24%) patients aged 45 and over reported that there was a time when they felt they needed to see a GP but did not go, while an estimated 1 in 8 (13%) patients aged 45 and over reported that there was a time when they felt they needed to see a specialist but did not go. If these barriers were addressed, there may be increased demand for GP and other specialist care services.

The findings of this report suggest that disparate access to health care exists across different populations.

People with high health needs were more likely than those with low health needs to say that there was a time when they needed to see a GP or specialist but did not go.

Patients with chronic and/or complex conditions usually need more frequent contact with a range of health-care services to treat and manage their conditions. So they are particularly susceptible to a lack of access to coordinated and continuous care. Patients who need to go more often might be more likely to be unable to go when needing to see a GP or specialist.

In Australia, people with chronic and complex conditions often experience difficulty in accessing services because of mobility, transport, language, financial barriers and remoteness (PHCAG 2015).

The current system was not set up to care for and effectively manage patients with long-term health conditions, particularly those living in regional and remote areas. A new model of care—the Health Care Home—was recommended to support patients with multiple health needs. The aim was to increase access to coordinated, more comprehensive and personalised care and improve access to medical care and services, including through non-face-to-face, phone- and internet-based digital health options where appropriate.

According to the Department of Health, more than 10,000 patients from 129 practices across 10 Primary Health Network (PHN) regions across Australia take part in the Health Care Home program (Department of Health 2019b). These practices identified patients most suited for enrolment in the program. For patients who agreed to participate, the practices were expected to

work proactively with them to better manage their conditions, starting with developing or reviewing the patient's care plan (Health Policy Analysis 2017).

Younger patients (those aged 45–54 and 55–64) were more likely than their older counterparts to report that there was a time they needed to see a GP or specialist but did not go. A reason for this finding could be that the older age groups in this survey reported more positive experiences and established relationships with their usual GP than the younger patients making access easier and better (AIHW 2018b).

One of the most commonly reported reasons for not seeing a GP when needed was that there was no appointment available. There are potential flow-on effects of not being able to see a GP when needed because of long waiting times, or not being able to get an appropriate appointment time.

Not being able to get an appointment when needed can be associated with increased emergency department use. A study of unnecessary use of emergency departments by older people in Adelaide found that the lack of availability of GP services appeared to be a contributing factor to presenting at an emergency department (Faulkner & Law, 2015). The patient responses in that study potentially highlight a difficulty in obtaining an appropriate GP appointment time when needed, which is consistent with the findings of this report.

A study comparing measures of health-care access found 'accessibility' to be a problematic dimension of access (Box 1.1) for Australia, particularly after-hours. Difficulties with getting after-hours-access were more prevalent in Australia than half of the comparator countries in that study (Corscadden et al. 2017).

Cost of appointment was also reported as a reason for not seeing a GP, and more often as a reason for not seeing a specialist, when patients needed to. Internationally, when the affordability dimension of access (see Box 1.1) for Australia was assessed against 10 other countries, adults in 7 countries were less likely to experience cost-related barriers than in Australia (Corscadden et al. 2017).

Patients living in *Remote and very remote* areas were more likely than those in *Major cities* to report that the reason for not seeing a GP or specialist was because there were no GPs or specialists nearby. The undersupply and uneven distribution of medical professionals in rural regions is well documented.

Patients from low socioeconomic areas were more likely to say that a reason for not seeing a specialist when they needed to was because they had not been referred by their GP. This potentially highlights a difference in the way problems are managed and treated based on patient profile, as found by the Royal Australian College of General Practitioners (Gordon et al. 2016).

The ability to successfully access health care is not solely rooted in the patient or any individual practitioner, but is a collaboration where positive relationships can be established, supported and improved by a system where coordinated and continuous care is promoted.

This report has found some associations between some patient sociodemographic characteristics and patient-reported barriers to accessing health-care services. But there are also environmental and social factors—such as a lack of culturally acceptable services or long waiting lists or waiting times—beyond a patient's control that affect access to health care. These many factors all need to be taken into account when developing policies and future plans to address issues of access to health care.

Strengths and limitations of the data

The Coordination of Health Care study was the first national study designed to provide consistent data on patient-reported experiences of coordination of health, at both national and local levels, such as PHN areas.

