Time for care

Length of general practice consultations in Australia

Helena Britt, Lisa Valenti, Graeme Miller

Helena Britt, BA, PhD, is Associate Professor and Director, AIHW General Practice Statistics and Classification Unit University of Sydney, New South Wales.
Lisa Valenti, BEc, is Senior Research Analyst, AIHW General Practice Statistics and Classification Unit University of Sydney, New South Wales.
Graeme Miller, MBBS, FRACGP, is Medical Director, AIHW General Practice Statistics and Classification Unit University of Sydney, New South Wales.

BACKGROUND Past estimates of the length of Australian general practice consultations have been based on Medicare item numbers claimed, which carries probable serious inaccuracies.

AIMS To describe the length of general practitioner consultations.

METHODS A random sample of 926 GPs recorded the start and finish times in minutes of their consultations for which a Medicare item number was claimed between April 2000 and March 2001, within a continuous cross sectional national study of general practice activity.

RESULTS Mean length of the consultations was 14.8 minutes (range 1-106). Mean length per GP varied widely (mean of means 14.8, range 3-39, mode 15.0 minutes). Female GPs had significantly longer consultations than males. Younger (<45 years) male metropolitan GPs had the shortest mean length. Most attendances (85.7%) were designated Level B, 1.5% as Level A, 11.7% Levels C and 1.1% as level D. Mean length of Level A was 7.1 minutes, Level B-13.0, Level C-26.1, and Level D-44.9 minutes.

CONCLUSION This study suggests that the majority of GPs are not practising 'six minute medicine', and may assist cost projections of any changes to the Medicare Schedule.

Medicare paid fee for service remains the major source of general practitioner income in Australia despite moves toward a blended payment system. From 1997 to 2001, Medicare paid general practice attendances rose by 1.8%, but total payments increased by 15.4%, or 8.4% per capita.[1] Future costs of general practice medical services might therefore be of concern.

Fee for service fee structures worldwide contain perverse incentives.[2] For example the Australian Medicare Level B rebate for a 19 minute office consultation is $21.40, whereas three five minute consultations provide a remuneration of $29.55 if charged at Level A, or $64.80 if charged at Level B. Perhaps this causes a tendency to practise 'six minute medicine' in order to maintain satisfactory incomes. The introduction of content based descriptors for the Medicare Benefits Scheme (MBS) in 1989 should have decreased dependence on time based claims. However, the extent to which GPs consider content rather than time when choosing the item number is not known, and time may remain important.[3]

There are considerable overseas data on measured consultation length,[4-5] and its relationship with GP and patient characteristics, case mix, content and quality.[6-11] In contrast, in Australia consultation length is usually described in terms of Medicare items claimed,[12-14] even in research into the relationship between consultation length and patient[12,15] or GP characteristics.[16]

There are two exceptions; a study of the relationship between measured length of consultation and GP satisfaction,[17] and one measuring the length of 686 videoed consultations, (which unfortunately did not report the timed results).[18] The latter led to the Relative Values Study, overseen by the Medicare Schedule Review Board, which resulted (in 2000) in a new series of proposed claim items for consultations.[19] Discussions are now being held between the profession and government regarding its implementation. A better indication of the current length of consultations would better inform the time cut

Table 1. Mean and median consultation length for Medicare GP attendances by GP characteristics

