

## Barriers to accessing primary health care: comparing Australian experiences internationally

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**Abstract.** Most highly developed economies have embarked on a process of primary health care (PHC) transformation. To provide evidence on how nations vary in terms of accessing PHC, the aim of this study is to describe the extent to which barriers to access were experienced by adults in Australia compared with other countries. Communities participating in an international research project on PHC access interventions were engaged to prioritise questions from the 2013 Commonwealth Fund International Health Policy Survey within a framework that conceptualises access across dimensions of approachability, acceptability, availability, affordability and appropriateness. Logistic regression models, with barriers to access as outcomes, found measures of availability to be a problematic dimension in Australia; 27% of adults experienced difficulties with out-of-hours access, which was higher than 5 of 10 comparator countries. Although less prevalent, affordability was also perceived as a substantial barrier; 16% of Australians said they had forgone health care due to cost in the previous year. After adjusting for age and health status, this barrier was more common in Australia than 7 of 10 countries. Findings of this integrated assessment of barriers to access offer insights for policymakers and researchers on Australia's international performance in this crucial PHC domain.

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### Introduction

Access to primary health care (PHC) is associated with cost-effectiveness and equity of health systems, and improved health outcomes, particularly among disadvantaged populations (Starfield 2005; Starfield *et al.* 2005; Fiscella 2011). Evidence of the importance of organisational factors and mechanisms contributing to the impact of PHC on effectiveness, equity and efficiency of health services continues to build (Starfield 2012).

Although access is often defined in terms of timeliness, distance and costs, it can be defined more broadly as the capacity of people to obtain appropriate services in response to need for care. Access represents a fit between patient needs and the services that meet those needs, or the dynamic interaction between supply (location, availability, or cost of services) and demand (the burden of disease and knowledge, attitudes and skills and self-care practices of the population) (Penchansky and Thomas 1981; Frenk 1992; Gulliford *et al.* 2002; Levesque *et al.* 2013). A further broadening of the concept suggests access begins

with the patients or consumers identifying needs, and ends when they have received care that contributes positively to their health and wellbeing (Penchansky and Thomas 1981). In other words, obtaining care that does not meet the needs of patients is not fully accessing care.

Building on this work, a recent conceptual framework of access posits five paired dimensions of access to better understand attributes of services and abilities of people as determinants of access (Levesque *et al.* 2013). This framework identifies key characteristics of services contributing to access as: approachability, acceptability, availability and accommodation, affordability, and appropriateness. It further posits five corresponding abilities of people: ability to perceive, ability to seek, ability to reach, ability to pay and ability to engage. Barriers to access can happen because of problems with attributes of services or abilities of people. There is a growing body of research using this framework to assess access to primary care more broadly (Fradgley *et al.* 2015; Ward *et al.* 2015).

**What is known about the topic?**

- Australia is known for its relatively good access to primary care providers despite high out-of-pocket costs.

**What does this paper add?**

- This study provides a first systematic quantitative assessment of access to primary health care across various types of barriers, and places Australian results in an international context.

Access to PHC is recognised as an important issue internationally. Regular reports compare measures of access as part of overall healthcare performance among different countries (Bureau of Health Information 2014; Davis *et al.* 2014; OECD 2015). In a recent comparison, the United Kingdom was ranked first out of 11 countries with regards to economic access, having the fewest cost-related barriers (Davis *et al.* 2014). Switzerland ranked first in timeliness of care. Australia ranked sixth in timeliness and ninth out of eleven in cost-related barriers, with the US and Canada ranking the bottom two on both.

Although variation in time- and cost-related aspects of access to care have been assessed for Australia within an international context, no known studies have looked simultaneously at the five proposed dimensions of access, with a focus on PHC. We aimed to compare Australia’s performance in access to PHC through the lens of a multidimensional conceptual framework with the performance of 10 other nations using the 2013 Commonwealth Fund International Health Policy Survey.