The study is able to provide robust samples of people aged 45 and over who had seen a GP in the 12 months before the survey, and who likely had high health-care needs due to the oversampling of high users of GP visits (those who had seen a GP 12 or more times in the previous 12 months). This has enabled this report to focus on people with complex and/or multiple chronic conditions and their experiences of barriers to accessing health-care services, where data might have previously been limited.

This report has shed light on the patient-reported experiences of barriers to accessing health-care services, in particular, GPs and specialists. One of the report's key strengths is that it has provided PHNs with the potential to explore these patient-reported barriers and what factors might impede a patient from being able to access the health care they need.

But, as with survey data in general, the models chosen for this study also have limitations. The scope of the survey was people aged 45 and over who had at least 1 GP visit in the 12 months between 24 November 2014 and 24 November 2015. This has implications for the generalisability of the results. Out of scope were people who:

- did not see a GP in the 12 months before selection of the sample for the survey
- received care elsewhere (exclusively), where services were not billed to Medicare
- were not receiving care at all.

This method of sampling could have excluded people who experienced insurmountable barriers to accessing health care and were never able to see a GP or specialist despite needing to. As a result, the findings of this report are limited in providing information on those people who are unable to access health care at all.

For more information on limitations of the response rate and potential bias, see the first report in this series, *Coordination of health care: experiences with GP care among patients aged 45 and over 2016* (AIHW 2018b).

The MBS data does not take into account any services that a person might have accessed outside of Medicare arrangements, such as those subsidised by the Department of Veterans' Affairs. As a result, payments made outside of Medicare could not be captured.

The statistics in this report also do not include people who did not claim on Medicare, either because they did not have services that were eligible, or because they did not claim for eligible services.

The report does not include costs related to pharmaceuticals, either bought privately or subsidised by the Pharmaceutical Benefits Scheme. Explanatory notes, including a data quality declaration, for the Survey of Health Care is available at: www.abs.gov.au/ausstats/abs@.nsf/Lookup/4343.0Explanatory+Notes12016.

Assessment of causality

The explanatory models used in this report do not indicate that certain patient characteristics caused patients to not see a GP or specialist even when they needed to. The method of regression is used for assessments of associations, rather than true causality. In addition, the survey could not capture some important characteristics that might confound the relationship between the characteristics and the outcome, such as religion, ethnicity and employment status of the patient.

Next steps

Future reports using the Coordination of Health Care Study will focus on the experiences of patients with high health needs, in particular:

- their reported experiences of the quality of care received from various health-care services
- their use of MBS services.

In 2019, the results of the survey were also linked to admitted patient and emergency department data from states and territories. These new datasets will provide opportunities to explore the relationships between patient experience of health-care services and hospitalisations and emergency department presentations.

This will help build a more comprehensive picture of the patient journey through Australia's health-care system.

Appendix: Technical supplement

Geographical and sociodemographic characteristics

This report includes supplementary data tables that present information split by several geographical and sociodemographic characteristics. Information is reported at the national level, by state and territory, and by Primary Health Network (PHN) area.

Results are also reported by various sociodemographic characteristics, including:

- age group
- sex
- level of health needs (Box 1.2)
- main language spoken at home
- private health coverage
- number of people in household
- socioeconomic areas—using the 2016 Australian Bureau of Statistics (ABS) Socio-Economic Indexes for Areas Index of Relative Socio-economic Disadvantage
- remoteness area—using the 2016 Australian Statistical Geography Standard Remoteness Structure.

Medicare Benefits Schedule claims data

Data for the report were sourced from the Medicare Benefits Schedule (MBS) claims data, which are owned by the Australian Government Department of Health.

The claims data are derived from administrative information on services that qualify for a Medicare benefit under the *Health Insurance Act 1973*, and for which a claim has been processed by the Department of Human Services.

Data are reported for claims processed between 1 July 2015 and 30 June 2016.

Scope and coverage

Under MBS arrangements, Medicare claims can be made by people who live permanently in Australia. This includes New Zealand citizens and holders of permanent residence visas.

Applicants for permanent residence may also be eligible depending on circumstances. In addition, people from countries with which Australia has reciprocal health-care agreements might also be entitled to benefits under MBS arrangements.

Some Australian residents may obtain medical services through other arrangements. This includes services that were fully or partially subsidised by the Department of Veterans' Affairs, compensation arrangements, or other publicly funded programs, such as jurisdictional salaried GP services provided in remote outreach clinics.