GP characteristic	Male			Female			Total		
	n	Mean (95% CI)	Median	n	Mean (95% CI)	Median	n	Mean (95% CI)	Median
All GPs	**20 937**	**14.30 (14.0-14.6)**	**12**	**9839**	**15.85 (15.4-16.2)**	**15**	**30 776**	**14.80 (14.5-15.1)**	**12**
<45 years	5907	13.44 (13.0-13.9)	13	5295	15.95 (15.4-16.5)	15	11 202	14.62 (14.2-15.0)	13
45-54 years	7471	14.28 (13.8-14.8)	12	3105	15.70 (14.7-16.7)	15	10 576	14.70 (14.2-15.2)	13
55+ years	7559	15.00 (14.3-15.7)	13	1439	15.80 (14.6-17.0)	15	8998	15.13 (14.6-15.7)	13
Metropolitan	**15 613**	**14.29 (13.9-14.7)**	**12**	**7799**	**15.93 (15.4-16.5)**	**15**	**23 412**	**14.84 (14.5-15.2)**	**13**
<45 years	4204	13.28 (12.7-13.9)	11	4321	15.97 (15.3-16.6)	15	8525	14.64 (14.2-15.1)	13
45-54 years	5498	14.05 (13.5-14.6)	12	2303	16.03 (14.7-17.3)	15	7801	14. (14.1-15.2)	12
55+ years	5911	15.24 (14.5-16.0)	13	1175	15.61 (14.2-17.0)	15	7806	15.30 (14.6-16.0)	13
Rural	**5324**	**14.34 (13.7-15.0)**	**12**	**2040**	**15 (14.6-16.4)**	**15.52**	**7364**	**14.67 (14.2-15.2)**	**12**
<45 years	1703	13.84 (12.9-14.8)	12	974	15.83 (14.1-17.5)	15	2677	14.56 (13.7-15.4)	13
45-54 years	1973	14.93 (13.8-16.1)	12	802	14.77 (13.8-15.8)	14	2775	14.88 (13.0-15.8)	13
55+ years	1648	14.15 (13.0-15.1)	12	264	16.68 (14.3-19.1)	15	1912	14.50 (13.4-15.6)	12

Note: Encounters with GPs for whom age and/or sex and or rurality was missing were removed for this analysis (n=203). Shading indicates statistically significant differences between groups.

off points required to ensure equity in fund distribution. We attempted to fill this gap.

Method

This was a substudy from the Bettering the Evaluation and Care of Health (BEACH) program, a national continuous cross sectional survey of general practice. Approximately 1000 GPs participate each year, each providing details (on structured encounter forms) about 100 consecutive patient encounters. Data include payment source and (when applicable) Medicare item number.[14] General practitioners also record their age, sex and major practice postcode, classified by the rural, remote and metropolitan area (RRMA) classification.[20]

Between April 2000 and March 2001 GPs were asked to record consultation start and finish times for 40 of their 100 encounters, sampled by randomly placed sets of forms in each general practice recording pack (either the first 40, the middle 40 or the last 40). Consultation length was calculated by finish time less start time, in minutes. Mean consultation length and 95% confidence intervals (adjusted for study cluster design) were calculated.

Ethics Committees of the University of Sydney and Australian Institute of Health and Welfare approved the study.

Results

Start and finish time slots were available on 39 910 forms. Data from three GPs (n=120) were rejected as invalid due to overlapping time periods. A further 8047 encounters were missing Medicare item numbers (some legitimately) and 774 were other Medicare items. The final study sample included 30 969 encounters from 926 GPs, for which data on GP age, sex and rurality were available for 30 776.

Mean length of Medicare general practice attendances was 14.8 minutes, median 12 minutes (range 1-106 minutes). Results are shown in Table 1. Those of exactly 10, 15 and 20 minutes together made up almost half (44.2%) of the consultations. Consultations of more than 20 minutes accounted for 15.8% of the total (Figure 1).

Using the GP as the unit of analysis, the mean length (mean of the means) of consultations was 14.8 minutes (SD: 4.3 minutes) and the mode 15.0 minutes.

