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Abstract

Objective. To evaluate factors associated with the availability of same or next day appointments and after-hours access reported by Australian general practitioners (GPs). **Methods.** Secondary analysis of a survey of primary care practitioners conducted by the Commonwealth Fund in 2009 in 11 countries. Analysis of factors likely to be associated with reported availability of same or next day appointments and after-hours access. **Findings.** Of 1016 Australian GPs, 78.8% reported that most patients in their practice had access to an appointment on the same or next day and 50% that their practice had arrangements for after-hours access. Access to same or next day care was better in practices where practitioners reported larger numbers of patients seen per GP per week and reviewed their performance against annual targets, but worse in rural areas and practices routinely reviewing outcomes data. Arrangements for after-hours care were more common among GPs who were planning to retire in the next 5 years; worked in practices with high electronic functioning information systems; and received and reviewed clinical outcome data and incentives for performance. **Conclusions.** Improving after-hours access requires a comprehensive approach which includes incentives, improvements to information management and organised systems of care with review of data on clinical outcomes. **What is known about the topic?** Access to general practice is an important priority for the health system and the subject of several reforms and initiatives over the past decade in Australia. Access to same or next day appointments and after-hours has been an increasing concern related to workforce availability, and limited access to general practice is one factor influencing the demand on hospitals, especially their emergency departments. **What does this paper add?** This paper reports on secondary analysis of a survey of over 1000 general practitioners in Australia. Responses to questions about access to same or next day appointments or after-hours arrangements were analysed for associations with practitioner and practice characteristics and their processes and systems of care. Access to same day appointments is particularly challenging in rural general practice but is more likely to be reported by GPs working in larger practices. Incentives, quality improvement and better information management may be important strategies to improve after-hours access. **What are the implications for practitioners?** Strategies to improve access to appointments and to after-hours care need to be considered as part of a comprehensive approach which includes financial incentives, strengthening information systems and quality improvement activities. 2012 AHHA.

Keywords

appointments; views, australian, access, general, same, practitioners, day, next, day, after-hours

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Access to same day, next day and after-hours appointments: the views of Australian general practitioners

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Methods. Secondary analysis of a survey of primary care practitioners conducted by the Commonwealth Fund in 2009 in 11 countries. Analysis of factors likely to be associated with reported availability of same or next day appointments and after-hours access.

Findings. Of 1016 Australian GPs, 78.8% reported that most patients in their practice had access to an appointment on the same or next day and 50% that their practice had arrangements for after-hours access. Access to same or next day care was better in practices where practitioners reported larger numbers of patients seen per GP per week and reviewed their performance against annual targets, but worse in rural areas and practices routinely reviewing outcomes data. Arrangements for after-hours care were more common among GPs who were planning to retire in the next 5 years; worked in practices with high electronic functioning information systems; and received and reviewed clinical outcome data and incentives for performance.

Conclusions. Improving after-hours access requires a comprehensive approach which includes incentives, improvements to information management and organised systems of care with review of data on clinical outcomes.

What is known about the topic? Access to general practice is an important priority for the health system and the subject of several reforms and initiatives over the past decade in Australia. Access to same or next day appointments and after-hours has been an increasing concern related to workforce availability, and limited access to general practice is one factor influencing the demand on hospitals, especially their emergency departments.

What does this paper add? This paper reports on secondary analysis of a survey of over 1000 general practitioners in Australia. Responses to questions about access to same or next day appointments or after-hours arrangements were analysed for associations with practitioner and practice characteristics and their processes and systems of care. Access to same day appointments is particularly challenging in rural general practice but is more likely to be reported by GPs working in larger practices. Incentives, quality improvement and better information management may be important strategies to improve after-hours access.

What are the implications for practitioners? Strategies to improve access to appointments and to after-hours care need to be considered as part of a comprehensive approach which includes financial incentives, strengthening information systems and quality improvement activities.

Additional keywords: general practice, information technology, multidisciplinary, rural, workload.