Bulk-billing

A bulk-billing facility for professional services is available to all people in Australia who are eligible for a benefit under the Medicare program.

If a practitioner bulk-bills for a service, the practitioner undertakes to accept the relevant Medicare benefit as full payment for the service. Additional charges for that service cannot be raised, except for when the patient is provided with a vaccine or vaccines from the practitioner's own supply held on the practitioner's premises.

Out-of-pocket costs

The MBS lists fees for certain health services (the schedule fee). If a health practitioner provides a services listed on the MBS, on a 'fee-for-service' basis to a Medicare eligible patient, the patient or practitioner can make a claim with Medicare. Medicare will then provide a rebate or benefit as a percentage of the schedule fee.

Health providers can choose how much they charge, so the fee charged might be higher than the schedule fee. The gap between the fee charged by the provider and the benefit paid by the Medicare is the 'out-of-pocket' cost incurred by the patient.

Out-of-pocket costs for services to private in-patients and for privately insured episodes of hospital substitute treatment are not included, since data on supplementary benefits paid by private health benefits organisations are not available through the Medicare claims system.

The out-of-pocket costs associated with services included in this report cannot be further subsidised under other insurance schemes.

For more detailed information on the MBS services and item types, see the [Australian Government Department of Health MBS online website](#).

Measure definitions

Table A.1 describes how the measures used in this report have been defined from the 2016 Survey of Health Care questionnaire. This is available from: <https://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/4343.02016?OpenDocument>.

People who did not respond to a question (generally a small proportion) are listed as having a response of 'not stated', and have been excluded when calculating totals and proportions.

Other responses that were not very informative, such as 'don't know', have also been excluded from calculations of proportions.

Table A.1: Definition of measures using Survey of Health Care, 2016

Measure description	Survey question	Possible responses	Denominator used
Needed GP but did not go	In the last 12 months, was there a time you felt you needed to see a GP but did not go?	<ul style="list-style-type: none"> • Yes • No 	All survey participants
Cost of the appointment was one of the reasons for not seeing a GP when needed one	What were <u>all</u> the reasons you did not see a GP?	<ul style="list-style-type: none"> • Cost • No GP nearby • I could not get an appointment when I needed one • Other 	Only participants who answered 'yes' to needing a GP but did not go
No GP nearby was one of the reasons for not seeing a GP when needed one			
Could not get an appointment when needed was one of the reasons for not seeing a GP when needed one			
Needed specialist but did not go	In the last 12 months, was there a time you needed to see a specialist doctor but did not go?	<ul style="list-style-type: none"> • Yes • No 	All survey participants
Cost of the appointment was one of the reasons for not seeing a specialist when needed one	What were <u>all</u> the reasons you did not see a specialist doctor?	<ul style="list-style-type: none"> • Cost of appointment • No specialist doctor nearby • I could not get an appointment when I needed one • GP didn't refer me • Other 	Only participants who answered 'yes' to needing a specialist but did not go
No specialist doctor nearby was one of the reasons for not seeing a specialist when needed one			
Could not get an appointment when needed was one of the reasons for not seeing a specialist when needed one			
No GP referral was one of the reasons for not seeing a specialist when needed one			

There are also some limitations in the questions used for this report to identify patients experiencing barriers to accessing health care (Table A.1).

For patients who responded 'no' to the survey questions about whether or not there was a time they felt they needed to see a GP or specialist but did not go (the majority), it is difficult to differentiate between those who responded 'no' because they *did not* feel a need to see a GP and those who responded 'no' because they *did* feel a need to see a GP, experienced a barrier, but did ultimately see a GP.

So, we therefore cannot say with absolute certainty that the subset of people who responded 'no' definitely did not experience barriers, as it might just be that they did not need to see a GP and could still potentially experience barriers when they do need health care.

Further, even if a participant responded 'no', it does not necessarily mean they did not experience any barriers. They could have delayed going because of a barrier, but ultimately accessed the service because they were able to overcome that barrier.

For patients who responded 'yes' to the survey questions about a time when they felt they needed to see a GP or specialist but did not go, they were given a list of responses to select from on the reasons why they did not see the GP or specialist (Table A.1).

Despite the question highlighting for participants to tick *all* responses that applied to them, it is possible that they only selected the main reason, or the reason with which they identified the most, for not attending a service.

