

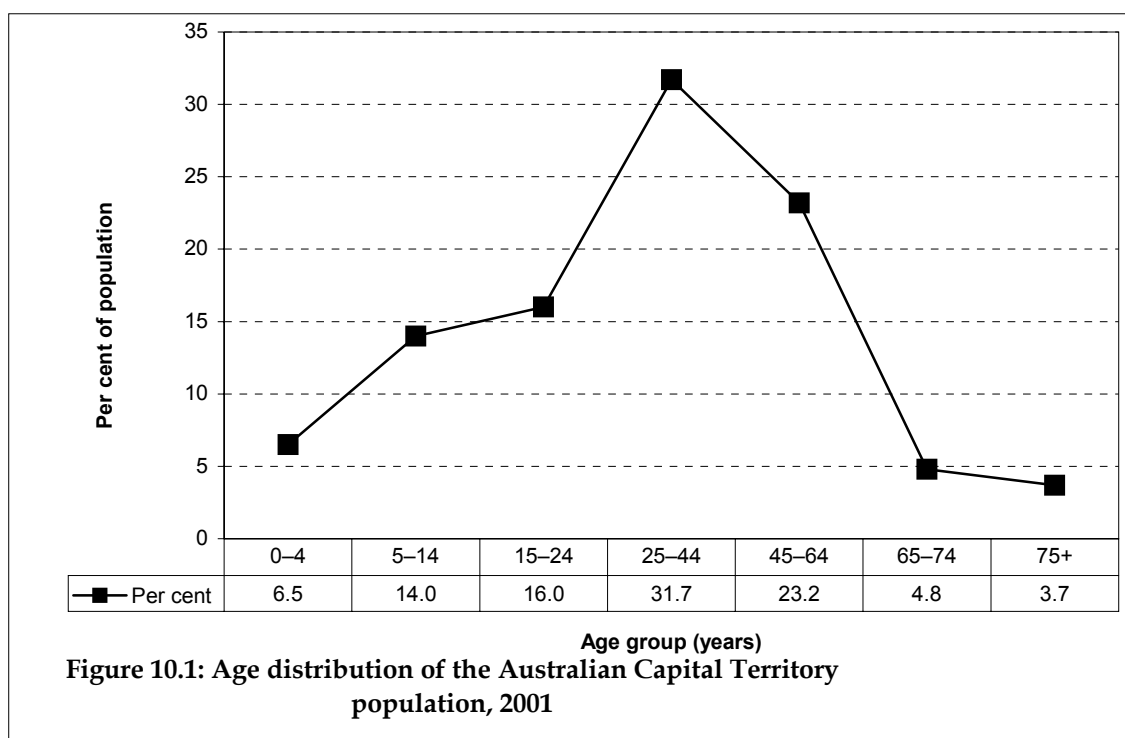
10 Australian Capital Territory

10.1 Background

In 2001, the population of the Australian Capital Territory was 319,317 people, accounting for 1.6% of the total Australian population. Males accounted for 49.3% of people living in the Australian Capital Territory, and 50.7% of the population were female. The median age of people in the Australian Capital Territory was 33.8 years, about 3 years younger than the national median (Table A3.1).

In the Australian Capital Territory in 2001, there were 366 GPs/OMPs who provided at least one Medicare service in the last 3 months of 2001. This accounted for 215.5 full-time workload equivalent (FWE) GPs, which corresponded with one FWE GP for every 1,481.8 people living in the Australian Capital Territory. This was somewhat lower than the average throughout Australia, where there was one FWE GP per 1,153.9 people. Of these, 18% were aged more than 55 years. The Australian Capital Territory had a considerably higher proportion of female GPs compared with the national average (34% compared with 25%) (Table A3.1).

Figure 10.1 shows that 31.7% of people living in the Australian Capital Territory were aged between 25 and 44 years, and 23.2% were aged 45–64 years. Only 3.7% were aged 75 years or more, and 4.8% were aged between 65 and 74 years.



Between July 2002 and June 2003, 1,179,831 Medicare A1 and A2 items of service were processed by the HIC for people living in the Australian Capital Territory, accounting for 1.2% of total services processed throughout Australia in that year. Residents of the Australian Capital Territory attended general practice, on average, 3.7 times over this period.

Older patients attended at the highest rates, with those aged 75 years and over averaging 8.4 Medicare-claimed attendances, although those aged 65–74 years attended 7.4 times per person. Children aged between 5 and 14 had the lowest rates of attendance (1.9 attendances per person), and people aged 15–24 years attended general practice 2.7 times per year (Figure 10.2).

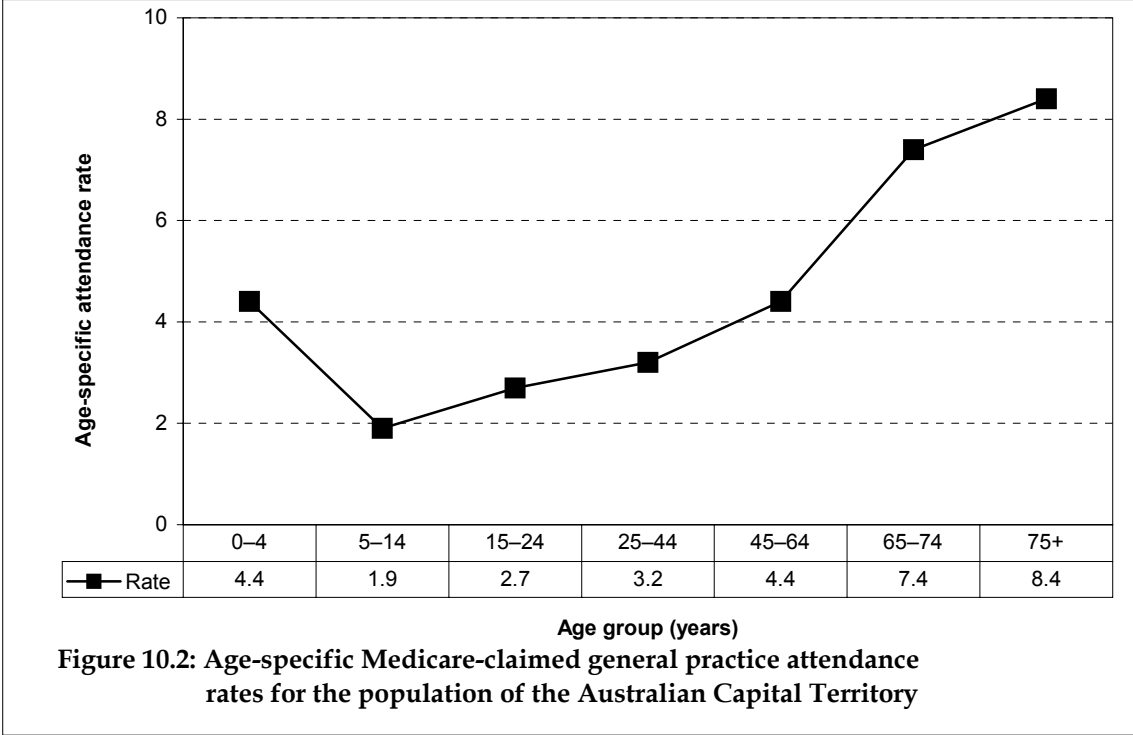


Figure 10.2: Age-specific Medicare-claimed general practice attendance rates for the population of the Australian Capital Territory

10.2 Results

Of the 5,021 GPs who participated in BEACH Australia-wide between April 1998 and March 2003, 78 were from the Australian Capital Territory. They accounted for 1.6% of the total sample over the 5 years, and they provided information about 7,800 encounters. The Australian Capital Territory results are compared with those for all of Australia and for each of the other Australian states and territories in Appendix 4. The differences highlighted below are those identified by non-overlapping 95% confidence intervals. Marginal differences (where the confidence intervals meet but do not overlap) are not noted here but can be identified in the tables in the Appendix.

The general practitioners

The participating Australian Capital Territory GPs differed from all participants in most of their characteristics. GPs were more likely to be female (50.0%) compared with the average for all participants (32.6%), less likely to be aged less than 45 years (29.9% compared with 37.3%), and more likely to be 45 years or older (70.2% compared with 62.6%). The Australian Capital Territory participants were more likely to have worked less than 2 years in practice (1.3% compared with 0.6%), more likely to work fewer than 6 sessions per week (23.4% compared with 15.8%), more likely to work 6–10 sessions per week (74.0% compared with 67.7%), and far less likely to work 11 or more sessions per week (2.6% compared with 16.5%).

The participants from the national capital were also less likely to be solo practitioners (5.3% compared with 16.9%), far more likely to work in practices of 2–4 GPs (61.8% compared with 39.2%) and less likely to work in practices with 5 or more partners (32.9% compared with 44.0%).

The number of participants currently in a general practice vocational training program (5.3%) was significantly greater than the proportion for all participants (2.5%). The Australian Capital Territory participants were more likely to be Fellows of the RACGP (44.2% compared with 32.2%), and less likely to provide their own after-hours care (38.5% compared with 43.4%).

Australian Capital Territory participants were significantly more likely to have a practice location in a capital city (98.7% compared with 67.1%). The Australian Capital Territory participants did not differ from their national counterparts in place of graduation (Table A4.1).

The encounters

The raw figures showing the number of each variable available in the BEACH data set for Australia and for each state and territory of Australia are provided in Table A4.2.

Content of the encounters

Table A4.3a provides an overview of the content of the encounters recorded by Australian Capital Territory participants. At the 7,800 encounters reported by Australian Capital Territory GPs, patient reasons for encounter were recorded at a rate of 150.1 per 100 encounters which was almost identical to the average rate for Australia (150.2 per 100). Although the number of problems managed at Australian Capital Territory encounters (143.1 per 100) did not differ significantly from the national average (148.1 per 100), they managed significantly fewer new problems (45.2 per 100 compared with 51.2 per 100). Work-related problems (3.2 per 100) were managed at a similar rate to the national average (3.4 per 100).

Medications were prescribed, supplied or advised at a rate of 92.2 per 100 encounters, which was significantly lower than the national rate of 106.5 per 100. This was mainly due to the significantly lower prescribing rates (79.4 per 100) and rates of medication supplied by the GP (3.7 per 100) compared with the national averages of 89.4 per 100 and 8.1 per 100 respectively.

Encounters with Australian Capital Territory GPs did not differ from the national average in terms of the number of other (non-pharmacological) treatments provided. Clinical treatments were provided at a similar rate in the Australian Capital Territory (34.7 per 100 encounters) to those provided nationally (37.1 per 100); however, the rate of procedural treatments (10.3 per 100) was significantly lower than the national average (13.8 per 100).

Australian Capital Territory GPs did not differ from the national average in rates of referrals generally (12.1 per 100 encounters), or to specialists (7.8 per 100), allied health professionals (3.6 per 100), hospitals (0.4 per 100), emergency departments (0.1 per 100), or other referrals (0.2 per 100). They did not differ in their rates of pathology (35.0 per 100) or imaging (9.4) requests compared with the national average.