Table 2. Distribution of Medicare GP attendances by GP characteristics

GP characteristic	Level A	Level B	Level C	Level D	Total
	Percent of total	Percent of total	Percent of total	Percent of total	Number (100%)
ALL GPS	**1.5 (0.5-2.6)**	**85.6 (84.7-86.6)**	**11.7 (10.8-12.7)**	**1.1 (0.0-3.2)**	**30 776**
Male	1.6 (0.5-2.8)	87.3 (86.1-88.4)	10.1 (9.0-11.1)	0.9 (0.0-3.4)	20 937
Female	1.3 (0.0-3.4)	82.1 (80.5-83.7)	15.0 (13.5-16.5)	1.5 (0.0-5.2)	9839
Metropolitan	**1.3 (0.2-2.5)**	**85.3 (85.2-86.4)**	**12.2 (11.1-13.3)**	**1.2 (0.0-3.8)**	**23 412**
Male	1.4 (0.2-2.6)	87.1 (85.7-88.4)	10.7 (9.3-12.1)	0.9 (0.0-3.9)	15 613
Female	1.3 (0.0-3.8)	81.7 (79.8-83.5)	15.3 (13.6-17.0)	1.8 (0.0-6.1)	7799
Rural	**2.2 (0.0-4.4)**	**86.8 (85.1-88.4)**	**10.3 (8.6-11.9)**	**0.8 (0.0-3.9)**	**7364**
Male	2.4 (0.0-5.0)	87.9 (85.9-89.9)	8.8 (6.9-10.8)	0.9 (0.0-5.3)	5324
Female	1.6 (0.0-5.5)	83.8 (80.7-86.8)	14.0 (11.0-16.9)	0.6 (0.0-3.1)	2040

Note: Encounters with GPs for whom age and/or sex and or rurality was missing were removed for this analysis (n=203). Shading indicates statistically significant differences between groups.
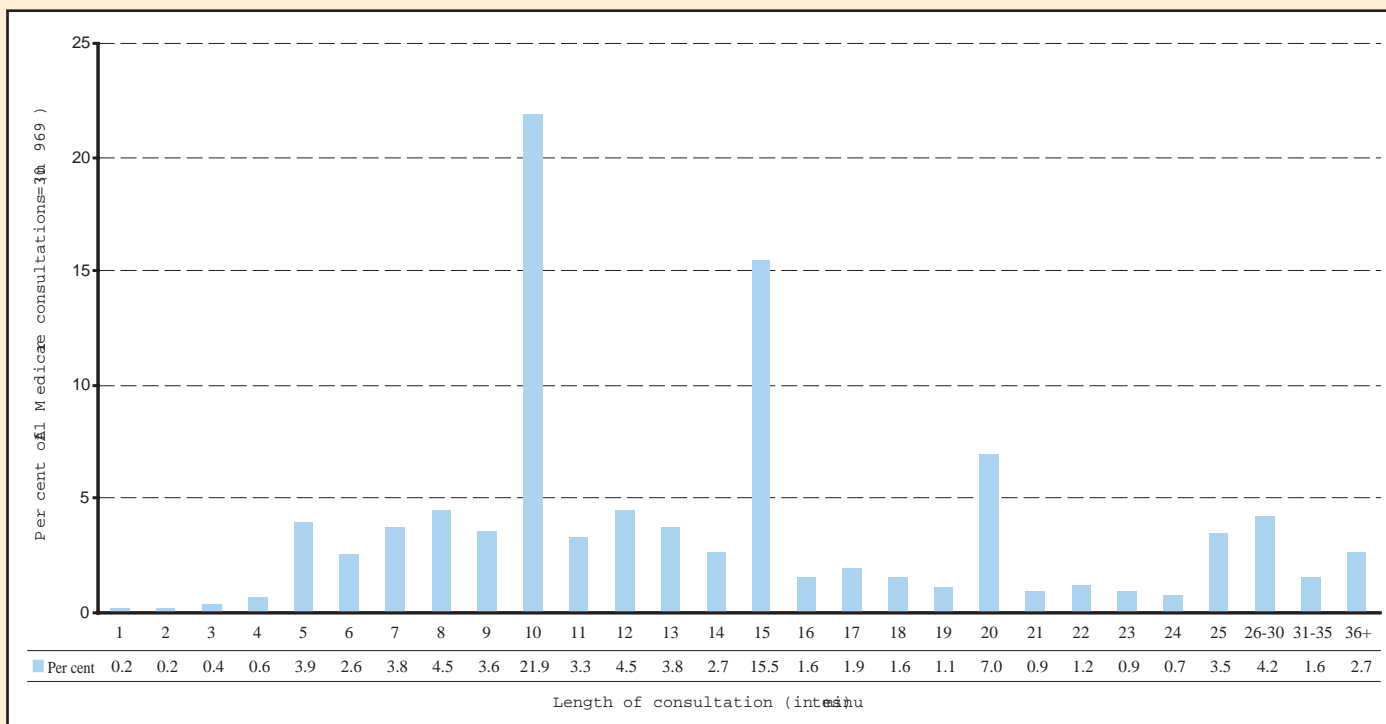
Figure 1. Distribution of consultation length for Medicare GP attendances

Consultation length and GP characteristics

There was wide variance in mean consultation time among GPs, ranging from three minutes (one GP) to 39 minutes (two GPs). Results are shown in Figure 2.