Also, patients who selected 'other' as a reason were not provided with the opportunity to expand on this response. This limits the ability to identify and explore other reasons why patients could not access care even when they felt they needed to.

Methods

Logistic regression modelling

Logistic regression was used to identify the patient sociodemographic characteristics that are associated with patient-reported experiences of barriers to accessing health services. This was done using the responses to the following questions from the 2016 Survey of Health Care as the outcome variables:

Questions about visits to GPs

- In the last 12 months, was there a time you felt you needed to see a GP but did not go? (Yes/No)
- (If answered 'yes' to above question) What were all the reasons you did not see a GP? (Tick all that apply)
 - Cost of appointment (Yes/No)
 - No GP nearby (Yes/No)
 - I could not get an appointment when needed one (Yes/No)

Questions about visits to specialist doctors

- In the last 12 months, was there a time you felt you needed to see a specialist doctor but did not go? (Yes/No)
- (If answered 'yes' to above question) What were all the reasons you did not see a specialist doctor? (Tick all that apply)
 - Cost of appointment (Yes/No)
 - No specialist doctor nearby (Yes/No)
 - I could not get an appointment when I needed one (Yes/No)
 - GP didn't refer me (Yes/No)

The following sociodemographic characteristics collected from the survey were used as the explanatory variables (1 refers to the reference category):

- patient sex: 1 = male, 2 = female
- patient age, grouped into 10-year age groups: 1 = 75+, 2 = 65–74, 3 = 55–64, 4 = 45–54
- levels of health needs (see Box 1.2): 1 = low needs, 2 = moderate needs, 3 = high needs
- main language spoken: 1 = English, 2 = Other language
- whether or not had private health insurance: 1 = covered, 2 = not covered
- whether or not lived alone: 1 = lives alone, 2 = 2 or more people
- socioeconomic areas, grouped into fifths: 1 = lowest socioeconomic areas, 2 = second lowest socioeconomic areas, 3 = middle socioeconomic areas, 4 = second highest socioeconomic areas, 5 = highest socioeconomic areas
- remoteness areas: 1 = *Major cities*, 2 = *Inner regional*, 3 = *Outer regional*, 4 = *Remote and very remote*
- states and territories: 1 = New South Wales, 2 = Victoria, 3 = Queensland, 4 = South Australia, 5 = Western Australia, 6 = Tasmania, 7 = Northern Territory, 8 = Australian Capital Territory.

Model selection

Firstly, univariate logistic regression models were fitted for each outcome and explanatory variable, without adjusting for other variables. The Akaike information criterion (AIC) and the Bayesian Information Criterion (BIC), also known as the Schwarz information criterion, were used to determine which explanatory variable to include in the base model for each outcome. The explanatory variables that produced the models with the lowest AIC and BIC were selected as the first variable to be included in the base model.

To ensure that the AIC and BIC across different models could be compared, we created subsets of data where there were no missing data for any outcome or explanatory variable. In excluding patients with missing data, we verified that we still retained a high percentage of patients in the subsets that were used in building the models for comparison.

Once the first variable was selected for inclusion in the base model of the multivariate model, we used a forward selection approach to add 1 variable at a time. The explanatory variables that produced the model with the lowest AIC and BIC were selected to be the next variable included in the multivariate model. A backward elimination approach was then applied to the final multivariate model, where only variables with a p -value of less than 0.05 were retained.

Using the outcome variable *Needed to see a GP but did not go* as an example, the following steps outline our modelling procedure. We:

1. built univariate models of *Needed to see a GP but did not go* and each explanatory variable, resulting in 9 univariate models
2. compared the AIC and BIC of each univariate model and selected the explanatory variable that produced the model with the lowest AIC and BIC values as the first variable to add into the model. For the outcome *Needed to see a GP but did not go*, the variable *age group* produced the model with the lowest AIC and BIC. So, *age group* was the first variable to be added to the model
3. built models with *age group* and each of the remaining 8 explanatory variables, resulting in 8 new models
4. compared the AIC and BIC of these 8 new models and selected the explanatory variable that produced the model with the lowest AIC and BIC values as the second variable to add into the model. For the outcome *Needed to see a GP but did not go*, the variable *level of health needs* produced the model with the lowest AIC and BIC. So, *level of health needs* was the second variable to be added to the model
5. built models with *age group*, *level of health needs* and each of the remaining 7 explanatory variables, resulting in 7 new models
6. compared the AIC and BIC of these 7 new models and selected the explanatory variable that produced the model with the lowest AIC and BIC values as the third variable to add into the model. For the outcome *Needed to see a GP but did not go*, the variable *sex* produced the model with the lowest AIC and BIC. So, *sex* was the third variable to be added to the model
7. built models with *age group*, *level of health needs*, *sex* and each of the remaining 6 explanatory variables, resulting in 6 new models
8. compared the AIC and BIC of these 6 new models and selected the explanatory variable that produced the model with the lowest AIC and BIC values as the fourth variable to add into the model. For the outcome *Needed to see a GP but did not go*, the variable *whether or not had private*