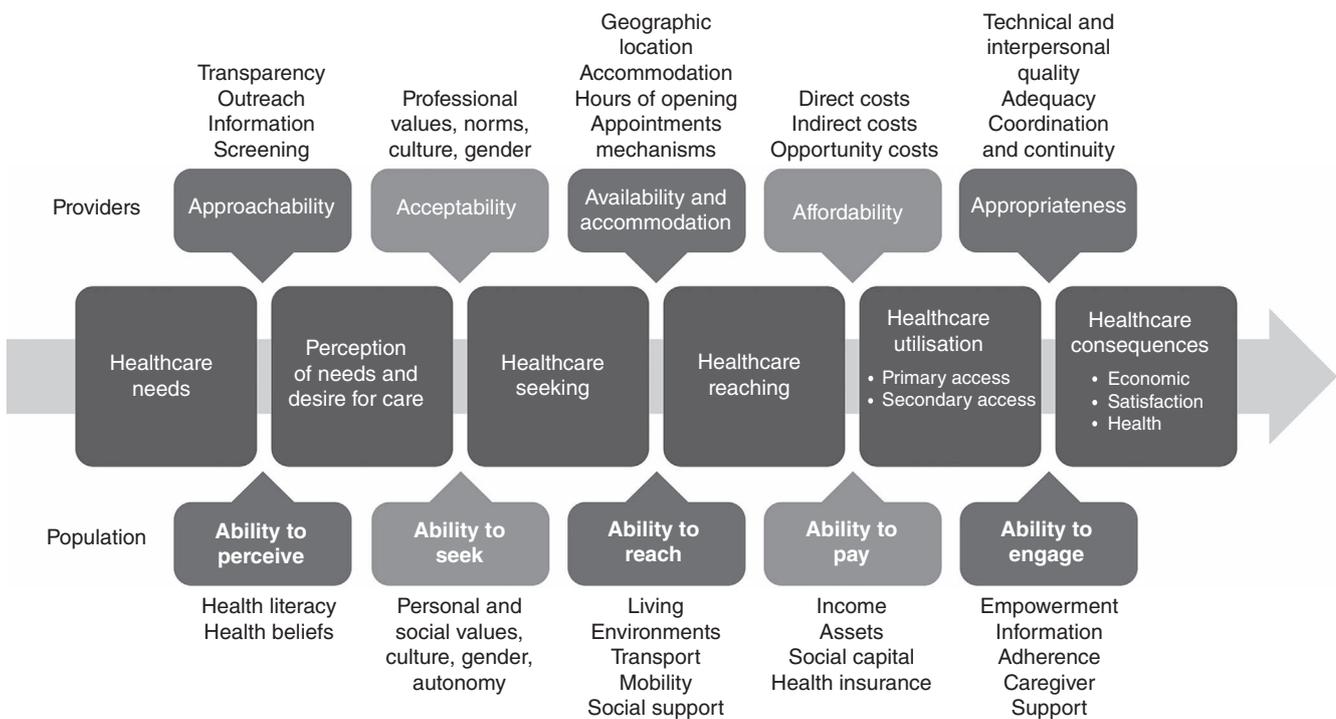
Having a more comprehensive model of access as the framework for comparisons will provide new insights into the relative strengths and weakness of PHC in different countries.

**Methods**

The secondary data analyses reported here were conducted as part of The Innovative Models Promoting Access to Care Transformation (IMPACT) research program funded by the Australian Primary Health Care Research Institute (APHCRI) and the Canadian Institutes for Health Research (CIHR). The IMPACT research team works with consumers, policymakers and providers through ‘local innovation partnerships (LIPS)’ in Australia and Canada to identify organisational innovations designed to improve access to appropriate PHC for vulnerable populations, and establish the effectiveness and scalability of the most promising innovations.

The 2013 Commonwealth Fund International Health Policy (IHP) Survey was conducted with adults aged 18 years and over in 11 countries: Australia, Canada, Germany, France, Netherlands, New Zealand, Norway, Sweden, Switzerland, the United Kingdom and the United States. Survey weights, provided by the contractor, were used in the analysis so that the estimates were representative of the age, sex, regional and education profile of adults in each country, as in other publications on this data source (Schoen *et al.* 2013). In Australia, 2200 responses were collected (Appendix 1). The analysis was generated using SAS/STAT software, ver. 9.3 (SAS Institute Inc., Cary, NC, USA).

Ten researchers reviewed 80 survey questions and identified 59 questions as being related to at least one of the five dimensions of access and specific to primary health care (Fig. 1). The



**Fig. 1.** Access to health care: a conceptual framework. Adapted from Levesque *et al.* (2013).

**Table 1. Percentage of adults experiencing barriers, by access measure and country, 2013**

Bold formatting highlights country values above the upper quartile, or among the top 25% of country values. Underline formatting indicates country values among the lowest 25% of country value. IQR, interquartile range

