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Factors influencing billing status in general practice

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TO THE EDITOR: Young and Dobson's article¹ 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 Ageing⁵ (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 OR (95% CI) (n = 5546)	Multiple logistic regression analysis 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 Dobson¹ 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

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1 Young AF, Dobson AJ. The decline in bulk-billing and increase in out-of-pocket costs for general practice consultations in rural areas of Australia, 1995–2001. *Med J Aust* 2003; 178: 122–126.

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.

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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). □