Factors influencing billing status in general practice

Robert W Pegram,* Lisa Valenti†
* Senior Lecturer, Department of General Practice, University of Adelaide, Adelaide, SA; † Senior Analyst, General Practice Statistics and Classification Unit, University of Sydney, Wentworthville, NSW.
Robert.pegram@adelaide.edu.au

To the Editor: Young and Dobson's article[1] examining the bulk-billing status of services provided to women generated much debate.[2,3] To add to that debate we undertook an analysis of 5546 Medicare-claimable general-practice encounters. Data were provided by 200 general practitioners between May and July 2002, using the BEACH (Bettering the Evaluation and Care of Health) methodology.[4] We examined which encounter, GP and patient characteristics determine billing status (patient-billed or bulk-billed). From time and day of service we determined which consultations were "after hours".

Over two-thirds of services (69.8%; 95% CI, 65.4%–74.3%) were bulk-billed. One in fourteen services (7.1%; 95% CI, 2.2%–12.1%) were delivered "after hours" as defined by the Australian Government Department of Health and Ageing[5] (ie, between 6 pm and 8 am on weekdays or between 1 pm Saturday and 8 am Monday on weekends). The results after simple and multiple logistic regression analysis are shown in the Box.

After-hours consultations were significantly more likely to have been bulk-billed than those held during standard office hours (odds ratio [OR], 1.9).

Patients aged < 15, 15–24 years and ⩾ 75 years were significantly more likely to be bulk-billed than working-age adults ($P < 0.0001$).

Also significantly more likely to be bulk-billed were patients from non-English-speaking backgrounds (OR, 7.3), living in an urban area (OR, 2.6), holding a health-care card (OR, 3.5) and/or coming from a low socioeconomic status background (OR, 2.3).

There was no significant association between the likelihood of being bulk-billed and the age or sex of the GP, the practice size or the number of problems managed at the encounter.

Interestingly, the variable with the largest impact on bulk-billing rates was whether patients were from a non-English-speaking background. These patients were over seven times more likely to be bulk-billed than patients from an English-speaking background.

Factors influencing the likelihood of bulk-billing in Australian general practice*

	Simple logistic regression analysis	Multiple logistic regression analysis
	OR (95% CI) ($n = 5546$)	Adjusted OR (95% CI) ($n = 4793$)
Time of consultation		
"After hours" status (standard hours : after hours)	1.5 (0.9–2.5)	1.9 (1.1–3.3)
Other variables		
Non-English-speaking background (no : yes)	8.8 (4.8–16.3)	7.3 (3.8–14.0)
Aboriginal or Torres Strait Islander descent (no : yes)	2.0 (0.7–6.0)	ns
Patient new to practice (new : not new)	1.5 (1.0–2.2)	ns
Rural/urban place of residence (rural : urban)	2.2 (1.3–3.7)	2.6 (1.5–4.7)
Having health care card (no : yes)	3.4 (2.4–5.0)	3.5 (2.3–5.2)
Socioeconomic status† (higher SES : low SES)	3.2 (1.8–5.7)	2.3 (1.2–4.5)
Practice size		
(5+ GPs : solo GP)	2.4 (1.0–5.8)	ns
(5+ GPs : 2–4 GPs)	1.4 (0.9–2.3)	ns
Patient age (years)		
(25–64 : < 15)	1.5 (1.1–2.0)	1.4 (1.0–1.9)
(25–64: 15–24)	1.4 (1.2–1.8)	1.4 (1.1–1.9)
(25–64 : 65–74)	1.8 (1.4–2.5)	1.2 (0.8–1.6)
(25–64 : ⩾ 75)	2.5 (1.7–3.8)	1.7 (1.1–3.8)
Patient sex (female : male)	1.1 (0.9–1.3)	ns
GP age (years) (25–54 : ⩾ 55)	1.6 (1.0–2.8)	ns
GP sex (female : male)	1.1 (0.7–1.8)	ns
Number of problems managed per encounter‡	1.0 (0.9–1.2)	ns

GP = general practitioner. ns = not significant at 5% level. OR = odds ratio. * For each variable, the first-mentioned category is the reference. † Assessed by SEIFA (Socioeconomic Indexes for Areas) categories of the Australian Bureau of Statistics. ‡ The reference point for this variable is the number of problems managed (1, 2, 3 or 4), measured against whether the patient is bulk-billed. The OR here indicates that for each unit increase in problems managed the odds of the encounter being bulk-billed do not change.

This study adds further support to the findings of Young and Dobson[1] that patients in urban areas were significantly more likely to be bulk-billed for general practice consultations than their rural counterparts. We can go one step further and say that consultations given after hours were also significantly more likely to be bulk-billed. The conclusion is that bulk-billing decisions by GPs are not uniformly influenced by timing, location and patient characteristics. This has implications for assessing the likely impact of bulk-billing strategies such as MedicarePlus.[6]

Acknowledgements

Thanks to all the GP participants and to Helena Britt for critically appraising the text. Funding was provided by the Australian Department of Health and Ageing, AstraZeneca (Australia) Pty Ltd, Janssen-Cilag Pty Ltd, Merck Sharp and Dohme (Australia) Pty Ltd and Roche Products Pty Ltd.

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2 Arnold PC. The decline in bulk-billing and increase in out-of-pocket costs for general practice consultations in rural areas of Australia, 1995-2001 [letter]. *Med J Aust* 2003; 178: 470-471.

3 Harrison CA. The decline in bulk-billing and increase in out-of-pocket costs for general practice consultations in rural areas of Australia, 1995-2001 [letter]. *Med J Aust* 2003; 178: 470.

4 Britt H, Miller GC, Knox S, et al. General practice activity in Australia 2002-03. Canberra: Australian Institute of Health and Welfare, 2003. (AIHW Catalogue No. GEP 14.)

5 Medicare benefits schedule. Explanatory notes. Canberra: Australian Government Department of Health and Ageing, 2003: 31-32. Available at: www.health.gov.au/pubs/mbs (accessed May 2004).

6 Australian Government Department of Health and Ageing. MedicarePlus. 2004. Available at: www.health.gov.au/medicareplus (accessed May 2004). ❑