	Australia	Canada	France	Germany	Netherlands	New Zealand	Norway	Sweden	Switzerland	UK	USA	Average	IQR	Lower quartile	Upper quartile
<b>Approachability</b>															
1. Is there one GP you usually go to for your medical care? (No)	11	15	<u>3</u>	6	10	8	<u>5</u>	<b>45</b>	<u>3</u>	<b>15</b>	<b>23</b>	13	9	5.4	14.8
2. Is there a GP or one doctor's group, health centre, or clinic you usually go to for most of your care? (No)	5	7	<u>2</u>	6	<u>2</u>	3	<u>2</u>	<b>8</b>	3	<b>9</b>	<b>13</b>	6	5	2.5	7.6
<b>Availability</b>															
3. How easy or difficult is it to get medical care in the evenings, on weekends, or holidays without going to emergency? (Very difficult)	27	<b>32</b>	28	25	<u>13</u>	18	19	<b>37</b>	<u>18</u>	<u>8</u>	<b>35</b>	24	12	17.9	30.0
4. When you call your regular care provider with a medical question during regular practice hours, how often do you get an answer that same day? (Sometimes, rarely or never)	21	<b>33</b>	<b>37</b>	<u>10</u>	<u>16</u>	20	22	<u>16</u>	18	25	<b>27</b>	22	9	16.8	26.0
<b>Affordability</b>															
5. During the past 12 months, was there a time when you: had a medical problem but did not visit a doctor because of the cost? (Yes)	10	5	9	8	<b>12</b>	<b>16</b>	<u>5</u>	<u>3</u>	7	<u>2</u>	<b>28</b>	9	6	5.2	10.8
6. Skipped a recommended medical test, treatment, or follow up because of the cost? (Yes)	10	6	9	5	<b>16</b>	<b>12</b>	<u>5</u>	<u>2</u>	7	<u>2</u>	<b>22</b>	9	6	5.2	10.9
7. Skipped treatment, consultation or prescription due to cost (derived variable) (Yes)	16	13	18	15	<b>22</b>	<b>21</b>	<u>10</u>	<u>6</u>	13	4	<b>37</b>	16	8	11.5	19.6
<b>Appropriateness</b>															
8. When you need care or treatment, how often does your doctor know important information about your medical history? (Sometimes, rarely or never)	15	16	<b>21</b>	<u>8</u>	<u>7</u>	11	17	<b>26</b>	17	<u>9</u>	16	15	7	10.2	17.0
9. After you left the hospital, did the place where you usually get medical care seem informed and up-to-date about the care you received in the hospital? (No)	22	<u>17</u>	21	20	<u>15</u>	17	<b>23</b>	<b>29</b>	<b>25</b>	<u>13</u>	18	20	5	16.9	22.3
10. Thinking about the past 2 years, when receiving care, was there ever a time when you received conflicting information from healthcare professionals? (Yes)	16	16	<u>14</u>	<b>19</b>	<b>20</b>	17	18	17	<u>13</u>	<u>7</u>	<b>20</b>	16	4	15.0	18.6
11. How often does your regular doctor or practice help coordinate the care you receive from other doctors and places? (sometimes, rarely or never)	31	<u>22</u>	<b>43</b>	29	27	<u>22</u>	<b>34</b>	<b>42</b>	31	29	<u>26</u>	30	6	26.2	32.2
Number of times country was above the upper quartile value	0	2	3	1	4	3	2	6	1	2	8				
Number of times country was below the lower quartile value	0	2	3	2	5	1	5	4	3	7	1				

questions identified focused primarily on characteristics of PHC services that people had experienced, or had tried to gain access to. There were no questions regarding the ability of people to perceive, seek, reach, afford or engage in PHC. Next, members

from each LIP prioritised questions in relation to local needs. Finally, a revised shortlist of questions was identified and presented to LIP management teams using webinar-based deliberation, which included polling to enable stakeholders to

**Table 2. Adjusted odds ratios of experiencing each barrier relative to Australian adults, by access measure and country, 2013**

Bold formatting indicates that, compared to Australia, country residents are more likely to experience barriers ( $P < 0.05$ ). Underline formatting indicates that, compared to Australia, country residents are less likely to experience barriers ( $P < 0.05$ )