health insurance produced the model with the lowest AIC and BIC. So, *whether or not had private health insurance* was the fourth variable to be added to the model

9. continued with this forward selection method of adding variables until either:

- the AIC and/or BIC values increased, in which case no more variables were subsequently added;
- all explanatory variables had been added into the model (without increasing the AIC and/or BIC)

10. once Step 9 had been completed, a backward elimination method was applied, where only the variables with *p*-values of less than 0.05 were retained in the model.

The final multivariate model from Step 10 was then fitted using the full cohort of people (excluding those with a missing value for the predictors in the final model). All models were performed using the survey weights and replicate weights in the SURVEYLOGISTIC procedure in SAS 9.4.

Two statistics for how well the logistic regression models fit are provided in the supplementary tables. These are the adjusted R-squared and c-statistic. The adjusted R-squared is a measure of the variation in the outcome variable that is explained by the explanatory variables. The c-statistic is a measure of the predictive accuracy of a logistic regression model.

Significance testing

z-score

A difference between proportions was considered statistically significant when the confidence intervals around the proportions did not overlap.

Where there was a small overlap between confidence intervals, a z-score for the difference in observed proportions was calculated using the following formula:

$$z = \frac{\text{proportion 1} - \text{proportion 2}}{\sqrt{SE(\text{proportion 1})^2 + SE(\text{proportion 2})^2}}$$

where *SE* is the standard error of the proportion.

If $-1.96 < z < 1.96$, the difference was not considered statistically significant at the 95% confidence level.

If $z \leq -1.96$ or $z \geq 1.96$, the difference was considered statistically significant at the 95% confidence level.

Confidence interval of difference between 2 means

A difference between means was considered statistically significant when the 95% confidence intervals around the means did not overlap.

When there was a small overlap between the confidence intervals of the 2 means, a confidence interval for the difference between the 2 means was calculated to determine whether the difference in means was significant or not. The confidence interval of the difference between the 2 means was calculated using the following steps:

Step 1:

Calculate the standard error of the difference between the 2 means using the formula:

$$SE(\text{mean 1} - \text{mean 2}) = \sqrt{SE(\text{mean 1})^2 + SE(\text{mean 2})^2}$$

Step 2:

Determine the critical value using the degrees of freedom (df), which was calculated using the following formula:

$$df = N + M - 2$$

where N is the unweighted sample size of the first group

M is the unweighted sample size of the second group.

If degrees of freedom ≥ 500 , then the t-value was approximately equal to 1.96.

If the degrees of freedom < 500 , the t-value that corresponded to a left tail probability of 97.5% was obtained from the t-distribution with the appropriate degrees of freedom.

Step 3:

The margin of error (MOE) is calculated using the formula:

$$MOE = \text{critical value} * SE(\text{mean 1} - \text{mean 2})$$

Step 4:

The lower bound (LCI) and upper bound (UCI) of the confidence interval of the difference between the 2 means is calculated using the formula:

$$LCI = \text{mean}_{\text{difference}} - MOE$$

$$UCI = \text{mean}_{\text{difference}} + MOE$$

where $\text{mean}_{\text{difference}}$ is the difference between the 2 means.

If the confidence interval of the difference between the 2 means included 0, the difference was not considered statistically significant.

If the confidence interval of the difference between the 2 means did not include 0, the difference was considered statistically significant.