Age-standardised results

After age-standardisation, all these significant differences remained and a further difference emerged. The rate of pathology orders was significantly higher than the national average (Table A4.3b).

Type of encounter

GPs in the Australian Capital Territory made no hospital visits at all, which is a significant difference to GPs in the rest of the country. They made fewer home visits (0.9 per 100 encounters) than the national participants (1.7 per 100), and fewer visits to residential aged care facilities (0.3 per 100 compared with 1.0). They also claimed fewer other Medicare items (1.1 per 100) compared with the national average (2.6 per 100). With these exceptions, the types of encounters undertaken by Australian Capital Territory GPs did not differ from those performed by their national counterparts (Table A4.4a).

Age-standardised results

After age-standardisation, the differences between home visits and aged care facility visits no longer existed. The only significant differences remaining were for hospital visits and other items of service. No other significant differences emerged (Table A4.4b).

Characteristics of the patients at encounter

The expected age distribution of patients at encounter in the Australian Capital Territory was calculated from the age distribution of the Australian Capital Territory population (Figure 10.1) and mean annual GP visits by age group (Figure 10.2). The observed age distribution of BEACH encounters from the Australian Capital Territory (Table A4.5a) did not differ from the expected age distribution (results not shown). Therefore, the Australian Capital Territory sample of BEACH encounters was representative of the Australian Capital Territory population in terms of age distribution and GP visit rates.

There were several differences in the patients at encounters with Australian Capital Territory GPs and those seen at all other encounters. There were significantly more encounters with patients aged 15–24 years (12.7%), and fewer with those of 65–74 years (9.1%) or 75 and over (9.2%) compared with the national average (9.9%, 12.1% and 13.0% respectively). Patients at Australian Capital Territory encounters were less likely to hold a Commonwealth Concession Card (26.0% compared with 39.3%), and considerably less likely to be from a non-English-speaking background (5.1% compared with 8.8%) or to identify themselves as an Aboriginal or Torres Strait Islander person (0.4% compared with 1.1%) (Table A4.5a).

Age-standardised results

Only 'other characteristics' could be compared after age-standardisation, and the existing differences remained significant. No other significant differences emerged (Table A4.5b).

Patient reasons for encounter

The distribution of patient reasons for encounter (RFEs) given by patients attending general practice in the Australian Capital Territory was not significantly different to those provided by patients at all encounters, with one exception. Patients in the Australian Capital Territory were significantly less likely to describe circulatory problems as their reason for visiting the GP (9.2 per 100 encounters) compared with patients at all encounters (11.4 per 100) (Table A4.6a).

A request for check-up, either specific or general, was described by patients in the Australian Capital Territory at a rate of 12.0 per 100 encounters compared with the national rate of 14.6 per 100. This was the only individual RFE where patients at encounters with Australian Capital Territory GPs differed significantly from patients at all encounters (Table A4.7a).

Age-standardised results

After age-standardisation, the significant difference for circulatory problems no longer remained, although a new difference emerged. Patients described social problems as a reason for consulting the GP at a significantly lower rate than all patients at all encounters (Table A4.6b). In terms of individual RFEs the difference in request for check-up no longer existed. No other significant differences emerged (Table A4.7b).

Problems managed at encounter

Number of problems managed

The distribution of the number of problems managed at the encounter did not differ for the Australian Capital Territory when compared with the national average. At more than two-thirds of encounters the GPs managed only one problem (67.4%), and managed two problems at slightly less than one-quarter of encounters (23.8%). Three problems (7.1%) and four problems (1.7%) were managed at relatively few encounters (Table A4.8a).

Types of problems managed

The problems managed significantly more often in Australian Capital Territory patients were those associated with the respiratory system (24.1 compared with 21.7 per 100 encounters). Problems managed significantly less often when compared with the national rates were those associated with the skin (14.9 compared with 16.6 per 100), the circulatory system (12.9 compared with 16.6 per 100), those of a psychological nature (9.6 compared with 11.3 per 100) and the endocrine & metabolic system (7.9 compared with 9.9 per 100) (Table A4.9a).

Table A4.10a shows that the most common problem managed in the Australian Capital Territory was upper respiratory tract infection (7.1 per 100 encounters), followed by hypertension (6.6 per 100) and immunisation/vaccination (4.9 per 100), depression (3.7 per 100) and asthma and back complaint (2.6 per 100 encounters each). Five conditions were managed at a significantly lower rate than the national average:

- hypertension (6.6 compared with 8.8 per 100)
- diabetes (1.9 compared with 2.8 per 100)
- lipid disorders (2.1 compared with 2.8 per 100)
- anxiety (1.1 compared with 1.7 per 100) and
- insomnia (1.1 compared with 1.6 per 100 encounters).

There were no significant differences in the rates of management of other more common problems.

Age-standardised results

No significant differences emerged after age-standardisation in terms of numbers of problems managed (Table A4.8b). The only significant difference to remain after age-standardisation was that the rate of skin problems managed remained significantly lower in

the Australian Capital Territory than the national average (Table A4.9b). In terms of the most frequently managed problems, no differences remained after age-standardisation (Table A4.10b).

New problems managed at encounter

As previously reported, there were significantly fewer new problems managed in the Australian Capital Territory when compared with the national average (Table A4.3a). The new problems most frequently managed by Australian Capital Territory GPs paralleled those managed most frequently across Australia. Upper respiratory tract infection was the most frequent (4.5 per 100 encounters), followed by immunisation (1.8 per 100), acute bronchitis (1.2 per 100), sprain/strain and urinary tract infection (each recorded at a rate of 0.9 per 100 encounters) (Table A4.11a).

Age-standardised results

These results were not changed by age-standardisation. No significant differences emerged in the most frequently managed new problems (Table A4.11b).

Management rates

Earlier in this chapter we reported the rates of each management type provided per 100 encounters. In this section we view management in two other ways. First, we compare the rate of each management variable per 100 problems managed. This removes any bias introduced by differing numbers of problems managed per 100 encounters between states. Second, we look at the likelihood of GPs providing at least one of each management action at the encounter. This provides a simple picture of the chance the patient has of receiving, for example, a prescribed medication or a referral when they attend the GP.

GPs in the Australian Capital Territory prescribed, advised or supplied significantly fewer medications per 100 problems managed (64.5) than the national average (71.9). Although advised medications were not significantly different, the Australian Capital Territory GPs prescribed (55.5 per 100 problems) and supplied (2.6 per 100) significantly fewer medications than GPs nationally (60.4 and 5.5 per 100 problems respectively) (Table A4.12a).

They provided fewer procedural treatments per 100 problems managed (7.2 compared with 9.3) than GPs at the national level, but did not differ in terms of clinical treatments (24.3 per 100 problems), referrals (5.4 per 100) or orders for pathology (24.1 per 100) or imaging (6.5 per 100 problems managed).

Age-standardised results

After age-standardisation, all significant differences remained with the exception of prescribed medications. No other significant differences emerged (Table A4.12b).

Encounters for which management was recorded

This section considers the relative likelihood of at least one management action of each type per encounter, and the results are presented in Table A4.13a.

The likelihood of at least one management type being provided at the encounter was significantly lower at Australian Capital Territory encounters (88.8%) compared with the national average (91.7%). Specifically, at least one medication or other treatment (78.8%) was less likely to be provided than at the national level (83.0%), mainly due to at least one medication being significantly less likely to be prescribed, advised or supplied at the encounter. Although there were no differences in the proportions generating prescribed or

advised medications, the Australian Capital Territory GPs were only half as likely to supply a medication than their national counterparts (3.2% compared with 6.0%). They were also less likely to provide at least one therapeutic procedure at the encounter (9.5% compared with 12.6%). There was no significant difference in the proportion of encounters generating at least one referral, although Australian Capital Territory GPs were less likely to have made at least one referral to a hospital (0.1% compared with 0.3%). There were no significant differences in their likelihood of ordering at least one investigation, either for pathology or imaging.

Age-standardised results

After age-standardisation, these significant differences remained with the exception of at least one referral to a hospital, which became only marginal (Table A4.13b).

Medications

Some medication groups were prescribed at significantly different rates in the Australian Capital Territory when compared with the average for the nation.

- Medications acting on the cardiovascular system were prescribed at a significantly lower rate in the Australian Capital Territory (10.3 per 100 encounters) than the national average (13.7), mainly due to the lower prescribing rates of anti-hypertensives (5.7 compared with 7.4 per 100 encounters), beta-blockers (0.9 compared with 1.7 per 100) and anti-angina medications (0.8 compared with 1.2 per 100).
- Central nervous system medications were also prescribed at a significantly lower rate in the Australian Capital Territory (8.0 per 100) than the average for the nation (10.7 per 100). This was mainly attributable to the much lower rate of prescribed simple analgesics in the nation's capital (2.6 compared with 4.2 per 100), which was the only subgroup in which the difference was reflected.
- Medications for psychological problems were prescribed at a significantly lower rate in the Australian Capital Territory than the national average (6.4 per 100 compared with 7.6 per 100). This difference was due to the significantly lower rate of prescribed anti-anxiety agents (1.2 compared with 2.0 per 100 encounters).
- Although the prescribing rate for hormones generally was not significantly different to the national average (5.2 compared with 6.0 per 100), the rate of prescribed hypoglycaemic agents was significantly lower (1.1) than that prescribed nationally (1.9 per 100 encounters).
- Medications acting on the digestive system were prescribed at a significantly lower rate at encounters in the Australian Capital Territory (3.2) than at national encounters (4.0 per 100), and this was reflected in the lower rate of prescribing for anti-ulcerants (1.7 compared with 2.3).
- Prescribing rates for ear and nose topical medications did not differ in the national capital from the national average, but the rate for topical otic prescriptions was significantly lower in the Australian Capital Territory (0.5 compared with 0.9 per 100 encounters).
- Urogenital medications were prescribed at a rate of 1.3 per 100 encounters in the Australian Capital Territory which was significantly lower than the national rate of 2.1 per 100 encounters. This was reflected in the significantly lower rate of prescribed diuretics (0.9 compared with 1.5 per 100 encounters).

- The only medication prescribed significantly more often in the Australian Capital Territory than the national average was contraceptives (2.7 compared with 1.8 per 100 encounters), particularly oral or systemic contraceptives.

There were no significant differences in the prescribing rates of the other drug groups, including antibiotics, medications acting on the musculoskeletal, respiratory or allergy and immune systems, or medications for the skin, the blood, nutrition and metabolism, eye medications or anti-neoplastics (Table A4.14a).

Most commonly prescribed medications

Comparative results for the prescribing rates of each of the most frequently prescribed generic medications in the Australian Capital Territory are shown in Table A4.15a. The most frequently prescribed were amoxicillin (2.4 per 100 encounters), roxithromycin (2.2 per 100), cefaclor monohydrate (2.2 per 100), paracetamol (2.2 per 100) and influenza virus vaccine (2.2 per 100 encounters).