	Australia	Canada	France	Germany	Netherlands	New Zealand	Norway	Sweden	Switzerland	UK	USA	Number of countries more likely than Australia to experience barrier	Number of countries less likely than Australia to experience barrier
<b>Approachability</b>													
1. No regular doctor	1.0	<b>1.4</b>	<u>0.3</u>	<u>0.6</u>	1.0	0.7	<u>0.5</u>	<b>8.0</b>	<u>0.3</u>	<b>1.5</b>	<b>2.6</b>	4	4
2. No regular doctor or place of care	1.0	<b>1.7</b>	<u>0.5</u>	1.5	<u>0.4</u>	0.7	<u>0.5</u>	<b>2.1</b>	0.7	<b>2.3</b>	<b>3.5</b>	4	3
<b>Availability</b>													
3. Very difficult to get medical care in out-of-hours	1.0	<b>1.3</b>	1.0	0.8	<u>0.4</u>	<u>0.7</u>	<u>0.6</u>	<b>1.6</b>	<u>0.6</u>	<u>0.3</u>	<b>1.4</b>	3	5
4. No same-day answer to a call to GP	1.0	<b>1.9</b>	<b>2.0</b>	<u>0.4</u>	<u>0.7</u>	1.0	1.0	<u>0.7</u>	0.8	1.3	<b>1.4</b>	3	3
<b>Affordability</b>													
5. Skipped a test, treatment or follow up due to cost	1.0	<u>0.5</u>	<u>0.7</u>	<u>0.4</u>	<b>1.8</b>	1.2	<u>0.4</u>	<u>0.2</u>	<u>0.7</u>	<u>0.2</u>	<b>2.2</b>	2	7
6. Did not consult a doctor due to cost	1.0	<u>0.5</u>	<u>0.7</u>	<u>0.6</u>	1.3	<b>2.0</b>	<u>0.4</u>	<u>0.3</u>	<u>0.7</u>	<u>0.2</u>	<b>3.3</b>	2	7
7. Skipped consultation, test or medication due to cost	1.0	<u>0.7</u>	0.9	<u>0.7</u>	<b>1.4</b>	<b>1.4</b>	<u>0.5</u>	<u>0.3</u>	<u>0.7</u>	<u>0.2</u>	<b>2.8</b>	3	6
<b>Appropriateness</b>													
8. GP does not always know medical history	1.0	1.1	1.3	<u>0.5</u>	<u>0.5</u>	<u>0.7</u>	1.1	<b>2.0</b>	1.1	<u>0.6</u>	1.0	1	4
9. Place of care not up-to-date after hospitalisation	1.0	0.7	0.9	0.9	0.7	0.8	1.0	1.5	1.3	0.6	0.7	0	0
10. Conflicting information from different doctors	1.0	0.9	<u>0.7</u>	1.0	<b>1.3</b>	1.1	1.0	1.0	<u>0.7</u>	<u>0.4</u>	1.1	1	4
11. Practice does not always coordinate care	1.0	<u>0.7</u>	<b>1.6</b>	0.9	0.8	<u>0.6</u>	1.1	<b>1.6</b>	1.0	0.9	<u>0.8</u>	2	3
Number of times country was more likely than Australia to experience barriers.	4	2	0	3	2	0	5	0	2	7			
Number of times country was less likely than Australia to experience barriers.	4	5	6	4	3	6	0	0	6	1			

vote on questions to be the focus of the analysis. This study is based on 11 questions selected through the prioritising process (Table 1).

Responses to each question were dichotomised to focus on barriers to access. For each access barrier, the prevalence of reported barriers and the interquartile range (IQR) of country values were calculated, as well as the number of times each country was above or below the IQR. Statistical comparisons were made by using logistic regression (SURVEYLOGISTIC procedure), to compare each country with Australia with regards to the likelihood of reporting each access barrier. Analyses were performed adjusting for age and self-rated health status.

## Results

Table 1 shows the percentage of adults who said they experienced barriers to accessing PHC across countries. Although the percentage of Australian adults reporting barriers was in the mid-range across countries, there were some barriers affecting a high proportion of Australians. Three in ten Australian adults (31%) said their usual place of care did not regularly help to coordinate or arrange care they received from other doctors and places, and

nearly three in ten adults (27%) said it was very difficult to get medical care after-hours. Across countries and access domains, barriers related to availability were also reported frequently (22–24%) and had the widest range (IQR 9–12%).

The UK stood out as having the fewest barriers overall – it was among the lowest 25% of countries on 7 out of 11 questions. In contrast, the US was among the highest 25% of countries on eight questions. Australia was the only country where the frequency of reported barriers was always among the middle 50% of countries, or never outside the IQR.

Barriers to accessing PHC reported in each country were compared with those reported by Australian adults using logistic regression models (Table 2). Where the adjusted odds ratio (AOR) was greater than 1 (bold), the barriers were more likely to be reported in the indicated country compared to Australia. In contrast, where the AOR was less than 1 (underline), the barrier was significantly less likely experienced in the indicated country.