There were no significant differences in mean consultation length between GPs in rural versus metropolitan areas, between GPs of different age groups (Table 1), or GPs in various practice sizes (solo, 2-4 GPs, 5-10 GPs, 11+ GPs) (results not presented). There were significant relationships between consultation length and:
- GP sex - female GPs had longer consultations at a mean 15.9 minutes than males at 14.3 minutes;
- GP age-sex - young females, <45 years, had longer consultations at a mean 16.0 minutes than their male counterparts at 13.4 minutes; and
- practice location-GP sex - in metropolitan areas, consultations with female GPs were significantly longer at 15.9 minutes than those with male GPs at 14.3 minutes. This difference was not
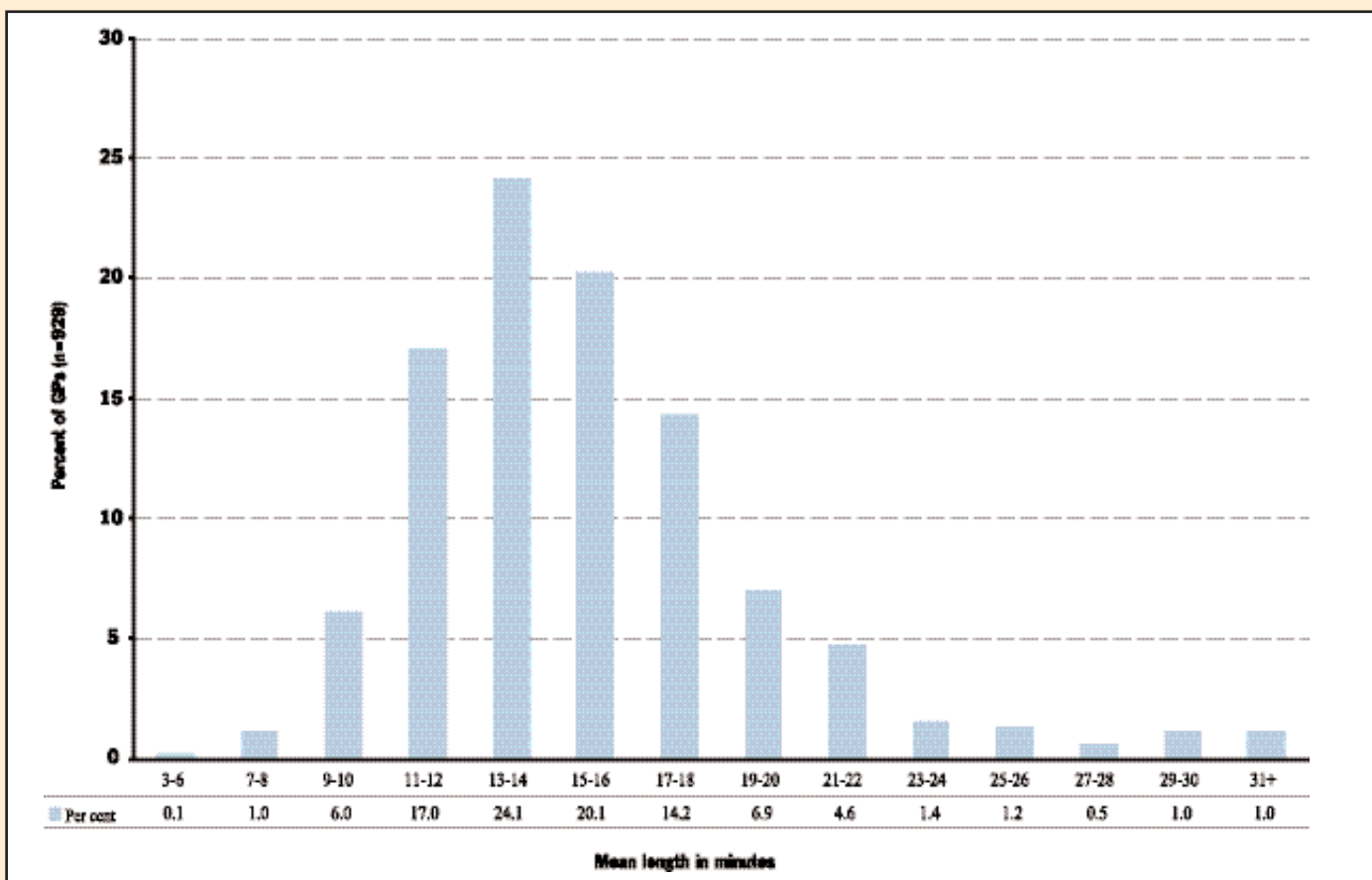
Figure 2. Distribution of mean consultation length per GP for Medicare GP attendances