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Introduction

In Australia, general practitioners (GPs) are the first point of contact and coordinate access to much of the rest of the health system. It is therefore essential that general practice is easy to access, and this has been a focus in recent health reforms.^{1,2} Although there is no evidence that low socioeconomic groups use general practice less,³ inequities in access relative to need have been reported in rural and remote areas and for some population groups (such as indigenous or refugee populations).⁴⁻⁶ There has also been inequities in access to longer consultations and psychological services.^{7,8} Improving access to primary health-care has been demonstrated to help overcome some of the adverse effects of income inequality on health.⁹

Workforce shortages and the maldistribution of the medical workforce in general practice have led to increasing concern about waiting times for appointments with GPs, especially in rural areas.¹⁰ There are also increasing problems with access to general practice after-hours, reflecting several factors including changes to the work hours and work practices of GPs and increasing concern about security of practitioners working after-hours.⁴ Out of hours work has been described as 'the most important stress' in GPs' professional lives.¹¹

The resulting pressure on hospital emergency departments has led to a range of government initiatives to improve access to general practice care after-hours. Accredited general practices have been funded to provide after-hours care as part of the Practice Incentives Program (PIP). In 2008–09, the average PIP payment was \$19 700 per full time equivalent (FTE) GP, with incentives for after-hours care comprising 19% of this.¹² This was slated to be cut as it is due to be incorporated and funded as part of the new primary care organisations (Medicare Locals).¹³ However, the PIP funding has been extended until July 2013 following an outcry from the profession. Waiting times and after-hours access are also important standards for general practice accreditation¹⁴ and were an early target for improvement by the National Primary Care Collaboratives.¹⁵

In a systematic review of the literature, we found only limited research on factors associated with access to general practice in Australia.¹⁶ This study examined access to same or next day appointments in general practice and to after-hours general practice care reported by Australian GPs in a large international survey of primary care practitioners.¹⁷ The findings were compared with the performance in other countries and related to practice and practitioner characteristics and the processes and systems of care used in their practices.

Methods

Data source

The data for this secondary analysis came from the 2009 International Survey of General Practitioners, coordinated by the Commonwealth Fund. The survey was conducted in 11 countries: Australia, Canada, France, Germany, Italy, The Netherlands, New Zealand, Norway, Sweden, UK and USA. The methodology has been published previously.¹⁸ In Australia, 2025 GPs were randomly drawn from a representative national list of GPs stratified by region (cities, inner regional, outer regional and remote/very remote) for invitation by mail.

Questionnaire

The survey included two questions about how doctors perceived accessibility of their practice:

- (1) What proportion of your patients who request a same or next day appointment can get one?
- (2) Does your practice have an arrangement where patients can see a doctor or nurse if needed when the practice is closed (after-hours) without going to the hospital emergency room or department?

Information on practitioner and practice characteristics was collected including:-

- (1) Staffing: number of doctors (Q28) (less than 5; 5 or more) and non-medical staff (Q29) (less than or equal to 5; more than 5);
- (2) Practice location: city or suburban; rural or small towns (Q35);
- (3) Hours in practice per week: (under 40; 40 or more) (Q30);
- (4) Number of patients seen per week: (under 120; 120 or more) (Q31);
- (5) Percentage of work time facing patient: (under 70; 70 or more) (Q32);
- (6) Age: (under 50; 50 or more) (Q36); and
- (7) Plans to retire: Yes, within 5 years; No (Q36).

Participants were also asked whether their practice:

- (1) Used non-doctor staff in calls to follow up patients between visits and education for self-management (Q11);
- (2) Had adequate clinical information system functionality (composite score from several questions addressing computerisation of records, reminders, practice systems, and communication with patients);
- (3) Used patient reminders for preventive or follow-up care (Q21);
- (4) Routinely received and reviewed data on health outcomes or patient experience or satisfaction (Q23);
- (5) Reviewed clinical performance against targets at least annually (Q24);
- (6) Received information about how the clinical performance of practice compares with other practices (Q25);
- (7) Received payment incentives to improve quality, productivity and care coordination (Q26).

Data collection

The survey was conducted in Australia from 17 February to 29 May 2009. Potential respondents were recruited and screened by phone (using a CATI system), including a check that they were general practitioners spending at least 50% of their time in direct patient care. They were then asked to complete a survey and return it by mail. An incentive of \$50 was offered for participating, with similar incentives being used in other countries to improve response rates. Reminder telephone calls to non-responders were made ~2 weeks after a period of non-response. In total, 1016 physicians completed the survey in Australia.

Data analysis

We hypothesised that increasing practitioner age, imminent plans for retirement, high workloads and practice in a rural location

would reduce access. On the other hand, we hypothesised that increased information system functionality, non-medical staffing and roles in patient care, reminders, incentives and review of clinical performance and outcome data would improve access.

All data analyses were performed using SPSS (Version 15 SPSS, Chicago, IL, USA). Records with missing values for either outcome or any practice or practitioner characteristics were omitted from the analysis. Initial univariate analysis (using Chi-square tests for significance) was performed and those items that were significant were included in the multivariate logistic regression analysis, which was undertaken in order to adjust for interaction between the variables.