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Abbreviations

ABS	Australian Bureau of Statistics
ACT	Australian Capital Territory
AIC	Akaike information criterion
AIHW	Australian Institute of Health and Welfare
BIC	Bayesian Information Criterion
GP	general practitioner
MBS	Medicare Benefits Schedule
PHN	Primary Health Network

Symbols

>	greater than
<	less than
=	equals
%	per cent

Glossary

access: Broadly in the context of health care, access to health services and professionals refers to the ability of patients to get timely, appropriate and quality health care to address their health-care needs.

adjusted associations: Adjusted associations take into account other variables or factors (see **confounding**) that can affect the association between the exposure and the outcome.

barrier: Barriers to health-care access refer to any factors, whether physical, cultural, societal or environmental, that can stop a patient from getting timely, appropriate and quality health-care service.

bulk-billing: Bulk-billing is when a health professional bills Medicare directly and accepts the Medicare benefit as full payment for their service. This means the patient does not have to pay anything out of their own pocket.

confidence interval: A range determined by variability in data, within which there is a specified (usually 95%) chance that the true value of a calculated parameter lies.

confounding: Confounding occurs when a third variable, called a confounder, distorts the real association between an exposure variable and an outcome variable. Confounding is a common occurrence in observational studies and can be controlled for by adding it into a logistic regression (or other type) model.

continuity of care: The relationship between a single practitioner and a patient that extends beyond specific episodes of illness or disease.

coordination of care: The deliberate organisation of patient care activities between 2 or more participants involved in a patient's care to help the appropriate delivery of health-care services.

exposure: An exposure can be broadly applied to any factor that could be associated with an outcome of interest.

long-term health condition: A health condition that is expected to last, or has lasted, 6 months or more, and has been diagnosed by a health professional. Respondents were specifically asked whether they had any of the following conditions:

- diabetes
- heart disease
- high blood pressure
- effects of a stroke
- cancer
- asthma
- chronic lung disease
- osteoporosis or low bone density
- arthritis
- mental health condition
- Alzheimer disease or dementia
- moderate or severe pain
- other long-term health condition/injury.

long travel time: Long travel time is one of many barriers to accessing health-care services. It is often experienced, in particular, by people living in rural and remote areas of Australia, who need to cover long distances to the nearest health service.

Medicare: Medicare provides free or subsidised access to many treatments and diagnostic tests provided by health professionals. These can include services provided GPs and medical specialists outside of hospitals (the scope of this report). For more information:

www.humanservices.gov.au/individuals/subjects/whats-covered-medicare/about-medicare.

odds: The odds of an event occurring is defined as the ratio of the probability that the event will occur over the probability that the event will not occur.

odds ratio: A measure of the odds of an event occurring given an exposure, or characteristic, compared with the odds of the event or outcome occurring without that exposure.

outcome: A broad term that can be used to define a disease, state of health or health-related event.

patient-billed service: Where a practitioner bills a patient for a service, that does not involve the patient assigning the benefit to the practitioner, even if the patient does not incur a co-payment.

Primary Health Network (PHN): Primary Health Networks are administrative bodies developed to improve primary health-care delivery and coordination for the population they serve, and, in particular, those who are at risk of poor health outcomes. PHNs work across the primary and secondary health-care landscape, including GPs, other primary care providers, hospitals and communities, to deliver the right care in the right place at the right time. There are 31 PHN geographical areas in Australia. For more information, see:

www1.health.gov.au/internet/main/publishing.nsf/Content/PHN-Background.

remoteness: Regions are divided up in each state and territory based on their relative accessibility to goods and services (such as GPs, hospitals, and specialist care) as measured by road distance. These regions are based on the Accessibility/Remoteness Index of Australia, and defined as remoteness areas by the Australian Statistical Geography Standard (2016). The 5 remoteness areas are *Major cities*, *Inner regional areas*, *Outer regional areas*, *Remote areas* and *Very remote areas*. *Remote* and *Very remote* areas have been combined for analyses in this report, due to smaller numbers of patients in these areas compared with other areas. This is described further at:

www.abs.gov.au/ausstats/abs@.nsf/mf/1270.0.55.005.

socioeconomic areas: A population grouping that indicates how 'well off' a group of people are. In this report, socioeconomic areas are mostly reported using the Socio-Economic Indexes for Areas, typically for 5 groups—from those living in the lowest socioeconomic area (worst off) to those living in the highest socioeconomic area (best off). The index value reflects the overall or average level of disadvantage of the population of an area; it does not show how individuals living in the same area differ from each other in their socioeconomic areas. This report uses the Index of Relative Socio-Economic Disadvantage 2016, available at: www.abs.gov.au/ausstats/abs@.nsf/mf/2033.0.55.001.

specialist: Refers to all doctors other than GPs and who require a referral from another doctor.

unadjusted associations: Unadjusted or crude associations are when confounders (see **confounding**) have not been controlled for.

usual GP: The general practitioner whom a person visits for most of their health care.

usual place of care: The usual place to which people go if they are sick or need advice about their health. Examples of usual place of care settings include a clinic with GPs only, a clinic with GPs and other health professionals, a community health centre, an Aboriginal Medical Service, or, for some patients, a hospital emergency department.