Twelve significant differences emerged for the Australian Capital Territory when compared with all of Australia. Ten of these were significantly lower prescribing rates than the national average:

- paracetamol (2.0 compared with 3.4 per 100 encounters)
- salbutamol (1.4 compared with 2.0 per 100)
- atenolol (0.4 compared with 0.9 per 100)
- betamethasone topical (0.5 compared with 0.9 per 100)
- ranitidine (0.6 compared with 0.8 per 100)
- frusemide (furosemide) (0.5 compared with 0.8 per 100)
- metformin (0.5 compared with 0.8 per 100)
- oxazepam (0.3 compared with 0.7 per 100)
- amlodipine (0.3 compared with 0.7 per 100)
- prochlorperazine (0.5 compared with 0.7 per 100 encounters).

For only two medications was the prescribing rate significantly higher in the Australian Capital Territory than for the rest of the country: cefaclor monohydrate (2.2 compared with 1.3 per 100 encounters) and levonorgestrel/ethinylloestradiol (1.8 compared with 1.3 per 100 encounters).

Age-standardised results

After age-standardisation, the only remaining significant differences in the rate of prescribed medications were in the rates of beta-blockers, central nervous system medications, simple analgesics, anti-anxiety agents, hypoglycaemic agents, and topical otic medications (Table A4.14b). Although the order of the most frequently prescribed medications changed, the same five medications were still the top five after standardisation. The significant differences in prescribing rates remained for paracetamol, salbutamol, cefaclor monohydrate, atenolol, betamethasone topical, oxazepam, and amlodipine. A new difference emerged with amoxicillin being prescribed at a significantly lower rate than the national average (Table A4.15b).

Other (non-pharmacological) treatments

As previously stated in 'Content of the encounters' (Table A4.3a), GPs from the Australian Capital Territory did not differ from the national average in terms of the number of other (non-pharmacological) treatments provided. Although clinical treatments were provided at a similar rate to those provided nationally, the rate of procedural treatments was significantly lower than the national average.

Clinical treatments

The rate of provision of any of the most frequent individual types of clinical treatment was not significantly different in the Australian Capital Territory when compared with the national rate. The most frequent clinical treatments were general advice/education (5.3 per 100 encounters), advice/education about the treatment of a problem (4.8 per 100), counselling about a problem (4.5 per 100), counselling/advice about nutrition/weight (3.7) and counselling for psychological problems (2.5 per 100 encounters) (Table A4.16a).

Procedural treatments

Several procedural treatments were provided at a significantly lower rate in the Australian Capital Territory than average:

- excision/removal of tissue/biopsy (including destruction, debridement or cauterisation) (1.7 compared with 2.8 per 100 encounters)
- dressing/compression/tamponade (1.3 compared with 1.9 per 100)
- incision/drainage/flushing/aspiration/removal of body fluid (0.6 compared with 1.1 per 100)
- repair/fixation-suture/cast/prosthetic device (apply/remove) (0.6 compared with 1.0 per 100)
- electrical tracings (0.2 compared with 0.4 per 100 encounters) (Table A4.17a).

Age-standardised results

After age-standardisation, a new difference emerged in the rate of provision of counselling for drug abuse, which was now significantly lower in the Australian Capital Territory (Table A4.16b).

All significant differences observed in the rates of procedural treatments remained, and no new differences emerged (Table A4.17b).

Referrals

As stated earlier in 'Content of the encounters' (Table A4.3a), Australian Capital Territory GPs did not differ from the national average in rates of referrals to specialists, allied health professionals, hospitals, emergency departments or for any other referrals.

Referrals to medical specialists

Patients were referred to medical specialists at a similar rate by Australian Capital Territory GPs (7.7 per 100 encounters) compared with other GPs in Australia (7.9 per 100). Referrals were most commonly made to ophthalmologists, orthopaedic surgeons, dermatologists and ear, nose and throat specialists (all at 0.6 per 100 encounters). The rate of referrals to a surgeon was significantly lower than the national average (0.5 compared with 0.8 per 100 encounters) (Table A4.18a).

Referrals to allied health professionals

There were no significant differences in the rates of referrals to allied health professionals. The most common referral made by Australian Capital Territory GPs was for physiotherapy (1.1 per 100 encounters), followed by referrals to podiatrists/chiropodists (0.4 per 100 encounters). Referrals to health professionals (unspecified), psychologists, dietitians/nutritionists and dentists all occurred at a rate of 0.2 per 100 encounters (Table A4.18a).

Age-standardised results

The rate of referrals to a surgeon remained significantly lower in the Australian Capital Territory after age-standardisation. No other significant differences emerged (Table A4.18b).

Pathology test orders

In the earlier section, 'Content of the encounters' (Table A4.3a), we stated that GPs in the Australian Capital Territory did not differ in their rates of pathology ordering when compared with the national average (35.0 compared with 33.7 per 100 encounters). Pathology tests classed as Chemistry were the most commonly ordered type, at a rate of 17.9 per 100 encounters, followed by Haematology (6.9 per 100) and Microbiology (5.5 per 100). The most frequently ordered individual pathology order was for a full blood count (4.8 per 100 encounters) (Table A4.19a).

Age-standardised results

After age-standardisation, a significant difference emerged in the rate of pathology orders for full blood count. GPs in the Australian Capital Territory requested this test at a significantly rate than the national average. No other significant differences emerged (Table A4.19b).

Imaging orders

Australian Capital Territory GPs did not differ from their national counterparts in rates of requests for imaging (9.4 compared with 8.2 per 100 encounters) as previously reported (Table A4.3a).

The most frequently ordered imaging tests classified by Medicare Benefits Schedule groups are presented in Table A4.20a. GPs in the Australian Capital Territory did not differ significantly in their imaging ordering in any of these groups.

Age-standardised results

These results did not change following age-standardisation. No significant differences emerged between rates for the Australian Capital Territory GPs and for all Australian GPs (Table A4.20b).

Patient risk factors

Information about patient height and weight were asked of patients of all ages for calculation of body mass index (BMI). However, questions about other risk behaviours such as smoking status and alcohol consumption were only asked of patients aged 18 years or over.

Body mass index

Adults

There were no significant differences in the proportions of underweight, normal, overweight or obese adults (aged 18 years and over) seen by participating GPs from the Australian Capital Territory compared with the national average (Table A4.21).

Children

The Australian Capital Territory GPs saw similar proportions of children aged 2–17 years in each of the underweight, normal, overweight and obese categories when compared with children in this age group seen by all participating GPs (Table A4.21).

Alcohol consumption

Adult patients (aged 18 years or more) from the Australian Capital Territory were significantly less likely to be non-drinkers (26.0% compared with 31.1%) and significantly more likely to be responsible drinkers (50.4% compared with 43.9%) than those from the nation as a whole. However, the proportion who were classified as at-risk drinkers did not differ from the national average (Table A4.21).

Smoking status

There were no significant differences in the smoking status of adult patients (aged 18 years and over) seen by GPs in the Australian Capital Territory when compared with the national average. However, there appeared to be a trend towards fewer daily smokers and more previous smokers.

10.3 Discussion

The GPs

The 78 GPs from the Australian Capital Territory who participated in BEACH were significantly different from their national counterparts in almost every respect. The higher proportion of GPs who are female, have worked fewer than 2 years in general practice, and are currently in a general practice vocational training program, reflect the recent trend towards feminisation of general practice, and suggests that young graduates are attracted to working in the Australian Capital Territory. Approximately 70% of new graduates from medicine in recent years have been female.⁴⁶ This trend may also be reflected in the differences in numbers of sessions worked per week, and in the fewer FWE equivalents per head of population – women may be more likely to work fewer than 6 sessions per week and less likely to work 11 or more sessions per week, as has occurred in the GP workforce in the nation's capital. The lower rate of home visits and visits to residential aged care facilities in the nation's capital may also relate to the higher proportion of female GPs. A recent study of residential aged care found that although numbers of female GPs had increased between 1984 and 2000, the rate of services of this type per female GP had declined, leading to a reliance on older, male GPs to provide these services.³¹ This does not, however, explain why GPs in the Australian Capital Territory made no hospital visits at all over the 5 years of this study. Age-standardisation did not explain the significant difference in the rates of hospital visits or in the rates of claims for 'other' items of service. The geographical construct of the

Territory may more likely account for these differences: the fact that the area is entirely metropolitan would alleviate the need for GPs to have visiting medical officer rights to their patients in hospital where they are under the care of hospital physicians.

The fact that 98.7% of Australian Capital Territory participants had a capital city practice location, although differing significantly from all participants at 67.1%, is not an unusual finding given the geography of the Australian capital. Place of graduation was the only characteristic where the Australian Capital Territory participants did not differ from their national counterparts.

The patients

The average rate of visits to GPs by the population of the Australian Capital Territory was lower by approximately 25% compared with the national average, and lower in each individual age group. Given the higher proportion of GPs working fewer than 6 sessions per week, the far fewer working more than 11 sessions per week (the national proportion is 6 times greater in this category), and the higher population:GP ratio, the patients appear to have less access to GPs than their national counterparts. The slightly greater proportion of people in the 15–24 year age group living in the Australian Capital Territory (16.0%) than the national average (13.7%) is reflected in the significantly higher proportion of encounters with patients in this age group compared with all Australia. Similarly the lower percentage of encounters with patients in the 65–74 (4.8%) and 75+ (3.7%) age groups is related to the lower percentage of the population in these age groups compared with the national average (6.8% and 5.8% respectively).

The Australian Capital Territory has a high socio-economic status by SEIFA classification⁴⁷ and the significantly lower rate of Commonwealth Concession Card holders at encounters with GPs reflects this. The smaller proportions of patients in the older age groups, of Aboriginal and Torres Strait Islander patients and NESB patients all relate to this significant difference, as these groups are considerably more likely to hold Commonwealth Concession Cards than other Australians.^{15,48}

As older patients have more problems managed and medications prescribed per 100 encounters,⁹ the smaller proportion of older people in the Australian Capital Territory may provide some explanation for the lower numbers of problems managed and lower rates of prescribed medications. However, patients aged 65 years and over have procedural treatments and medications supplied by the GP at a similar rate to the rest of the population,⁴⁹ so the significantly lower rates of these in the national capital cannot be explained by the age distribution (as supported by the age-adjusted result which remained significantly different). The significantly fewer circulatory problems recorded as the patients' reason for visiting the GP was also influenced by the smaller proportion of older people in the Australian Capital Territory as the difference no longer remained following age-standardisation.

The smaller proportion of Aboriginal or Torres Strait Islander peoples and Commonwealth Concession Card holders in the capital possibly contributed to the significantly lower rate of social problems reported as RFEs. Patients who identify themselves as Aboriginal or Torres Strait Islander have significantly higher rates of social problems managed by GPs than other Australian patients,¹⁵ as do Commonwealth Concession Card holders.²⁹ The smaller proportion of NESB patients may be influenced by several factors. First, although Canberra is a city, it is smaller than most state capitals and is regionally located. Encounters with NESB patients are more likely to occur in metropolitan practices than in regional areas.⁴⁸ There may also be fewer employment opportunities for migrants who are not yet Australian

citizens. Many Australian government departments are based in the Australian Capital Territory, and the Public Service Act (1999) requires that Agency heads must not engage (in normal circumstances), as an Australian Public Service employee, a person who is not an Australian citizen.⁵⁰

Problems and management

It would appear that the age distribution and high socio-economic status of the Australian Capital Territory population have resulted in their relative good health compared with all Australians. Although the general practice attendance rates for every age group in the Australian Capital Territory are lower than the national averages, the number of problems managed per encounter was no greater than for all encounters. Where problems were managed, there was a significantly lower prospect of a management of any type being provided. There were significantly fewer medications prescribed, advised or supplied, and fewer therapeutic treatments or referrals to hospital or a surgeon provided, per 100 encounters. Although amoxicillin was the most frequently prescribed medication in the Australian Capital Territory, it was still prescribed at a significantly lower rate than the national average (after age-standardisation).