Ethics

The University of New South Wales Human Research Ethics Advisory Panel determined that ethics approval was not required for this secondary analysis of de-identified data.

Results

In all countries, 31 287 primary care doctors were invited to participate and 10 470 (33%) completed the survey. There were 1016 general practitioner responses in Australia, a response rate of 52%. There was less than 1% missing responses to questions in the Australian dataset.

Description of access in Australia

Of the Australian GP respondents, 78.8% reported that almost all (>80%) or most (60–80%) patients in their practice had access to an appointment on the same or next day. This put Australia equal seventh (with the US) of the 11 countries, but above the mean (72.0%). Fifty per cent of the Australian GPs reported that their practices had an arrangement whereby patients could see a doctor or nurse if needed when the practice was closed (after-hours),

without going to the hospital emergency department. This placed Australia eighth and was below the international mean of 59% (Fig. 1).

Univariate analysis

Access to same or next day appointments

In the Australian sample, GPs with higher patient loads or who worked in urban areas were more likely to report that most (>80%) of their patients could get access to a same or next day appointment (Table 1). Reported access was higher in practices where

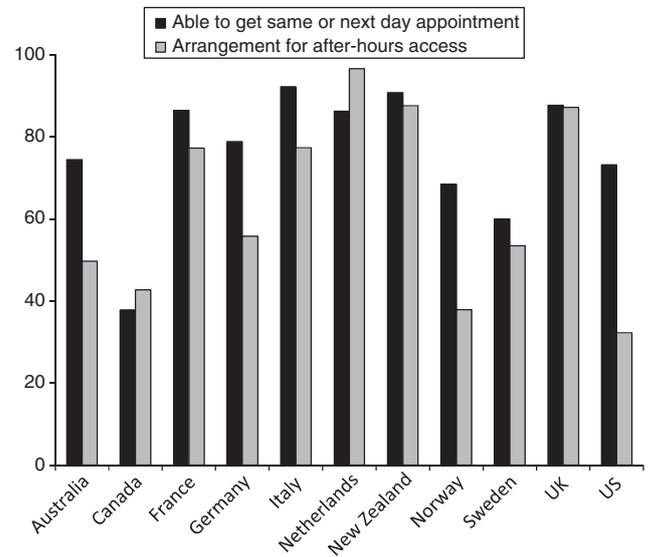


Fig. 1. International comparison of frequency of GP reported access to same day or next day appointments and arrangements for after-hours access 2009.

Table 1. Association between GPs reporting most patients are able to access same or next day appointments and arrangements for after-hours access with practice and practitioner factors

Variable	Most patients able to access same or next day appointment			Arrangement for after-hours access		
	N	%	Significance	N	%	Significance
Practice characteristics						
Number FTE GPs <5	474	79.5	NS	296	49.7	NS
Number FTE GPs ≥5	327	77.7		214	51.3	
Number of FTE non-GP ≤ 5	624	78.1	NS	395	49.6	NS
Number of FTE non-GP >5	177	81.2		115	53.0	
Practice not in rural area or small town	674	83.1	$X^2 = 44.5,$ $P < 0.001$	390	48.3	$X^2 = 6.21,$ $P = 0.01$
Practice in rural area or small town	126	61.5		119	58.3	
Practitioner characteristics						
Age <50 yrs	415	81.2	NS	261	51.2	NS
Age ≥50 yrs	385	76.2		248	49.3	
Female	507	80.3	NS	323	51.4	NS
Male	293	76.3		186	48.3	
Patients/week <120	215	70.5	$X^2 = 17.4,$ $P < 0.001$	170	55.6	$X^2 = 4.55,$ $P < 0.05$
Patients/week ≥120	585	82.4		340	48.0	
No plans to retire in next 5 years from practice	733	79.0	NS	449	48.6	$X^2 = 11.6,$ $P = 0.001$
Plans to retire in next 5 years from practice	67	76.1		60	68.2	

non-doctor staff routinely called to check between visits and provided patient education for self management, where computer generated reminders were sent to patients for preventive or follow-up care, surveys of patients' experience of care were conducted, or the GPs annually reviewed their performance against targets. However, routinely receiving and reviewing data on clinical outcomes was negatively associated with access to appointments on the same or next day (Table 2).