References

- ABS (Australian Bureau of Statistics) 2015. Disability, ageing and carers, Australia: summary of findings, 2015. ABS cat. no. 4430.0. Canberra: ABS. Viewed 11 July 2019, <<https://www.abs.gov.au/AUSSTATS/abs@.nsf/Latestproducts/4430.0Glossary12015?opendocument&tabname=Notes&prodno=4430.0&issue=2015&num=&view=>>>.
- ABS 2018. Patient experiences in Australia: summary of findings, 2017–18. ABS cat. no. 4839.0. Canberra: ABS.
- ABS 2019. Patient experiences in Australia: summary of findings, 2018–19. ABS cat. no. 4839.0. Canberra: ABS.
- AIHW (Australian Institute of Health and Welfare) 2018a. Australia's health 2018. Australia's health series no. 16. Cat. no. AUS 221. Canberra: AIHW.
- AIHW 2018b. Coordination of health care: experiences with GP care among patients aged 45 and over 2016. Cat. no. CHC 2. Canberra: AIHW.
- AIHW 2018c. Medicare Benefits Schedule GP and specialist attendances and expenditure in 2016–17. Cat. no. HPF 30. Canberra: AIHW.
- AIHW 2018d. Patients' out-of-pocket spending on Medicare services, 2016–17. Cat. no. HPF 35. Canberra: AIHW.
- AIHW 2019a. Coordination of health care: experiences of information sharing between providers for patients aged 45 and over 2016. Cat. no. CHC 3. Canberra: AIHW.
- AIHW 2019b. Rural & remote health. Cat. no. PHE 255. Canberra: AIHW. Viewed 20 September 2019, <<https://www.aihw.gov.au/reports/rural-health/rural-remote-health>>.
- Bywood P, Katterl R & Lunnay B 2011. Summary: disparities in primary health care utilisation—Who are the disadvantaged groups? How are they disadvantaged? What interventions work? Policy Issue Review. Adelaide: Primary Health Care Research and Information Service. Viewed 11 July 2019, <<https://dspace2.flinders.edu.au/xmlui/bitstream/handle/2328/26598/PIR%20June%2011%20Summary.pdf?sequence=2&isAllowed=y>>.
- Corscadden L, Levesque J, Lewis V, Breton M, Sutherland K, Weenink J et al. 2017. Barriers to accessing primary health care: comparing Australian experiences internationally. *Australian Journal of Primary Health* 23:223–8.
- Department of Health 2013. National Aboriginal and Torres Strait Islander Health Plan 2013–2023: priorities—health enablers. Canberra: Department of Health. Viewed 11 July 2019, <<https://www1.health.gov.au/internet/publications/publishing.nsf/Content/oatsih-healthplan-toc~priorities~health-enablers>>.
- Department of Health 2016. National Strategic Framework for Rural and Remote Health. Canberra: Department of Health. Viewed 6 November 2019, <<https://www1.health.gov.au/internet/main/publishing.nsf/Content/national-strategic-framework-rural-remote-health>>.
- Department of Health 2019a. Annual Medicare statistics. Canberra: Department of Health.
- Department of Health 2019b. Health Care Homes. Canberra: Department of Health. Viewed 9 December 2019, <<https://www1.health.gov.au/internet/main/publishing.nsf/Content/health-care-homes>>.

Department of Human Services 2019. Education guide—Claiming bulk bill incentive items. Canberra: Department of Human Services. Viewed 10 December 2019, <<https://www.humanservices.gov.au/organisations/health-professionals/topics/education-guide-claiming-bulk-bill-incentive-items/33011>>.

Evans D, Hsu J & Boerma T 2013. Universal health coverage and universal access. *Bulletin of the World Health Organization* 91:546–A.