Respiratory problems were the only problems that were managed significantly more often in the Australian Capital Territory than the national average. The higher rate of prescribed cefaclor monohydrate probably reflects this. The three most frequently prescribed medications (amoxicillin, roxithromycin and cefaclor monohydrate) were antibiotics commonly prescribed for respiratory problems, followed by paracetamol and influenza vaccine. Although upper respiratory tract infection was the most frequently managed new problem and the second most frequently managed problem overall, its management rate was not significantly different to the national rate, so it would appear that the antibiotics were prescribed for respiratory problems other than URTI.

The significantly lower management rates of circulatory problems (particularly hypertension), diabetes and lipid disorders are associated with the lower proportion of the population in the older age groups, and correspond to the significantly lower prescribing rates of atenolol (beta-blocker), amlodipine (anti-hypertensive), frusemide/furosemide (diuretic), and metformin (hypoglycaemic agent). Skin problems are also more prevalent in older patients and were managed significantly less often compared with the national average. This corresponded to the lower than national average rate of excision, and the significantly lower rate of prescribed betamethasone topical. The lower rates of psychological problems, notably anxiety and insomnia, correspond with the significantly lower prescribing rate of the anti-anxiety agent, oxazepam. The significantly lower prescribing rates of salbutamol and simple analgesics, especially paracetamol, may also reflect the significantly fewer Commonwealth Concession Card holders in the nation's capital, as these medications are available for over-the-counter purchase but may be more affordable if prescribed for these card holders. Apart from the better diets that may be associated with this higher socio-economic status, there seems little explanation for the significantly lower rate of medications for the digestive system, particularly anti-ulcerants.

The only medication other than cefaclor monohydrate to be prescribed at a significantly higher rate than the national average was the oral contraceptive, levonorgestrel/ethinylloestradiol. The higher proportion of the population in the 15–44 years age groups is the likely explanation for this disparity, as the difference no longer remained following age-standardisation.

The lower rate of many procedural treatments (dressing/compression/tamponade, incision/drainage/flushing/aspiration/removal of body fluid, repair/fixation-suture/cast/prosthetic device (apply/remove), electrical tracings) may reflect the metropolitan nature of the Australian Capital Territory. If a hospital casualty department is in close proximity, patients requiring these treatments may be more likely to attend these institutions than approach their GP, especially if a payment for the GP consultation is required. There seems no obvious explanation for the significantly higher rate of pathology orders for full blood counts (after age-standardisation) by GPs in the Australian Capital Territory compared with those ordered for other Australian patients.

Although the percentage of at-risk drinkers remained similar to all Australia, there were significantly fewer non-drinkers and significantly more responsible drinkers in the Australian Capital Territory. While the differences were not significant, there appeared to be a trend towards fewer daily smokers and more previous smokers. These differences may partially explain why (following standardisation) counselling for substance abuse emerged as a clinical treatment which occurred at a significantly lower rate than the national average.

The size and representativeness of the sample and the reliability of the research methods ensure the uniqueness of BEACH as a reliable data source.¹⁵ However, as in all research of this kind, there is the possibility that some of the significant differences reported here result from Type 1 error owing to the large number of comparisons made. Relying on 95% confidence intervals to determine differences may lead to 5% of identified differences being false.

10.4 Conclusion

The GPs in the Australian Capital Territory are more likely to be female, newly graduated, part-time workers who are enrolled in a general practice vocational training program. They are less likely, because of the mostly metropolitan nature of the Territory, to make a hospital visit than other Australian GPs. The patients are more likely to be younger, affluent, employees who drink responsibly compared with other Australians. They visit their GP less often per year but have similar numbers of problems managed when they do attend. They receive fewer medications, procedural treatments or referrals to a hospital or surgeon. Overall, this study suggests they seem to denote a younger, healthier pocket of Australia.

The practice patterns of GPs in the Australian Capital Territory are significantly different to those of all Australian GPs in many aspects. It may be more beneficial for health planners and workers to use data specific to the nation's capital rather than the national BEACH data when assessing the activity of general practitioners in the Australian Capital Territory.

11 Northern Territory

11.1 Background

The population of the Northern Territory was 197,768 people in 2001, accounting for the smallest proportion of the Australian population (1.0%). In the Northern Territory, 52.3% of the population were male, while females accounted for 47.7% (Table A3.1).

There were 221 GPs/OMPs practising in the Northern Territory in the last 3 months of 2001, equating to 92.8 FWE GPs, giving a ratio of one FWE GP per 2,131.1 people. This is around half the rate for Australia as a whole (one FWE GP per 1,153.9 people). One-quarter of the FWE GPs were aged over 55 years, which was slightly higher than the national average (25%) and a considerably higher proportion were female (33%, compared with the national average of 25%) (Table A3.1).

The median age in the Northern Territory was 30.3 years, 6 years younger than the national median (Table A3.1). The age distribution of the Northern Territory population is shown in Figure 11.1. People aged between 25 and 44 years accounted for over one-third of the population (35.2%), while almost one-fifth were aged 45–64 years. Only 1.2% of people were aged 75 years or more, while only 2.5% were aged 65–74 years.



In the Northern Territory 507,923 Medicare A1 and A2 items of service were processed over the period between July 2002 and June 2003. These accounted for 0.5% of total services processed over this time throughout Australia. On average, people living in the Northern Territory attended general practice 2.6 times in the 12-month period. This was a little more than half the overall rate for Australia (4.9 visits). Older people had the highest rates of Medicare-claimed attendance per annum, with those aged 75 years or more having an

average of 6.6 attendances per person (compared with 10.0 for all Australia), while people aged 65–74 attended 5.8 times (compared with 8.6 for all Australia). Those aged between 5 and 14 years attended only 1.2 times on average, while the 15–24 year age group had an average of 1.8 attendances per year (Figure 11.2).

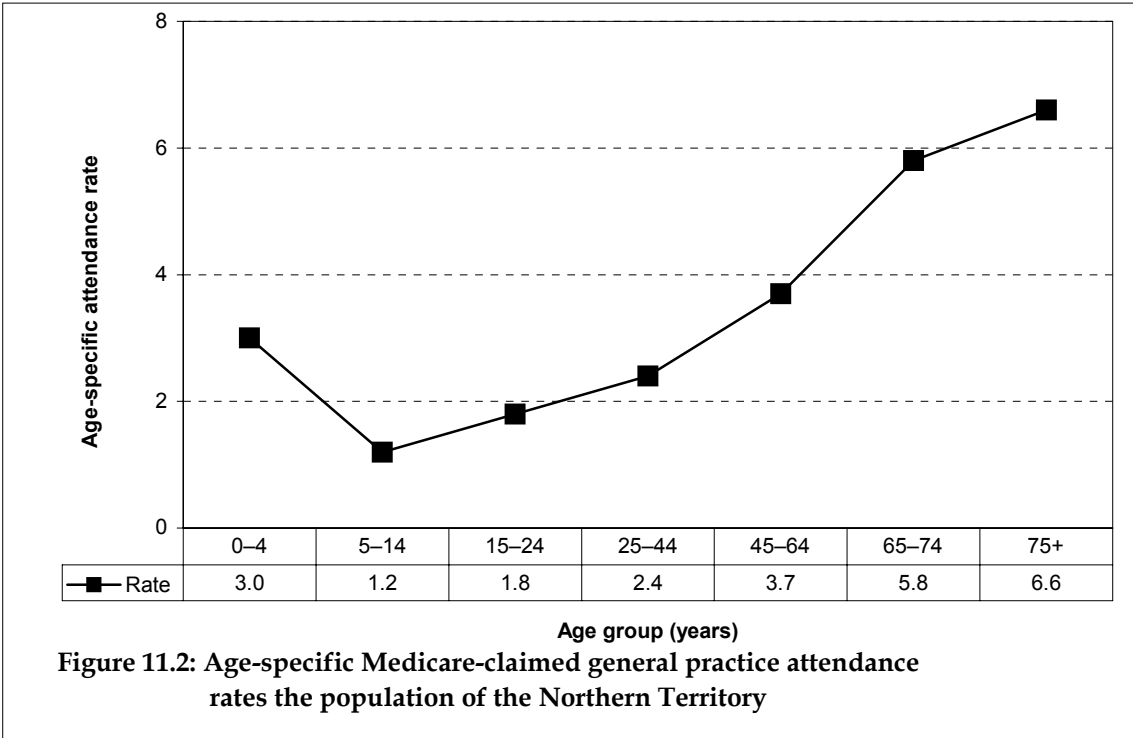


Figure 11.2: Age-specific Medicare-claimed general practice attendance rates the population of the Northern Territory

11.2 Results

Fifty-two GPs from the Northern Territory participated in BEACH between April 1998 and March 2003, accounting for 1.0% of the total 5-year sample. Northern Territory GPs provided details on 5,200 patient encounters. The Northern Territory results are compared with those for all of Australia in Appendix 4. The differences highlighted below are those identified by non-overlapping 95% confidence intervals. Marginal differences (where confidence intervals meet but do not overlap) are not noted here but can be examined in the tables in the Appendix.

The general practitioners

The participating GPs from the Northern Territory were a little older than average, with the greatest proportion of GPs being 55 years and over (34.6% compared with the average of 28.4%). The GPs did not differ markedly from the total sample in terms of sex distribution or years in general practice. Compared with the total sample, GPs in the Northern Territory were somewhat less likely to work less than six sessions per week (11.5% compared with 15.8%) and more likely to work in small group practices of 2–5 GPs (51.9% compared with 39.2%) than in large practices of 5 or more GPs (30.8% compared with 44.0%). The GPs were mostly practising in Darwin (67.3%) or in remote centres (11.5%). They were more likely to hold FRACGP than the average (41.2% compared with 32.2%) (Table A4.1).

The encounters

The raw figures for each variable in the BEACH data set for Australia and each state/territory are provided in Table A4.2.

Content of the encounters

The rate of patient reasons for encounter (145.8 per 100 encounters) and of problems managed (149.0 per 100 encounters) did not differ from the national average. However, new problems were managed at a significantly higher rate in the Northern Territory (58.6 per 100 encounters compared with the average of 51.2 per 100 encounters) and work-related problems were managed at twice the average rate (6.7 per 100 compared with 3.4 per 100) (Table A4.3a).

The number of medications per encounter in the Northern Territory (104.6 per 100) did not differ from the national average. GPs in the Northern Territory, however, supplied significantly fewer medications directly to the patient at the encounter than average (4.9 per 100 encounters compared with 8.1 per 100).