Access to after-hours care

Arrangements for after-hours access were more frequently reported by GPs with a lower patient load, who planned to retire from their practice in the next 5 years, or worked in rural areas or small towns (Table 1). It was also more likely in practices where the practice received and reviewed data on clinical outcomes, or received information comparing clinical performance with other practices. Practices where non-doctor staff routinely called patients to check up between visits or provided patient education for self management, or which received incentives for performance were less likely to have arrangements for after-hours access (Table 2).

Logistic regression

Logistic regression modelling was performed including as covariates those variables that were significantly associated with the outcome in the univariate analysis of the Australian data.

Access to same or next day appointments

GPs from practices with high daily patient loads or who reviewed their clinical performance against annual targets were more likely to report access to same or next day appointments for most patients. GPs whose practices were in rural locations or small towns or who routinely received and reviewed clinical outcome data were less likely to report access to same or next day appointments for most patients (Table 3).

Access to after-hours care

GPs who planned retirement in the next 5 years, whose practices had higher electronic functionality, who routinely received and reviewed data on clinical outcomes or who received incentives for performance were more likely to have practice arrangements for after-hours access. GPs in practices where non-doctor staff routinely called patients to check

Table 2. Association between GPs reporting most patients are able to access same or next day appointments and arrangements for after-hours access and practice systems and processes

Variable	Most patients able to access same or next day appointments			Arrangements for after-hours access		
	N	%	Significance	N	%	Significance
Electronic functioning low	67	70.5	NS	43	44.8	NS
Electronic functioning high	733	79.7		467	50.9	
Non doctor health professionals						
Do not call patients to check between visits routinely	335	74.6	$\chi^2 = 7.76$, $P = 0.005$	285	63.9	$\chi^2 = 57.6$, $P < 0.001$
Call patients to check between visits routinely	465	82.0		225	39.7	
Do not educate patient about self management routinely	291	74.6	$\chi^2 = 6.3$, $P = 0.01$	170	63.2	$\chi^2 = 19.7$, $P < 0.001$
Educate patient about self management routinely	509	81.4		279	44.7	
Practice does not use computer to generate reminders for regular preventive or follow-up care	131	70.6	$\chi^2 = 9.7$, $P < 0.01$	104	56.2	NS
Practice routinely uses computer to generate reminders for regular preventive or follow-up care	669	80.7		405	49.0	
Practice does not routinely receive and review data on clinical outcomes	618	80.5	$\chi^2 = 5.0$, $P = 0.04$	340	44.4	$\chi^2 = 43.9$, $P < 0.001$
Practice routinely receives and reviews data on clinical outcomes	180	73.5		169	69.0	
Practice does not routinely receive and review data on surveys of patient satisfaction or experience of care	376	77.0	NS	229	47.2	NS
Practice routinely receives and reviews data on surveys of patient satisfaction or experience of care	425	80.5		280	53.2	
Practice does not review clinical performance against targets annually	366	75.3	$\chi^2 = 6.49$, $P = 0.01$	239	49.3	NS
Practice reviews clinical performance against targets annually	430	82.1		269	51.4	
Practice does not receive information comparing clinical performance with other practices routinely	683	78.4	NS	419	48.3	$\chi^2 = 46.1$, $P < 0.001$
Practice receives information comparing clinical performance with other practices routinely	117	80.7		90	62.1	
Practice does not receive incentives for performance	280	79.3	NS	138	60.8	$\chi^2 = 25.6$, $P < 0.001$
Practice receives incentives for performance	521	78.5		371	43.8	

between visits were less likely to report arrangement for after-hours access (Table 3).

Discussion

Australian GPs were slightly more likely than those in other countries to report that their practices provided same or next day access to care for most patients. This compares with consumer surveys in which half of patients reported being able to get same day appointments in Australia ahead of the UK, Canada and US, but behind New Zealand and Germany.¹⁹ A higher proportion of Australian GPs reported arrangements for after-hours access than those in the US and Canada, but lower than those in the UK and New Zealand.

The pattern of associations of the two measures of access with practice and practitioner characteristics was quite different. GPs with larger patient loads and who reviewed their clinical performance against targets were more likely to report same or next day access, perhaps reflecting busy practices involved in implementing organisational strategies to improve access, such as those promoted by the Primary Care Collaboratives.¹⁶ It was unsurprising that rural GPs were less likely to report that most of their patients could access timely appointments, given the workforce shortage and reports of long waiting times for appointments with GPs in rural areas.²⁰ Arrangements for after-hours access were more commonly reported by GPs who planned to retire from their practice in the next 5 years. These associations are likely to be confounded by the maldistribution of the medical workforce and worsen as many older GPs retire over the next few years.^{21,22}

There was no association between the number of medical or non-medical staff in a practice and either waiting times for appointments or arrangements for after-hours access. Moreover, the involvement of non-medical staff making contact between visits was negatively correlated with arrangements for after-hours access. It is unclear why this was so. It may be that more pro-active contact between visits reduced the need for after-hours

arrangements. This suggests the need for more research on the optimal role of non-medical staff in improving access to general practice.