apparent for GPs of 55 years or more, or any GPs in rural areas.

Young male GPs (<45 years) in metropolitan settings had the shortest mean consultation length (13.3 minutes) and rural female GPs aged 55 years or more had the longest at 16.7 minutes (Table 1).

Distribution of Medicare GP attendances by GP characteristics

Of the 30 776 encounters 1.5% were designated Level A; 85.7% Level B; 11.7% Level C; and 1.1% Level D, (a similar distribution to the total Medicare GP attendances July 2000 to June 2001) (Table 2).1 There were no significant differences in the distribution of encounters across Medicare claim levels between GPs practising in metropolitan and rural areas. Male GPs claimed relatively more Level B consultations (87.3%) than did female GPs (82.1%) and relatively fewer Level C

consultations (10.1% compared with 15.0% for females). This difference was also reflected in the subgroup of GPs in metropolitan areas. For rural GPs, Level C items made up a significantly greater proportion of the female GPs' workload (14.0%) than of males' (8.8%) (Table 2).

Consultation length by Medicare item recorded

For Medicare Level A consultations mean length was 7.1 minutes (95% CI: 6.4-7.7) and the median five minutes. Level B consultations averaged 13.0 minutes (95%CI: 12.8-13.2, median 11 minutes). Level C encounters averaged 26.1 minutes (95% CI: 25.6-26.7, median 25 minutes), while level D averaged 44.9 minutes (95% CI: 42.3-47.4, median 45 minutes).

Differences in mean consultation length for each Medicare claimable level (A, B, C, D) were investigated in relation

to practice location, GP sex and GP age group. Only one significant difference emerged: Level B consultations were significantly longer for female GPs (13.7 minutes, 95% CI: 13.3-14.0, median 13 minutes) than for male GPs (12.7 minutes 95% CI: 12.5-12.9, median 11 minutes) (data not presented).

Discussion

The GPs participating in this substudy were completing an encounter form at each consultation. The extent to which they included their recording time (which should average about two minutes) as part of the consultation is not known. If they consistently did so, the real average consultation length would be shorter than estimated.

We could not validate the recorded start and finish time in this study. The very high proportion of consultations

recorded as exactly 10, 15 or 20 minutes suggests rounding up or down in five minute blocks to reflect appointment booking periods, which casts some doubt about the study's accuracy for assessing exact length of consultation.

We found that, far from practising 'six minute medicine', on average GPs provide consultations of approximately 15 minutes. This supports earlier findings which suggested a mean consultation length of 14.6 minutes in a sample of over 10 000 direct (not necessarily Medicare claimed) encounters.16 Further the measures of central tendency (median consultation lengths) for each of the Medicare claim levels were acceptable: five minutes for Level A, 11 for Level B, 25 for Level C and 45 for Level D. However, the mean consultation time per GP varied very widely among practitioners, and provides some concern for those few with recorded average consultation length of less than 10 minutes (minimum 3-4 minutes).