Faulkner D & Law J 2015. The ‘unnecessary’ use of emergency departments by older people: findings from hospital data, hospital staff and older people. *Australia Health Review* 39: 544–51.

Gordon J, Valenti L, Bayran C & Miller G 2016. An analysis of general practice encounters by socioeconomic disadvantage. *Australian Family Physician* 45(10):702–5.

Gulliford M, Figueroa-Munoz J, Morgan M, Hughes D, Gibson B, Beech R et al. 2002. What does ‘access to health care’ mean? *Journal of Health Services and Research Policy* 7(3):186–8.

Harris M & Zwar N 2007. Care of patients with chronic disease: the challenge for general practice. *Medical Journal of Australia* 187(2):104–7.

Health Policy Analysis 2017. Evaluation of the Health Care Homes program: evaluation plan. Canberra: Department of Health.

Korda R, Banks E & Young A 2009. Is inequity undermining Australia’s ‘universal’ health care system? Socio-economic inequalities in the use of specialist medical and non-medical ambulatory health care. *Australian and New Zealand Journal of Public Health* 33:458–65.

NRHA (National Rural Health Alliance) 2013. How many doctors are there in rural Australia? Canberra: NHRA.

PHCAG (Primary Health Care Advisory Group) 2015. Better outcomes for people with chronic and complex health conditions: PHCAG final report. Canberra: Department of Health.

Productivity Commission 2015. Improving Australia’s health system: what we can do now. Canberra: Productivity Commission. Viewed 11 July 2019, <<https://www.pc.gov.au/news-media/pc-news/previous-editions/pc-news-may-2015/improving-australia-health-system/improving-australia-health-system-pc-news-201505.pdf>>.

Ryan J, Abrams MK, Doty MM, Shah T & Schneider EC 2016. How high-need patients experience health care in the United States: findings from the 2016 Commonwealth Fund Survey of High-need Patients. *Issue Brief (Commonwealth Fund)* 43:1–20.

Sørensen K, Van den Broucke S, Fullam J, Doyle G, Pelikan J, Slonska Z et al. 2012. Health literacy and public health systematic review and integration of definitions and models. *BMC Public Health* 12(1):80.

van Gaans D & Dent E 2018. Issues of accessibility to health services by older Australians: a review. *Public Health Reviews* 39(1):20.

Victorian Department of Health and Human Services 2018. Care coordination. Melbourne: Victorian Department of Health and Human Service. Viewed 17 January 2019, <<https://www2.health.vic.gov.au/hospitals-and-health-services/patient-care/rehabilitation-complex-care/health-independence-program/care-coordination>>.

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Related publications

Supplementary (online) tables of data relevant to this report are available at:


<https://www.aihw.gov.au/reports/primary-health-care/coordination-of-health-care-experiences-barriers/data>.

This report is the third in a series of reports using the Coordination of Health Care Study. The previous 2 reports can be found on the AIHW website:

- AIHW 2018. Healthy Communities: coordination of health care: experiences with GP care among patients aged 45 and over 2016. Cat. no. CHC 2. Canberra: AIHW
<https://www.aihw.gov.au/reports/primary-health-care/coordination-of-health-care-experiences-2016/contents/summary>
- AIHW 2019. Coordination of health care: experiences of information sharing between providers for patients aged 45 and over 2016. Cat. no. CHC 3. Canberra: AIHW
<https://www.aihw.gov.au/reports/primary-health-care/coordination-of-health-care-experiences-of-informa/contents/summary>.

Other publications relating to coordination of health care that might also be of interest are:

- ABS (Australian Bureau of Statistics) 2017. Survey of health care, Australia, 2016. ABS cat. no. 4343.0. Canberra: ABS.
- ABS 2018. Coordination of Health Care Study: use of health services and medicines, Australia, 2015–16. ABS cat. no. 4343.0.55.001. Canberra: ABS.
- AIHW 2018. Survey of Health Care: selected findings for rural and remote Australians. Cat. no. PHE 220. Canberra: AIHW.



Having timely access to health-care professionals when a person needs it is crucial to preventing, treating and managing health conditions. In 2016, 1 in 4 patients did not see a GP, and 1 in 8 patients did not see a specialist, even when they felt they needed to. This report looks at the associations between selected patient characteristics and self-reported experiences of barriers to accessing GPs and specialists.

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