

Julie Gordon, Christopher Harrison, Graeme Miller



n June 2012, 14% of the Australian population was aged 65 years and over. Population projections indicate this could rise to 22.4% by 2061, and the proportion aged 85 years and over may increase from 1.8% to 4.5% over the same period.1

In June 2014 there were 176,816 people living in residential aged care facilities (RACFs) in Australia, either permanently or for respite care. This number was an increase of 6.3% since 2010.2 In June 2014, the average age of residents was 84.5 years.²

General practitioners (GPs) provide medical care to those living in RACFs (RACF patients). GP services for RACF patients are included in the Medicare Benefits Schedule (MBS). An assessment of GP encounters with RACF patients using 2010-11 Medicare claims data reported an average of one 'RACF-based GP service' per RACF patient every 3 weeks.3 This study examined the problems managed and medications prescribed by GPs at encounters with RACF patients, to determine the extent to which they differ from those at GP encounters with similar patients.

Data were analysed from the Australian Bettering the Evaluation and Care of Health (BEACH) program between April 2011 and March 2014. Encounters with RACF patients were identified using item numbers from the MBS for GP attendances conducted in RACFs, or for RACF patients (eg case conferences for RACF patients). To account for the skewed distribution of older patients in RACFs, analyses of problems managed and medications prescribed were restricted to encounters with RACF patients aged 75 years and over (75+) and all BEACH encounters with patients aged 75+.

Problems managed were classified according to the International Classification of Primary Care, Version 2 (ICPC-2), through the ICPC-2 PLUS clinical terminology.4 Medications were entered using a pharmaceutical classification called the Coding Atlas of Pharmaceutical Substances (CAPS).5

There were 4605 GP encounters with all RACF patients between April 2011 and March 2014. Only 4.3% of RACF patients were aged <65 years. Most patients (86.8%, n = 3997) were aged 75+; 8.9% were aged 65-74 years. By contrast, only 16.8% (n = 48,806) of the 289,726 patients at all BEACH encounters during this period were aged 75+ (results not tabled).

On average, there were fewer problems managed at encounters with RACF patients aged 75+ than were managed at all BEACH encounters with patients aged 75+. Marked differences between the two groups were apparent. Dementia was managed most often during encounters with RACF patients and was managed nearly six times more often (17.7 per 100 encounters) than during all encounters (3.1 per 100 encounters; Table 1).

Other problems managed at a higher rate during encounters with RACF patients, compared with all BEACH encounters, included urinary tract infections, depression, heart failure and chronic skin ulcers (Table 1). By contrast, hypertension, the problem managed most often at all encounters with patients aged 75+ (16.1 per 100 encounters), was managed approximately onethird as often during encounters with RACF patients (4.9 per 100 encounters; Table 1). Diabetes, osteoarthritis and immunisations/ vaccinations were also managed less frequently at encounters with RACF patients, compared with all BEACH encounters (Table 1).

There was no statistically significant difference in the overall rate of medications prescribed between the two groups (Table 2). However, there were clear differences in the types of medications prescribed. Opioid analgesics were prescribed significantly more often during encounters with RACF patients (6.1 per 100 problems managed) than at all BEACH encounters (3.5 per 100 problems). Antipsychotics were prescribed over three times more often at encounters with RACF patients (2.1 per 100 problems) than at all BEACH encounters (0.6 per 100 problems).

Table 1. Problems managed at encounters with RACF patients aged 75+, compared with all BEACH encounters with patients aged 75+

Problem managed	Rate per 100 RACF encounters with patients aged 75+ (95% CIs)	Rate per 100 encounters with all patients aged 75+ (95% Cls)
Dementia	17.7 (15.0–20.4)	3.1 (2.7–3.4)
Hypertension*	4.9 (3.7–6.2)	16.1 (15.6–16.7)
Urinary tract infection	4.7 (3.9–5.4)	2.9 (2.8–3.1)
Diabetes*	4.2 (3.3–5.1)	6.2 (5.9–6.5)
Osteoarthritis*	4.2 (3.2–5.1)	6.1 (5.8–6.4)
Depression*	3.9 (3.0–4.8)	2.6 (2.4–2.8)
Heart failure	3.9 (3.0–4.7)	2.6 (2.4–2.8)
Chronic skin ulcer	3.7 (3.0–4.4)	2.3 (2.1–2.5)
Immunisation/ vaccination*	3.3 (1.5–5.0)	5.9 (5.2–6.5)
Acute bronchitis/ bronchiolitis	3.2 (2.5–3.9)	2.1 (1.9–2.2)
Total	158.7 (151.0–166.5)	182.1 (180.1–184.2)

^{*}Includes multiple ICPC-2 and/or ICPC-2 PLUS terms Cl, confidence interval; ICPC-2, International Classification of Primary Care, Version 2; RACF, residential aged care facility; 75+, 75 years and over

Antibiotics (penicillins/cephalosporins and broad spectrum penicillins) were also prescribed more often during encounters with RACF patients. By contrast, antihypertensives were prescribed less often during encounters with RACF patients (Table 2).