The finding of longer consultations on average of female GPs, who more often claim Level C consultations and have longer Level B consultations than male GPs, is consistent with previous research indicating greater complexity of consultations with female GPs, (including the management of more psychosocial problems).[15]

We plan to further investigate the relative importance of other factors that may contribute to consultation length, (including patients' characteristics, number and types of problems managed, and their treatments). Consultation complexity may be an underlying variable influencing the current results. Meanwhile, we believe this study will provide an opportunity for more educated discussion between the profession and the government on future Medicare fee structures for general practice attendances.

Conflict of interest

None declared.

Implications of this study for general practice

- The mean length of consultations was approximately 15 minutes.
- It varied widely between different GPs.
- Most consultations were designated Level B.
- Female GPs spent longer with patients.

References

1. Health Insurance Commission (HIC). Medicare Benefits Schedule (MBS) Group Statistics Reports. Canberra: HIC, 2002; 17-4-2002.
2. Hsiao W C, Braun P, Becker E R, DeNicola M, Ketcham T R. Results and policy implications of the resource based relative value study. N Engl J Med 1988; 319:881-888.
3. Saltman D C, O'Dea N A. General practice consultations: quality time? Med J Aust 1999; (171)2:76.
4. Wilson A. Consultation length in general practice: a review. Br J Gen Pract 1991; 41:119-122.
5. Blumenthal D, Causino N, Chang Y, et al. The duration of ambulatory visits to physicians. J Fam Pract 1999; 48(4):264-271.
6. Andersson S O, Ferry S, Mattsson B. Factors associated with consultation length and characteristics of short and long consultations. Scand J Prim Health Care 1993; 11:61-67.
7. Carr-Hill R, Jenkins-Clarke S, Dixon P, Pringle M. Do minutes count? Consultation lengths in general practice. J Health Serv Res Policy 1998; 3:207-213.
8. Roter D, Lipkin M, Korsgaard A. Sex differences in patients' and physicians' communication during primary care medical visits. Med Care 1991; 29:1083.
9. Bensing J M, van den Brink-Muinen A, de Bakker D H. Gender differences in practice style: a Dutch study of general practitioners. Med Care 1993; 31:219-229.
10. Voo Y O. Consultation length and case mix in a general practice clinic. Singapore Med J 1999; 40:13-17.
11. Howie J G, Heaney D J, Maxwell M, Walker J J, Freeman GK, Rai H. Quality at general practice consultations: cross sectional survey. Br Med J 1999; 319:738-743.
12. Martin C M, Attewell R G, Nisa M, McCallum J, Raymond C J. Characteristics of longer consultations in Australian general practice. Med J Aust 1997; 167:76-79.
13. Bridges-Webb C, Britt H, Miles D A, Neary S, Charles J, Traynor V. Morbidity and treatment in general practice in Australia 1990-1991. Med J Aust 1992; 157:S1-S56.
14. Britt H, Miller G C, Knox S, et al. General practice activity in Australia 2000-2001. AIHW Cat. No. GEP 8. Canberra: Australian Institute of Health and Welfare. General Practice Series No.8.
15. Bolton P G, Mira M, Roberts L J, Usher H E. Is health care card status related to consultation time? Med J Aust 1998; 168:527-528.
16. Britt H, Bhasale A, Miles D A, Meza A, Sayer G P, Angelis M. The sex of the general practitioner: a comparison of characteristics, patients, and medical conditions managed. Med Care 1996; 34:403-415.
17. Sayer G P, Britt H, Horn F, et al. Measures of health and health care delivery in general practice in Australia. AIHW Cat. No. GEP 3. Canberra: Australian Institute of Health and Welfare. General Practice Series no.3.
18. Harris E A, Richardson J, Farish S J, Saltman D C. The reliability and validity of work measurement in Australian general practice consultations. Med J Aust 1996; 165:18-21.
19. Department of Health and Aged Care. Relative value studies. Canberra: Department of Health and Aged Care, 2001; 17-4-2002.
20. Department of Primary Industries and Energy and Department of Human Services and Health. Rural, remote and metropolitan area (RRMA) classification. Canberra: DPIE, 1994.

AFP

Correspondence

Helena Britt

Associate Professor and Director

General Practice Statistics and Classification Unit

Acacia House

Westmead Hospital

PO Box 533

Wentworthville, NSW 2145

Email: helenab@med.usyd.edu.au