Overall electronic functionality was not associated with better same or next day access. However, practices with better overall functionality of their IT systems were more likely to report arrangements for after-hours access. This functionality included not only computerised records, but also systems for prescribing, tracking test results, providing prompts or reminders, and communicating with patients. This may reflect overall organisation within the practice, but is also consistent with similar strategies used to systematically improve access and quality of care for patients with long-term conditions.¹²

Quality and organisational improvement activities were mixed in their associations. Those GPs who routinely received and reviewed data on clinical outcomes were less likely to report easy access to same or next day appointments, but more likely to report after-hours arrangements. In contrast, reviewing clinical performance annually against targets was associated with better access to appointments. The reasons for these varied associations are unclear. It may be that organisational improvement has a more positive impact on access to after-hours, whereas a focus on improved technical quality of clinical care might tend to divert attention from improving access to appointments (for example, having longer consultations may tend to reduce access to appointments in-hours).

It was significant that GPs who reported receiving incentives were more likely to report arrangements for after-hours access. This affirms the importance of the after-hours practice incentive and suggests the value in continuing such incentives in order to ensure engagement of GPs with after-hours care. There are strong personal disincentives to engagement in after-hours care, especially as GPs strive to achieve a ‘work-life balance’ and such incentives may be an important counterbalance.

The major limitation of this study is that it was based on self-report by GPs. Although this is likely to underestimate access problems, the findings are broadly consistent with consumer

Table 3. Logistic regression on GP reported access to same or next day appointments and arrangements for after-hours access
*, *P* < 0.05

Variable	Most patients access same or next day appointments		Arrangements for after-hours access	
	Odds ratio Yes v no	95% confidence intervals	Odds ratio Yes v no	95% confidence intervals
Rural or small town	0.33*	0.24–0.47*	1.31	0.94–1.84
120+ patients seen per week	2.13*	1.52–2.98*	0.74	0.55–1.00
Plan to retire	1.41	0.79–2.50	2.03*	1.20–3.42*
Age 50+ years	0.80	0.57–1.12	0.83	0.63–1.10
High electronic functionality	1.12	0.63–2.00	1.88*	1.09–3.23*
Non doctor health professionals				
Call patients to check between visits routinely	1.13	0.71–1.80	0.28*	0.18–0.44*
Educate patient about self management routinely	1.06	0.66–1.68	1.41	0.91–2.18
Practice routinely uses computer to generate reminders for regular preventive or follow-up care	1.31	0.82–2.09	0.97	0.63–1.50
Practice routinely receives and reviews data on clinical outcomes	0.61*	0.42–0.90*	2.41*	1.72–3.39*
Practice reviews clinical performance against targets annually	1.60*	1.11–2.29*	0.86	0.63–1.16
Practice receives incentives for performance	0.82	0.57–1.18	1.91*	1.41–2.58*
Model: % correctly classified		77.9%		68.6%

surveys. The response rate of 52% and the possibility of some participants being from the same practice mean that there is a possibility of sampling bias (i.e. that those participating may have better arrangements than non-participants). Comparative data on non-participants are not available. However, the characteristics of participants were broadly similar to that reported in other studies of general practice. The study offers a provider perspective on issues such as workforce and the organisation of care, which are not available in the consumer surveys. Further research is needed to prospectively examine the influence of changes to these organisational factors on access, particularly as arrangements for funding after-hours care change with the introduction of Medicare Locals (regional primary healthcare organisations).

Conclusion

The level of access reported by Australian general practitioners was slightly higher than the international mean for same or next day appointments, and slightly lower for after-hours care arrangements. Neither level was ideal, given the importance of general practice as a provider of primary medical care and gateway to other services. Workforce distribution, patient load and retirement intentions are likely to have an important impact on efforts to improve both in-hours and after-hours access. Access will not simply be addressed by creating larger multidisciplinary practices. Improved information systems, organisational improvement and incentives may also be useful as part of a comprehensive set of strategies to improve both in-hours and after-hours access to general practice.

Competing Interests

The authors have no competing interests to declare.

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