There were no significant differences in terms of other management received at the encounter. The overall rate of other treatments (54.8 per 100 encounters), the rate of referrals (12.4 per 100 encounters), including hospital referrals (0.8 per 100 encounters), and the overall rate of orders for imaging tests (7.8 per 100 encounters) were similar to the national average. Although the rate of pathology ordering (41.8 per 100 encounters compared with the average 33.8) was the highest in the country, this difference was not significant, due to the smaller sample size from the Northern Territory.

Age-standardised results

After age-standardisation, the difference in the rates of new and work-related problems were no longer significant. However, the rate of GP-supplied medications remained significantly lower in the Northern Territory (Table A4.3b).

Type of encounter

The proportion of consultations involving face-to-face contact with the patient (direct encounters) was similar in the Northern Territory (97.1%) to the national average (Table A4.4a). There was a significantly greater proportion of encounters with no charge to the patient compared with the national average (1.7 % compared with 0.7 %) and there was a significantly smaller proportion of claimable MBS items (87.7% compared with 92.6%). Although only a small proportion of all encounters, those conducted in residential aged care facilities were less common in the Northern Territory compared with the national average (0.3% compared with 1.0%).

Age-standardised results

After age-standardisation, differences remained between the Northern Territory and the national average in terms of relatively more encounters with no charge and relatively fewer MBS items remained (Table A4.4b). However, standardisation removed the observed difference in rates of encounters at residential aged care facilities.

Characteristics of the patients at encounter

The expected age distribution of patients at encounter in the Northern Territory was calculated from the age distribution of the Northern Territory population (Figure 11.1) and mean annual GP visits by age group (Figure 11.2). The observed age distribution of BEACH encounters from the Northern Territory (Table A4.5a) did not differ from the expected age distribution (results not shown). Therefore, the Northern Territory sample of BEACH encounters was representative of the Northern Territory population in terms of age distribution and GP visit rates.

The patients at encounters with GPs in the Northern Territory were significantly younger than all patients at encounters (Table A4.5a). There was a greater proportion of children aged 1–4 years (6.7% compared with 4.9%) and adults aged 25–44 years (34.7% compared with 25.9%). There was a smaller proportion of older adults aged 65–74 years (6.4% compared with 12.1%) and 75 years plus (3.8% compared with 13.0%).

The proportion of encounters where the patient was new to the practice was significantly greater in the Northern Territory compared with the national average (16.1% compared with 9.2%). There was a significantly smaller proportion of encounters with patients holding a Commonwealth Concession Card (23.8% compared with 39.3%) or a Repatriation Health Card (1.4 % compared with 3.4%). The proportion of encounters with Indigenous patients was eight times the national average (8.6% compared with 1.1%).

Age-standardised results

After age-standardisation, the rates of encounters with new patients, and encounters with Indigenous patients, remained significantly higher than the national average. A significantly lower proportion of encounters with Commonwealth Concession Card holders also remained, although the size of the difference was reduced. The rate of Repatriation Health Card holders was no longer significantly lower after age-standardisation (Table A4.5b).

Patient reasons for encounter

The patient reasons for encounter in the Northern Territory were broadly similar to all Australia with some significant differences. Patients described significantly higher rates of skin problems (16.9 per 100 encounters compared with 15.0 per 100) and ear problems (5.4 per 100 encounters compared with 4.1 per 100) than the Australian average. Conversely patients described fewer circulatory problems than average (6.8 per 100 encounters compared with 11.4 per 100) (Table A4.6a).

In terms of specific reasons for encounter, patients gave immunisation/vaccination as a reason for encounter less frequently than the Australian average (2.1 per 100 encounters compared with 4.6 per 100). Patients described a significantly higher rate of fever (3.0 per 100 encounters compared with 1.9 per 100), ear pain (3.0 compared with 1.7 per 100 encounters) and diarrhoea (2.3 per 100 encounters compared with 1.3 per 100) (Table A4.7a).

Age-standardised results

Most of the differences observed in patient reasons for encounter disappeared after age-standardisation, with two exceptions. After age-standardisation, only ear pain and diarrhoea remained significantly higher than average as reasons for encounter in the Northern Territory (Tables A4.6b and A4.7b).

Problems managed at encounter

Number of problems managed

The distribution of the number of problems managed by the GP at the encounter did not differ between the Northern Territory and the national average (Table A4.8a). At nearly two-thirds of encounters (64.2%) only one problem was managed. One in ten (10.6)% encounters involved the management of three or four problems.

Types of problems managed

The rates of problems managed by GPs in the Northern Territory broadly resembled the national profile with some exceptions (Table A4.9a). There was a significantly higher rate of skin problems (19.2 per 100 encounters) and ear problems (5.8 per 100 compared with 4.3 per 100) and a higher rate of management of pregnancy and family planning (6.0 per 100 encounters compared with 4.3 per 100). GPs in the Northern Territory managed relatively fewer circulatory problems than the national average (12.4 per 100 encounters compared with 16.6 per 100).

In terms of common specific problems, GPs in the Northern Territory managed hypertension (6.8 per 100 encounters compared with 8.8 per 100), problems described as immunisation (2.5 per 100 encounters compared with 4.8 per 100) and osteoarthritis (1.7 per 100 encounters compared with 2.4) significantly less frequently. Northern Territory GPs managed general check-ups (3.5 per 100 encounters compared with 1.9) at a significantly higher rate than the national average (Table A4.10a).

Age-standardised results

The distribution of the number of problems managed by the GP at the encounter did not differ between the Northern Territory and the national average after age-standardisation (Table A4.8b).

After age-standardisation, there remained significantly higher management rates of skin and ear problems but the differences in the rates of circulatory and pregnancy and family planning problems were removed. After standardisation, one new difference emerged: male genital problems were managed at significantly higher rates in the Northern Territory compared with Australia as a whole (Table A4.9b).

Among the most commonly managed problems, general check-ups remained significantly higher, but the differences in the rates of immunisations, osteoarthritis and hypertension were removed. Although the crude management rate of diabetes was not significantly higher than average, age-standardisation revealed a significantly higher age-standardised rate of diabetes management in the Northern Territory (Table A4.10b).

New problems managed at encounter

Compared with the national average, there were few differences in the rates of new problems commonly managed by GPs in the Northern Territory. One exception was the management of otitis externa, which was managed as a new problem significantly more frequently than average (1.2 per 100 encounters compared with 0.4 per 100 encounters). There was also a significantly lower than average rate of new immunisation problems at Northern Territory encounters (1.1 per 100 compared with 2.3) (Table A4.11a).

Age-standardised results

After age-standardisation, the management of otitis externa as a new problem remained significantly higher than average (Table A4.11b). The lower rate of immunisation was not significant after age-standardisation.

Management rates

Earlier in this chapter we reported the rates of each management type provided per 100 encounters. In this section we view management in two other ways. First, we compare the rate of each management variable per 100 problems managed. This removes any bias introduced by differing numbers of problems managed per 100 encounters between states. Second, we look at the likelihood of GPs providing at least one of each management action at the encounter. This provides a simple picture of the chance the patient has of receiving, for example, a prescribed medication or a referral when they attend the GP.

Table A4.12a shows the rate of treatments received per 100 problems managed. The total rate of all medications prescribed, advised or supplied per 100 problems in the Northern Territory was comparable to the national average. GPs in the Northern Territory supplied medications directly to the patient at a significantly lower rate than average (3.3 per 100 problems compared with 5.5 per 100). There were no significant differences between the Northern Territory and the national average in rates per 100 problems of other treatments, referrals, imaging or pathology orders.

Age-standardised results

Table A4.12b shows the age-standardised rates of treatments per 100 problems. There was no change in the pattern of treatments after age-standardisation.

Encounters for which management was recorded

This section considers the relative likelihood of at least one management action of each type per encounter, and the results are presented in Table A4.13a.

There was no difference between the Northern Territory and the national average in the proportion of encounters that received any medications (66.1%), any prescriptions (57.6%), advised medications (10.0%) or a medication supplied by the GP (4.1%). The percentage of encounters where the patient received at least one other treatment (40.4%), either clinical (31.4%) or procedural (11.8%), was similar to the national average. The proportion of encounters that received any referrals (12.0%), including to hospital (0.3%) or to a specialist (5.0%), also did not differ from the national average. However, the proportion of encounters that resulted in an order for any investigation was significantly greater in the Northern Territory (23.6%) than the national average (20.4%). This was largely explained by the greater proportion of encounters in the Northern Territory where an order for a pathology test was made (18.3% compared with 14.9%).

Age-standardised results

The greater proportion of Northern Territory encounters with an order for a pathology test remained unaffected by age-standardisation (Table A4.13b).

Medications

Most major medication groups were prescribed in the Northern Territory at rates comparable to the national average (Table A4.14a). Antibiotics, however, were prescribed at a significantly higher rate than the national average (19.3 per 100 encounters compared with 14.9 per 100 encounters). In particular, penicillin was prescribed at twice the rate of the national average (4.7 per 100 encounters compared with 2.2 per 100 encounters).

Topical ear medications were prescribed significantly more frequently at Northern Territory encounters (2.3 per 100) than the national average (0.9 per 100 encounters).

Simple analgesics (2.1 per 100 compared with 4.2 per 100) and anti-anxiety agents (1.4 per 100 compared with 2.0 per 100) were prescribed significantly less frequently in the Northern Territory compared with the national average. Medications acting on the endocrine/nutrition/metabolic system were infrequently prescribed in the Northern Territory (0.8 per 100 encounters), significantly below the national average (1.5 per 100).

Most commonly prescribed medications

In terms of generic medications, the most commonly prescribed in the Northern Territory was combined paracetamol/codeine analgesic, which was prescribed significantly more frequently than the national average (3.1 per 100 encounters compared with 2.2 per 100 encounters). The higher prescribing of the combined analgesic was compensated by the significantly lower prescribing of simple paracetamol in the Northern Territory (1.4 per 100 encounters compared with 3.4 per 100 encounters). The prescribing of systemic diclofenac sodium (2.2 per 100 encounters) was twice the national average; however, the prescribing of celecoxib was significantly lower than the national average (0.5 per 100 encounters compared with 1.0 per 100) (Table A4.15a).

Age-standardised results

After age-standardisation, the prescribing rates of antibiotics and topical ear medications remained significantly higher than the national average. The prescribing rate of penicillin remained significantly higher than the national average; however, the age-standardised prescribing rate of plain amoxicillin was significantly lower. The prescribing rates of simple analgesics remained significantly lower than the national average. The prescribing rate of diclofenac sodium remained significantly higher after age-standardisation. The differences in the rates of anti-anxiety agents and endocrine/nutrition/metabolism medications were only marginally significant after age-standardisation, and there was no significant difference from the national average for celecoxib after age-standardisation (Tables A4.14b and A4.15b).

Other (non-pharmacological) treatments

As shown in Table A4.3a, the overall rate of other (non-pharmacological) treatments was comparable to the national average.

Clinical treatments

The rate of all clinical treatments in the Northern Territory was not different from the national average. Table A4.16a shows the most common clinical treatments given. Counselling/advice for smoking was given significantly more frequently at encounters in the Northern Territory (1.9 per 100 encounters compared with 0.7 per 100).