The spectrum of problems managed and medications prescribed at GP encounters with RACF patients aged 75+ differs markedly from those at encounters with older patients living in the community. Dementia remains the leading problem managed in RACFs; the management rate reported in this study was similar to that reported using BEACH data in 2007 (16.7 per 100 encounters).6

Authors

Julie Gordon BAppSc (HIM) (Hons), PhD, Research Fellow, Family Medicine Research Centre, University of Sydney, NSW. julie.gordon@sydney.edu.au Christopher Harrison, BPsych (Hons), MSocHlth, Senior Research Analyst, Family Medicine Research Centre, University of Sydney, NSW

Graeme Miller MBBS, PhD, FRACGP, Medical Director, Family Medicine Research Centre, University of Sydney, NSW

Competing interests: None

Provenance and peer review: Commissioned, not peer reviewed.

References

Australian Bureau of Statistics. Population projections, Australia: 2012 (base) to 2101 Catino 3222 0. Latest Issue 26-11-2013. Capperra: Commonwealth of Australia, 2013. Available at www.ausstats.abs.gov.au/ausstats/subscriber. nsf/0/13D196FB0DBECC3BCA257C2E00173FAD/\$File/32220_2012%20 %28base%29%20to%202101.pdf [Accessed 23 February 2014].

Table 2. Medications prescribed at encounters with RACF patients aged 75+, compared with all BEACH encounters with patients aged 75+, by CAPS subgroup

Medication prescribed	Rate per 100 RACF problems managed with patients aged 75+ (95% CIs)	Rate per 100 problems managed with all patients aged 75+ (95% Cls)
Opioid analgesics	6.1 (5.2–7.0)	3.5 (3.3–3.7)
Penicillins/ cephalosporins	3.0 (2.5–3.4)	1.9 (1.8–2.0)
Anti-hypertensives	2.7 (1.7–3.7)	8.8 (8.5–9.1)
Simple analgesics	2.6 (2.1–3.1)	2.6 (2.5–2.8)
Diuretics	2.1 (1.5–2.7)	1.6 (1.5–1.7)
Antipsychotics	2.1 (1.6–2.6)	0.6 (0.5–0.7)
Antidepressants	2.1 (1.5–2.6)	1.6 (1.5–1.6)
Other antibiotics	2.0 (1.6–2.4)	1.5 (1.4–1.6)
Broad spectrum penicillins	1.8 (1.4–2.2)	1.3 (1.2–1.3)
Other blood drugs	1.8 (1.1–2.5)	3.2 (3.0–3.3)
Total prescribed medications	50.6 (44.0–57.1)	57.1 (55.9–58.2)

CAPS—Coding Atlas for Pharmaceutical Substances: Cl. confidence interval: RACF, residential aged care facility; 75+, 75 years and over

- 2. Australian Government Department of Social Services. 2013-14 Concise facts & figures in aged care. Available at www.dss.gov.au/sites/default/files/ documents/11_2014/att_a_-_2013-14_concise_facts_figures_in_aged_care. pdf [Accessed 23 February 2014].
- Taylor MJ, Edvardsson D, Horey D, Fetherstonhaugh D, Nay R, Swerissen H. General practitioner service provision in residential aged care facilities: 1998-2011. Australas J Ageing 2013;32:56-59.
- 4. Family Medicine Research Centre. ICPC-2 PLUS: the BEACH coding system. Sydney: The University of Sydney, 2001–2015 Available at http://sydney.edu.au/medicine/fmrc/icpc-2-plus/index.php> [Accessed 23 February 20151.
- Family Medicine Research Centre. CAPS Coding Atlas for Pharmaceutical Substances. Sydney: The University of Sydney, 2001-2015. Available at http://sydney.edu.au/medicine/fmrc/caps/index.php [Accessed 23 February
- O'Halloran J, Britt H, Valenti L. General practitioner consultations at residential aged-care facilities. Med J Aust 2007:187:88-91.

Acknowledgements

The authors thank the GP participants in the BEACH program, and all members of the BEACH team.

Funding contributors to BEACH from April 2011 to March 2014: Australian Government Department of Health and Department of Veterans' Affairs; AstraZeneca Pty Ltd (Australia); bioCSL Pty Ltd; GlaxoSmithKline Australia Pty Ltd; Merck, Sharp and Dohme (Australia) Pty Ltd; National Prescribing Service Ltd; Novartis Pharmaceuticals Australia Pty Ltd; Pfizer Australia Pty Ltd; and Sanofi-Aventis Australia Pty Ltd.

BEACH is approved by the Human Research Ethics Committee of the University of Sydney.