In terms of the approachability dimension, adults in Canada, Sweden, the US and the UK were more likely than Australians to say they had no affiliation with a regular care provider after accounting for age and general health. Similarly, compared to

Australians, adults in Canada and the US were more likely to report barriers in experiences of availability of PHC. In contrast, barriers in availability measures were less likely experienced in Norway than in Australia. In terms of affordability, adults in 7 of 10 comparator countries were less likely to experience cost-related barriers than Australians. Comparison of the four questions relating to appropriateness reflected mixed results, with experiences in Australia not substantially different from that of other countries.

Overall, compared to Australia, adults in the US and Sweden were more likely to experience barriers to PHC on 7 and 5 of the 11 measures respectively. In contrast, adults in Switzerland, Germany and the UK were less likely than Australians to experience barriers on 6 of 11 measures.

## Discussion

Barriers to access to appropriate care can occur at any point in time from before someone seeks care to when they are receiving it. Through the lens of the access framework, there were certain dimensions of access to PHC where barriers experienced in Australia stood out from other countries.

Consistent with research based on the Commonwealth Fund International Health Policy survey in 2010 (Schoen *et al.* 2010), affordability was an area where Australia had pronounced barriers relative to other countries. This may be a reflection of the different levels of government funding applicable to PHC services and the increasing co-payments that exist. However, cost barriers may have decreased for Australians, with the percentage of adults who said they skipped a GP consultation, test, or medication due to cost, decreasing from 22% in 2010 (Schoen *et al.* 2010) to 16% of adults in 2013. Further, in terms of availability, difficulties with after-hours access were more prevalent in Australia than half of the comparator countries after adjusting for age and health. Although 27% of adults said it was very difficult accessing care after-hours, this also marked an improvement for Australia from 2010 (Bureau of Health Information 2010), and may indicate the effect of policy and service delivery developments (e.g. Commonwealth Practice Incentive Payments, national after-hours bulk-billing service). The effect of these initiatives may be observed in future waves of the Commonwealth Fund International Health Policy Surveys.

The next step in this research is to explore reasons for the differences in access dimensions that are revealed by this analysis. For example, it is often assumed that PHC systems that feature enrolled populations will have fewer problems of access, particularly those described as approachability-related barriers. With this in mind, it was particularly interesting that Australian adults had fewer barriers in approachability than those in the UK, where registration of patients is a feature (Mossialos *et al.* 2015). In contrast, France, Netherlands and Norway also have voluntary registration or rostered patient policies, and these countries performed similarly to Australia, and better than the UK. Of note, Switzerland, Norway and Germany performed either better or no differently from Australia on every measure of access considered. Further work and policy analysis will be undertaken to explore the characteristics and features of the PHC policies and systems in these countries that may explain why adults in these countries are less likely to experience barriers to PHC access. Interviews

with key stakeholders including decision-makers, health services researchers and consumer advocates will also contribute to a better understanding of the way the data reflect policies and systems in place in a range of countries.

Additional work to develop measures to better capture the complexity of access, including perspectives of care providers, abilities of people to access care, and more local data, would provide additional evidence for action at a local level.

## Limitations

The Commonwealth Fund International Health Policy Surveys have been conducted since 1998, with questions that have been tested in many settings over several cycles. However, there are methodological issues that affect international comparison. In this survey, response rates ranged from 11% in Norway and Germany to 33% in Switzerland. Varying response rates may introduce bias for some countries, and some population groups may not be fully represented. The interpretation of findings are limited in that the questions in the survey do not completely cover the conceptual model of access nor do they provide a comprehensive picture of PHC.

## Conclusion

This was the first time international survey data has been analysed using a comprehensive conceptualisation of access. By using the 2013 Commonwealth Fund International Health Policy Survey of Adults, questions were mapped to a conceptual framework across the dimensions of approachability, acceptability, availability and accommodation, affordability and appropriateness. Prevalence of associated barriers in Australia and 10 other countries was compared. Although the survey questions did not capture all of the dimensions of the access model, results provide new insights and encourage further exploration using this framework. Overall, affordability continues to be a key factor affecting access to PHC in Australia compared with other countries. Through consideration of contextual factors in future research, these findings can be used to inform policy and practice responses to key PHC access barriers that are experienced in Australia.

## Conflicts of interest

The authors declare that they have no conflicts of interest.

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**Appendix 1. Commonwealth Fund International Health Policy Survey: number of respondents and response rates by country, 2013**

	Total	Response rate (%)
Australia	2200	30
Canada	5412	24
France	1406	32
Germany	1125	11
Netherlands	1000	23
New Zealand	1000	30
Norway	1000	11
Sweden	2400	29
Switzerland	1500	33
UK	1000	20
USA	2002	22