Procedural treatments

Overall the rates of procedural treatments in the Northern Territory were similar to the national average. The rates of dressing/pressure/compression/tamponade, physical medicine/rehabilitation and other non-specified therapeutic procedures were lower than the national average (Table A4.17a).

Age-standardised results

The rate of counselling/advice for smoking remained significantly higher than average after age-standardisation (Table A4.16b).

The lower rates of physical medicine and non-specified procedures remained significantly lower after age-standardisation. However, the lower rates of dressing/pressure/compression/tamponade did not persist after standardisation (Table A4.17b).

Referrals

Referrals to medical specialists

The overall rate of referrals to medical specialists in the Northern Territory (7.6 per 100 encounters) was similar to the national average (Table A4.18a). However, GPs in the Northern Territory made referrals to surgeons significantly more often than the national average (1.5 per 100 encounters compared with 0.8 per 100). Referrals to ophthalmologists (0.4 per 100 encounters), gastroenterologists (0.1 per 100 encounters) and urologists (0.1 per 100 encounters) were made significantly less frequently than the national average (0.8, 0.4 and 0.3 per 100 encounters respectively).

Referrals to allied health professionals

There were no differences between the Northern Territory and the national average in referral rates to allied health and other health professionals (Table A4.18a).

Age-standardised results

The age-standardised rates of referrals to surgeons remained significantly higher in the Northern Territory compared with the national average. Referrals to gastroenterologists and urologists remained significantly lower than the national average, but referrals to ophthalmologists were no longer significantly lower after age-standardisation. One new age-standardised difference emerged: rates of referral to dermatologists were significantly lower in the Northern Territory compared with the national average (Table A4.18b).

Pathology test orders

Table A4.19a shows the rates of orders for pathology tests by Medicare Benefits Schedule (MBS) groups and subgroups. There were no significant differences between the Northern Territory and the national average in terms of the rates of pathology orders per 100 encounters. Chemistry tests were the most commonly ordered (22.4 per 100 encounters), followed by Microbiology (7.1 per 100 encounters) and Haematology (6.2 per 100 encounters).

Age-standardised results

Age-standardisation did not reveal any differences in rates of pathology orders (Table A4.19b).

Imaging orders

Order rates for imaging tests by MBS group and subgroup are shown in Table A4.20a. GPs in the Northern Territory ordered most types of imaging tests at similar rates to the national average. The one exception was computerised tomography, which was ordered significantly less frequently in the Northern Territory compared with the national average (0.3 per 100 encounters compared with 0.7 per 100).

Age-standardised results

After age-standardisation, the rate of computerised tomography orders in the Northern Territory remained lower than the national average (Table A4.20b).

Patient risk factors

There have been three major ongoing subsample studies of selected patient risk factors: patient body mass index (BMI) calculated from patient self-reported height and weight, self-reported alcohol consumption and smoking status. The methods applied to these subsample studies are described in Chapter 2 – Methods.

Body mass index

Adults

There were 1,618 adult patients (aged 18 years and over) for whom BMI could be calculated. There was no difference between the Northern Territory and the national average in the proportion of overweight (31.3%) or obese patients (19.3%) (Table A4.21).

Children

There were 221 children aged between 2 and 17 years for whom BMI could be calculated. Of these 75.6% were normal or underweight, 14.9% were overweight and 9.5% were obese. These proportions were not significantly different from the national average (Table A4.21).

Alcohol consumption

In terms of drinking, a significantly greater proportion of Northern Territory patients (aged 18 years or more) were at-risk drinkers compared with the national average (39.9% compared with 25.0%) and a significantly smaller proportion were non-drinkers (26.1% compared with 31.1%) (Table A4.21).

Smoking status

Patients (aged 18 years and over) in the Northern Territory were also significantly more likely to smoke daily (28.9%) compared with the national average (18.6%) (Table A4.21).

11.3 Discussion

There were several salient differences in patient morbidity and management at GP-patient encounters in the Northern Territory.

The Northern Territory differs from Australia in demographic terms, with a younger population and a high proportion (28%) of Aboriginal or Torres Strait Islander people⁵¹. These differences are reflected in the demographics of patients seen at GP-patient encounters. There was a greater proportion of encounters with patients aged 25 to 44 and a smaller proportion with those aged 65 years and over in the Northern Territory. The rate of encounters with Indigenous people was higher than for any other state or territory (8.6%) but still low relative to the size of the Indigenous population in the Northern Territory.

The younger age of patients may partly explain the smaller proportion that held a Commonwealth Concession Card compared with the average for Australia, although the lower rate of Commonwealth Concession Card holders in the Northern Territory remained after age-standardisation. The higher rate of work-related problems was explained by the younger age of patients in the Northern Territory since after age-standardisation the rate of work-related problems was no longer significantly higher than the national average. Only one in ten encounters in the Northern Territory were with patients aged 65 years and over, compared with the national average of one in four.

The larger proportion of encounters with younger patients did not fully explain the higher rate of patients who were new to the practice, since the rate remained significantly higher after age-standardisation. This high rate of patients new to the practice possibly reflects the low average annual visit rates for the Northern Territory and may indicate less continuity of care. Distance from services contributes to infrequent GP attendance, and patients in the Northern Territory may make opportunistic use of medical services whenever they visit a major centre, without returning regularly to the same GP. Infrequent attendance may also explain the high rates of general check-ups that occur at encounters in the Northern Territory as GPs take the opportunity to provide general health check for new patients or those seen only occasionally. The higher rates of general check-ups could also explain the higher rate of pathology ordering in the Northern Territory.

Morbidity management rates in the Northern Territory need to be interpreted in the light of the apparent lack of GP services. The Northern Territory has around half the number of Medicare-paid FWE GPs per head of population than Australia as a whole, and half the mean number of annual GP visits per head of population. These figures are based on the number of claims for Medicare general practice items and represent activity in private general practice. Based on Medicare claims activity, the ratio of FWE GPs to the number of practising GPs in the Northern Territory is $93 \text{ FWE} / 221 \text{ GPs} = 0.42$. Each GP is working on average less than half a full-time load. This compares to a ratio of 0.79 for all Australian GPs. This indicates that the Northern Territory GPs spend less time in conventional private practice than their counterparts in other states. It could be that a high proportion of GPs in the Northern Territory work part-time, especially since the Northern Territory has a high proportion of female GPs. An alternative explanation is that Northern Territory GPs are providing more consultations in primary health care services that are not claimed as MBS items than their counterparts in other states. General practice in the Northern Territory appears more diverse than in other states, with a large proportion of GPs working in salaried positions in remote communities and Territory Health Clinics.⁵² Therefore, some of the short-

fall in population visit rates to private general practice, as measured by Medicare claims, may be met by consultations with salaried GPs that are not claimed through Medicare.

Even though patients visit private general practice less frequently, GPs manage the same mean number of problems per encounter as the national average. Therefore, GPs are not compensating for fewer visits by each patient by managing more problems at each visit. Therefore, those morbidities that are managed at the same rate per 100 encounters as the national average are in fact managed relatively less frequently in private practice per head of population in the Northern Territory, since there are fewer encounters per head of population compared with the Australian average.

One exception was diabetes which had nearly twice the age-standardised management rate per 100 encounters than the national average. However, GP visits per head of population is half the national average, so it appears that the diabetes management rate per head of population in the Northern Territory is only slightly less than the Australian average. This may indicate that Northern Territorians are more likely to attend a GP for the management of diabetes, relative to other morbidities, perhaps as part of a structured care plan. Alternatively, higher age-specific prevalence of diabetes among the Northern Territory population may account for the higher age-standardised visit rates for diabetes relative to other morbidities.

Ear problems were also prominent at encounters in the Northern Territory. Patients gave ear pain as a reason for encounter more frequently than average. GPs managed ear problems and prescribed topical ear medications at a higher rate per 100 encounters than the national average. These increased rates could be due to the high management rates of otitis media among Indigenous patients.¹⁵

The small proportion of encounters with Aboriginal and Torres Islander people relative to the proportion of the Northern Territory population indicates that Aboriginal and Torres Strait Islander people are visiting private general practice much less frequently than the rest of the Northern Territory population. However, it is uncertain how much of this difference is due to under-identification of Aboriginal and Torres Strait Islander patients in BEACH and how much is explained by the use of alternative primary health care services by Aboriginal and Torres Strait Islander people. The promotion of the 'Well persons check-up' among Aboriginal and Torres Strait Islander health services may contribute to the high rate of check-ups at encounters in the Northern Territory.

The BEACH program as a data source is unique in Australia. Its strengths lie in the large size and representativeness of the sample, and the reliability of the research methods.¹⁵ However, as in all analyses of this kind, relying on 95% confidence intervals with a large number of comparisons leads to a possibility that 5% of observed differences may be false (Type 1 error).

11.4 Conclusion

Compared with the national average, the Northern Territory has fewer FWE GPs per head of population, the population visits a GP less frequently on average, and relatively fewer Territorians attend a regular GP. As the number of new patients is higher than elsewhere this suggests that they may have received less continuity of care. Despite fewer patient visits, GPs in private practice are not being presented with a greater number of problems to manage (per encounter) when visits do occur. Analogous to the fewer problems, GPs in private practice in

the Northern Territory provide fewer managements per head of population for most morbidities relative to the Australian average.

One exception may be diabetes where the higher age-specific management rate may indicate that patients in the Northern Territory are returning more frequently for the management of diabetes than for other morbidities, perhaps as part of a program of structured care.

Less frequent visits, less continuity of care and higher risk factors among Northern Territory patients may explain the higher rate of check-ups seen at Northern Territory encounters. Aboriginal and Torres Strait Islander persons appear to be visiting GPs even less frequently than other Territorians, indicating that Aboriginal and Torres Strait Islander persons from the Northern Territory are among the most infrequent attenders at general practice.

Northern Territory GPs are claiming on average fewer Medicare items than average for all states and territories, indicating they spend less time in private general practice than average GPs. It would be useful to enumerate those consultations with salaried GPs that are not claimed against Medicare to understand how much of the short-fall in patient visit rates to private general practice is compensated by attendance at Territory funded clinics and other health services.

This report has described important differences between the Northern Territory and Australia as a whole. These differences indicate that the Northern Territory cannot rely on national averages to adequately understand private general practice in the Territory. Where possible, specific analyses should be undertaken to describe the Northern Territory's unique general practice context.

12 Discussion

This report has provided the first clear description of the current activities of general practitioners in each state and territory of Australia. These data fill a gap in available information about the health of the Australian population. Information has been available about hospital in-patient attendances,²⁷ mortality rates and cause of death,²⁸ but these statistics reflect what happens to a minority of the population. The National Health Survey collects information about the health of the broader community but this survey is only conducted every 4 years and relies on self-reported problems.⁵ The state-based health surveys rely on self-report by telephone interview on a selected range of topics.^{53,54}

About 85% of the population visit a GP at least once in any given year and it could be assumed that close to all Australians would have visited at least once in the 5-year period of the BEACH study reported here (1998–2003). This report therefore provides an additional view of the health of the population in each state and territory. The only previous report has been a simple upper level summary of results by state and territory, published in the report of the Australian Morbidity and Treatment Survey 1990–91, almost 15 years ago.²²

The BEACH GP–patient encounter data in each state and territory were found to be remarkably representative. When we tested the age distribution of patients at BEACH encounters in each state and territory against the expected age distribution (on the basis of the age distribution of each population and the mean annual visit rate per age group within that population), the results did not differ. One can therefore conclude that the sample of BEACH encounters was representative of the population in each state and territory in terms of age distribution and GP visit rates.

The remarkable consistency of most of the results across the country is notable. While differences have been identified between the characteristics of the GPs, their patients and their practice patterns in every state and territory, considering the very large number of comparisons made, relatively few significant differences were identified. However, the study has demonstrated that while practice patterns are similar across the country, each state and territory has specific morbidities or management styles which stand out, being above or below the average. Only some of these can be partially or fully explained by the age distribution of the state/territory patient population.

These data provide health care planners with an up-to-date view of the common issues taken to and managed by GPs in each state and territory. They also provide other researchers with state and territory averages against which they can compare smaller study samples. The large sample size and the consequent accuracy of the estimates can assist researchers to plan local general practice based studies of specific morbidity and its management by providing better estimates of required GP sample size through a knowledge of the likely occurrence of the event of interest.

The statistical techniques applied in BEACH recognise that the sampling is based on GPs and that for each GP there is a cluster of encounters. Each cluster may have its own characteristics, being influenced by the characteristics of the GP. While ideally the sample should be a random sample of GP–patient encounters, such a sampling method is impractical in the Australian health care system. The reader should, however, be aware that the larger the GP sample and the smaller the cluster, the better. The national sample size of 100,000 encounters from a random sample of 1,000 GPs per year has been demonstrated to be the most suitable balance between cost and statistical power and validity.⁵⁵

The very large sample sizes for the more populous states of New South Wales, Victoria and Queensland (189,200, 114,000 and 93,300 respectively) provide a very reliable picture of general practice activity in these states. Even in Western Australia and South Australia the sample sizes of 41,200 and 38,100 are larger than other state based health data currently available. Tasmania, the Australian Capital Territory and the Northern Territory, with smaller populations and fewer GPs, had smaller sample sizes of 13,300, 7,800 and 5,200 respectively. This resulted in somewhat wider confidence intervals in the estimates of events, thus reducing the number of variables found significantly different from the national average. Yet the Australian Capital Territory and the Northern Territory were the two that differed most from the national average. The influence of the age distribution of these two populations on their results has been discussed in the relevant chapters.

The results of this study suggest that people interested in the general practice care provided in New South Wales and Victoria can largely rely on the published annual reports of the national BEACH data, since these two states did not differ markedly from the average. This is not surprising as both heavily influence the average through the size of their populations and therefore the size of their representation in the total data set. However, in New South Wales, topics that may be worthy of more detailed analysis of BEACH data were the higher management rates of hypertension and lipid disorders, neither of which were explained by the age distribution of the population. The overall higher prescribing rate in New South Wales may also be worth more specific study. In Victoria, the higher management rates of psychological problems (anxiety in particular) in combination with the higher prescribing of anti-anxiety agents could be worthy of further investigation. It is interesting to find that the proportion of patients reporting at-risk alcohol consumption levels was lower than average in both New South Wales and Victoria, and the other risk factors measured (smoking and BMI) provided results consistent with the national average.

In Queensland, the higher management rate of skin problems (particularly solar keratosis and malignant neoplasms), together with their low referral rate to dermatologists and their more frequent action of excision/biopsy, suggest that GPs in this state are taking considerable responsibility for the management of these problems. More detailed analysis of this subset of data may assist in the design of educational programs for general practitioners in managing these problems.

In Western Australia, the pattern of morbidity managed was remarkably similar to the average and it is unclear why the prescribing rate was significantly lower than average, even after age-standardisation. It may reflect their lower management rates of respiratory and circulatory problems as the prescribing rates of anti-hypertensives and antibiotics were both lower than average. The higher proportion of patients reporting at-risk levels of drinking may be worthy of increased state based attention.

In South Australia, there were lower rates of management of immunisation/vaccination and hypertension with an associated lower prescribing rate for drugs acting on the cardiovascular system (particularly anti-hypertensives). As these differences were not due to the age distribution of the South Australian patients, further investigation of these results might provide some insight into whether hypertension is not being diagnosed at the optimum rate and whether the immunisations are being covered by other services within the health care system. The higher reported patient prevalence of obesity, together with the lower rate of provision of counselling regarding exercise by participating GPs, may suggest that programs highlighting the obesity problem should be promoted in general practice in this state.

In Tasmania, the significantly higher proportion of the patient population who reported smoking on a daily basis is somewhat surprising. Tasmania has a somewhat older population than average and the highest smoking rates are usually found in younger people.¹⁵ The relatively high prescribing rates of narcotic analgesics and psychotropic drugs may be explained by the higher management rate of back complaints but this area is worthy of further investigation through more detailed analysis of BEACH data for Tasmania.

In the main, the differences found in GP activity in the Australian Capital Territory were due to the age distribution of the patient population which is younger than average. The fewer visits per head of population to general practice did not result in higher rates of morbidity managed when they did attend. It is highly likely that the results are reflecting the relatively young and affluent nature of the community. However, because of the difference in the age distribution in this area, any specific analysis of GP management of any selected problem needs to be undertaken for the Australian Capital Territory alone, as relying on the annual BEACH national reported data would not provide a true picture for the Capital Territory itself.

The relatively young age distribution of the population also explains many of the differences in the Northern Territory, although there are a number of specific areas that should be investigated further at Territory level. These include the high number of work-related problems managed in general practice, the more frequent management of ear and skin problems and the higher age-standardised rate of diabetes management. In terms of population risk factors, the Territory GPs seem well aware of the high prevalence of daily smoking (as they provide more frequent advice and counselling on this subject), but their attention could be drawn to the very high patient prevalence of at-risk drinking behaviour identified in this study.

12.1 Using BEACH data with those from other sources

Users of the data reported in this publication might wish to compare the results with those from other sources, such as the National Health Survey⁵ or the HIC.⁴ Although integration of data from multiple sources can provide a more comprehensive picture of the health of the community, the user must keep in mind the limitations of each data set and the differences between them. Some examples are presented below.

The National Health Survey (NHS) and state based telephone interviews

Using BEACH data in combination with NHS state or territory data could provide a more comprehensive picture of the health of the community. However, both the NHS and the state based telephone surveys (e.g. the NSW Health Survey,⁵⁴ South Australia's Omnibus Survey⁵³) are population based, where the unit of selection and analysis is the person. This allows estimates of prevalence and incidence for some conditions.

In contrast, the BEACH survey is encounter based. Estimates of incidence can be made on the basis of the number of new presentations of a selected condition through extrapolation of the rate of presentation to the total number of Medicare-paid encounters in that state/territory over the same period. However, BEACH describes what happens at the GP-patient encounter. While about 85% of the population visit a GP in any one year,

incidence estimates from BEACH describe incidence within the attending population, not incidence for the total population, because some may choose not to attend the GP for management of their problem.

You cannot estimate population prevalence of disease from the BEACH encounter data as there are 100 million GP consultations represented by the national sample, not 19.5 million people.

The most useful approach is to use the NHS to gain an estimate of population prevalence of a disease and then consider the encounter data on the basis of this prevalence estimate in your state or territory. MBS and PBS data can also be used in combination with the NHS and BEACH data.

The Pharmaceutical Benefits Scheme (PBS)

If comparing BEACH prescribing data with data from the PBS, the reader should be aware of the following differences.

- Total medications in BEACH include those prescribed, those supplied to the patient directly by the GP, and those advised for over-the-counter purchase.
- Each prescription recorded in the BEACH program reflects the GP's intent that the patient receives the prescribed medication and the specified number of repeats. The prescription, irrespective of the number of repeats ordered, is counted only once.
- Prescriptions are counted in BEACH irrespective of whether or not the medication is covered by the PBS for all patients, for those holding a Commonwealth Concession Card or for those who have reached the safety net threshold.
- The BEACH data do not provide information on the number of prescriptions not filled by the patient (and neither does the PBS).

In contrast, the PBS data:

- count the prescription each time it is dispensed by the pharmacist
- count only prescribed medications subsidised by the PBS (i.e. those costing more than the minimum subsidy (therefore covered by the PBS for all patients), or those prescribed for people holding a Commonwealth Concession Card or for those who have reached the safety net threshold).

These differences will influence not only the numbers of prescriptions counted but also their distribution. For example, the majority of hormone replacement therapies (HRTs) fall under the PBS minimum subsidy level and would not be counted in the PBS data unless patients receive the medication under the PBS because they are a Commonwealth Concession Card holder or have reached the annual safety net threshold. The PBS would therefore underestimate the number of HRT prescriptions filled and the proportion of total medications accounted for by HRTs.

The Medicare Benefits Schedule (MBS) items

If comparing the BEACH data with Medicare data, it should be noted that:

- the MBS data provided by the DoHA does not usually include data about patients and encounters funded through the Department of Veterans' Affairs. The effect of this on comparisons between data sets has been demonstrated previously using a comparison of the age-sex distribution of patients at A1 encounters in BEACH with those of the MBS A1 items of service;¹⁵
- the BEACH participants have the opportunity to record only one Medicare item number on each encounter form. They are instructed to select the more general item number where two item numbers apply to the consultation because additional services attracting their own item number (e.g. 30026 – repair of wound) are counted as actions in other parts of the form. This results in a lesser number of 'other' Medicare items than would be counted in the Medicare data;
- the BEACH database includes data about all clinical activities, not only those billed to the MBS. Both direct (patient seen) and indirect (patient not seen but a clinical activity undertaken) consultations are recorded. Some of these are paid by other funding sources (such as state health departments, private insurance companies, workers compensation, etc.) and some are provided free of charge by the GP. In contrast, the MBS data include only those GP services that have been billed to Medicare; and
- in general practice activities of relatively low frequency with a skewed distribution across individual GPs, the relative frequency of the event in the BEACH data may not reflect that reported in the MBS data.

Pathology data from the MBS

The BEACH database includes details of pathology tests ordered by the participating GPs. When comparing these data with those in the MBS, remember that:

- BEACH reflects the GP's intent that the patient have the pathology test(s) done and information as to the extent to which patients do not have the test done is not available;
- each pathology company can respond differently to a specific test order label recorded by the GP. Further, the pathology companies can charge through the MBS only for the three most expensive tests undertaken even where more were actually undertaken. This is called 'coning' and is part of the DoHA pathology payment system; and
- pathology MBS items contain pathology tests grouped on the basis of cost. An item may therefore not give a clear picture of the precise tests performed.

The effect of these factors is that the MBS pathology data include only those tests billed to the MBS after interpretation of the order by the pathologist and after selection of the three most expensive tests. This effect will not be random. For example, in an order for four tests to review the status of a patient with diabetes, it is likely that the HbA1c will be the least expensive and will 'drop' off the billing process due to coning. This would result in an under-estimate of the number of HbA1cs being ordered by GPs.

The distributions of the two data sets will differ, reflecting on the one hand the GP order and on the other the MBS-billed services after coning and assignment of MBS item number.

Those interested in GP pathology ordering will find more detailed information from the BEACH program in *Pathology Ordering by General Practitioners in Australia 1998*.⁵⁶ A study of changes in pathology ordering patterns between 1998–99 and 2000–01 has also recently been released⁵⁷ and is available through our web site <<http://www.fmrc.org.au/publications/>> (go to Books—General Practice Series).

Imaging data from the MBS

Some of the issues discussed regarding pathology data also apply to imaging data. Although coning is not an issue for imaging, radiologists are free to decide whether or not the test ordered by the GP is the most suitable and whether to undertake other tests of their choosing. The MBS data therefore reflect the tests that are actually undertaken by the radiologist, whereas the BEACH data reflect those ordered by the GP. Those interested in GP imaging ordering will find more detailed information from the BEACH program in *Imaging Orders by General Practitioners in Australia 1999–00*,⁵⁸ also available from our web site.

13 Conclusion

General practice activity in Australia is, in the main, quite consistent across state and territory boundaries. However, differences between individual states and territories and the national average have been identified in terms of the characteristics of the GPs practising in each, the characteristics of their patients, the reasons their patients attend, the problems managed at GP-patient encounters and the methods of management used. More detailed individual analysis of state/territory based BEACH data should be considered in many of the areas of identified differences.

13.1 Access to BEACH data

Public domain

Much of the national information produced through the BEACH program is publicly available. In line with standard Australian Institute of Health and Welfare practice, an annual publication provides a comprehensive view of general practice activity in Australia.

Abstracts of results for the substudies conducted throughout the program (not reported in the annual report) are available through the web site of the Family Medicine Research Centre (of which the General Practice Statistics and Classification Unit is a part) at <<http://www.fmrc.org.au/beach.htm>> (select Abstracts).

Analysis of the BEACH data is a complex task. The General Practice Statistics and Classification Unit has therefore designed standard report formats that cover most aspects of the subject under investigation. Examples of a problem based standard report (the subject is Warts) and a pharmacological based standard report (subject Allopurinol) for a single year's data are available on our web site <<http://www.fmrc.org.au/purchase.htm>>.

Participating organisations

Organisations providing funding for the BEACH program receive summary reports of the encounter data quarterly and standard reports about their subjects of interest.

The GPSCU now provides participating organisations direct access to straightforward analyses on any selected problem or medication in real time, through our interactive web server.

External purchasers of standard reports

Non-contributing organisations may purchase standard reports or other ad hoc analyses. Standard reports are also available (upon request) for a selected state or territory and within these for specific groups of patients (e.g. children) or for a specific management action.

We can design individual data analyses for more complex research where the question is not adequately answered through standard reports. Charges are available on request. The General Practice Statistics and Classification Unit should be contacted for further information. Contact details are provided at the front of this publication.

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Glossary

A1 Medicare items: Medicare item numbers 1, 2, 3, 4, 13, 19, 20, 23, 24, 25, 33, 35, 36, 37, 38, 40, 43, 44, 47, 48, 50, 51, 601, 602.

A2 Medicare items: Medicare item numbers 52, 53, 54, 57, 58, 59, 60, 65, 81, 83, 84, 86, 87, 89, 90, 91, 92, 93, 95, 96, 97, 98, 697, 698.

Aboriginal: The patient identifies himself or herself as an Aboriginal person.

Activity level: The number of general practice A1 Medicare items claimed during the previous 3 months by a participating GP.

Allied and other health professionals: Those who provide clinical and other specialised services in the management of patients, including physiotherapists, occupational therapists, dietitians, dentists and pharmacists.

Chapters (ICPC-2): The main divisions within ICPC-2. There are 17 chapters primarily representing the body systems.

Complaint: A symptom or disorder expressed by the patient when seeking care.

Component (ICPC-2): In ICPC-2 there are seven components which act as a second axis across all chapters.

Consultation: See *Encounter*

Diagnosis/problem: A statement of the provider's understanding of a health problem presented by a patient, family or community. GPs are instructed to record at the most specific level possible from the information available at the time. It may be limited to the level of symptoms.

- *New problem:* The first presentation of a problem, including the first presentation of a recurrence of a previously resolved problem but excluding the presentation of a problem first assessed by another provider.
- *Old problem:* A previously assessed problem that requires ongoing care. Includes follow-up for a problem or an initial presentation of a problem previously assessed by another provider.
- *Work-related problem:* Irrespective of the source of payment for the encounter, it is likely in the GP's view that the problem has resulted from work-related activity or workplace exposures or that a pre-existing condition has been significantly exacerbated by work activity or workplace exposure.

Encounter (enc): Any professional interchange between a patient and a GP.

- *Indirect:* Encounter where there is no face-to-face meeting between the patient and the GP but a service is provided (e.g. prescription, referral).
- *Direct:* Encounter where there is a face-to-face meeting of the patient and the GP.

Direct encounters can be further divided into:

Medicare-claimable

- *A1 items of service:* See *A1 Medicare items*
 - *Surgery consultations:* Encounters identified by any one of MBS item numbers 3, 23, 36, 44.
 - *Home visits:* Encounters identified by any one of MBS item numbers 4, 24, 37, 47.

- *Hospital encounters*: Encounters identified by any one of MBS item numbers 19, 33, 40, 50.
- *Residential aged care facility visits*: Encounters identified by any one of MBS item numbers 20, 35, 43, 51.
- *Other institutional visits*: Encounters identified by any one of MBS item numbers 13, 25, 38, 40.
- *Other MBS encounters*: Encounters identified by an MBS item number that does not identify place of encounter (see *A1 Medicare items*).
- *Workers compensation*: Encounters paid by workers compensation insurance.
- *Other paid*: Encounters paid from another source (e.g. state).

General practitioner (GP): A medical practitioner who provides primary comprehensive and continuing care to patients and their families within the community (Royal Australian College of General Practitioners).

Groupers: Multiple ICPC-2 or ICPC-2 PLUS codes which are grouped together for purposes of analysis.

Medication: Medication that is prescribed, advised for over-the-counter purchase or provided by the GP at the encounter.

Medication rates: The rate of use of all medications including medications that were prescribed, GP-supplied and advised for purchase over-the-counter (OTC).

Medication status:

- *New*: The medication prescribed/advised/provided at the encounter is being used for the management of the problem for the first time.
- *Continuation*: The medication prescribed/advised/provided at the encounter is a continuation or repeat of previous therapy for this problem.
- *Old*: See *Continuation*

Morbidity: Any departure, subjective or objective, from a state of physiological wellbeing. In this sense, sickness, illness and morbid conditions are synonymous.

Patient status: The status of the patient to the practice.

- *New patient*: The patient has not been seen before in the practice.
- *Old patient*: The patient has attended the practice before.

Prescribed rates: The rate of use of prescribed medications (i.e. does not include medications that were GP-supplied or advised for purchase over-the-counter).

Problem managed: See *Diagnosis/problem*

Provider: A person to whom a patient has access when contacting the health care system.

Reasons for encounter (RFEs): The subjective reasons given by the patient for seeing or contacting the general practitioner. These can be expressed in terms of symptoms, diagnoses or the need for a service.

Recognised GP: A medical practitioner who is:

- vocationally recognised under Section 3F of the Health Insurance Act, *or*
- a holder of the Fellowship of the Royal Australian College of General Practitioners who participates in, and meets the requirements for, quality assurance and continuing medical education as defined in the RACGP Quality Assurance and Continuing Medical Education Program, *or*

- undertaking an approved placement in general practice as part of a training program for general practice leading to the award of the Fellowship of the Royal Australian College of General Practitioners or undertaking an approved placement in general practice as part of some other training program recognised by the RACGP as being of equivalent standard. (Medicare Benefits Schedule book, 1 November 1998).

Referral: The process by which the responsibility for part or all of the care of a patient is temporarily transferred to another health care provider. Only new referrals to specialists and allied health professionals, and for hospital and residential aged care facility admissions arising at a recorded encounter are included. Continuation referrals are not included. Multiple referrals can be recorded at any one encounter.

Rubric: The title of an individual code in ICPC-2.

Torres Strait Islander: The patient identifies himself or herself as a Torres Strait Islander person.

Abbreviations

ABS	Australian Bureau of Statistics
ACT	Australian Capital Territory
AIHW	Australian Institute of Health and Welfare
ATC	Anatomical Therapeutic Chemical (classification)
AUDIT	Alcohol Use Disorders Identification Test
BEACH	Bettering the Evaluation And Care of Health
BMI	Body mass index
BP	Blood pressure
C&S	Culture and sensitivity
CAPS	Coding Atlas for Pharmaceutical Substances
CI	Confidence interval (in this report 95% CI is used)
CNS	Central Nervous System
CT	Computerised tomography
CVS	Cardiovascular System
DoHA	Australian Department of Health and Ageing
ECG	Electrocardiogram
Enc	Encounter
ENT	Ear, nose and throat
ESR	Erythrocyte sedimentation rate
EUC	Electrolytes, urea and creatinine
FBC	Full blood count
FMRC	Family Medicine Research Centre, University of Sydney
FRACGP	Fellow of the Royal Australian College of General Practitioners
FWE	Full-time workload equivalent
GP	General practitioner
GPSCU	General Practice Statistics and Classification Unit, University of Sydney, a collaborating unit of the Australian Institute of Health and Welfare
HbA1c	Haemoglobin, type A1c
HIC	Health Insurance Commission
HIV	Human immunodeficiency virus
ICPC	International Classification of Primary Care
ICPC-2	International Classification of Primary Care (Version 2)
ICPC-2 PLUS	An extended vocabulary of terms classified according to ICPC-2
MBS	Medicare Benefits Schedule
MC&S	Microscopy, culture and sensitivity

MRI	Magnetic resonance imaging
NEC	Not elsewhere classified
NESB	The patient reports coming from a non-English-speaking background, i.e. a language other than English is spoken at home.
NOS	Not otherwise specified
NSAID	Non-steroidal anti-inflammatory drugs
NSW	New South Wales
NT	Northern Territory
OMP	Other medical practitioner
OTCs	Medications advised for over-the-counter purchase
PBS	Pharmaceutical Benefits Scheme
QA	Quality assurance (in this case the Quality Assurance Program of the Royal Australian College of General Practitioners)
Qld	Queensland
RACGP	Royal Australian College of General Practitioners
RAST	Radioallergosorbent Test
RFE(s)	Reason for encounter(s) (see Glossary)
RICE	Rest, ice, compression and elevation
RRMA	Rural, Remote and Metropolitan Area classification
SA	South Australia
SAND	Supplementary Analysis of Nominated Data
SAS	Statistical Analysis System
SRS	Simple random sample
Tas	Tasmania
URTI	Upper respiratory tract infection
Vic	Victoria
WA	Western Australia
WHO	World Health Organization
Wonca	World Organization of Family Doctors
—	Not applicable
..	Not available