

14. Selected topics

This Chapter provides a brief summary of results for some specific areas of interest:

- encounters with Indigenous persons,
- indirect encounters,
- comparison of encounters with male and female GPs,
- State/Territory of home residence of patients attending participating GPs.

14.1 Encounters with Indigenous people

GPs were instructed to ask each patient whether or not they identified as an Aboriginal and/or Torres Strait Islander person. This is the first time this question has been asked in a national general practice activity study.

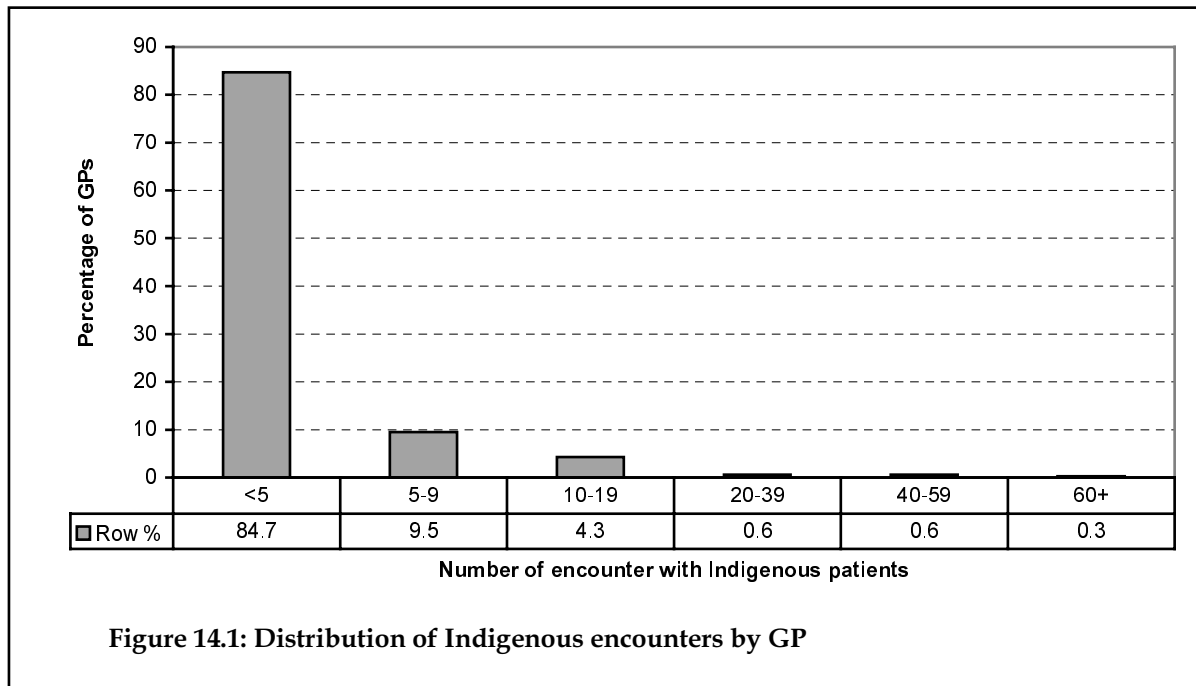
14.1.1 Number of encounters

At 1,162 encounters (1.2%) the patient responded positively to one or both questions. The vast majority (87.0%) stated they were Aboriginal persons, while 9.9% stated they were Torres Strait Islanders and 3.1% said they were both.

In terms of the total dataset 1.2% is not large. However, a simple extrapolation to the (approximately) 103 million General Practice Medicare item numbers claimed per year in Australia suggests that there are about 1.1 million GP consultations with Indigenous people, an even greater number than is conducted by Aboriginal Medical Services (AMS). It was thought that some of the participating GPs may have recorded activity conducted in Aboriginal Medical Services claimed through Medicare. If that was the case this number of consultations with private general practitioners by the Indigenous people could be an over-estimate. An investigation of the distribution of these encounters across individual GPs was therefore warranted.

Over one-third of participating GPs saw at least one Indigenous person during their 100 recorded encounters. The relative number of encounters with Indigenous people was calculated for each GP and Figure 14.1 demonstrates the distribution of these encounters across the 326 practitioners involved. The range was 1 to 63 consultations with Indigenous persons, the median being 2 and the mean 3.5, with a standard deviation of 6.2.

By far the majority of these GPs saw less than ten Indigenous persons during their 100 recorded encounters and only five GPs saw 20 or more. If it was assumed that these five GPs worked either full- or part-time in an AMS and that these consultations were undertaken in an AMS, their recorded encounters with Indigenous persons should be removed prior to extrapolation from BEACH to the annual Medicare data. The number of consultations with Indigenous persons in the non-AMS private general practice environment after removal of these encounters was estimated to be approximately 1 million per annum.



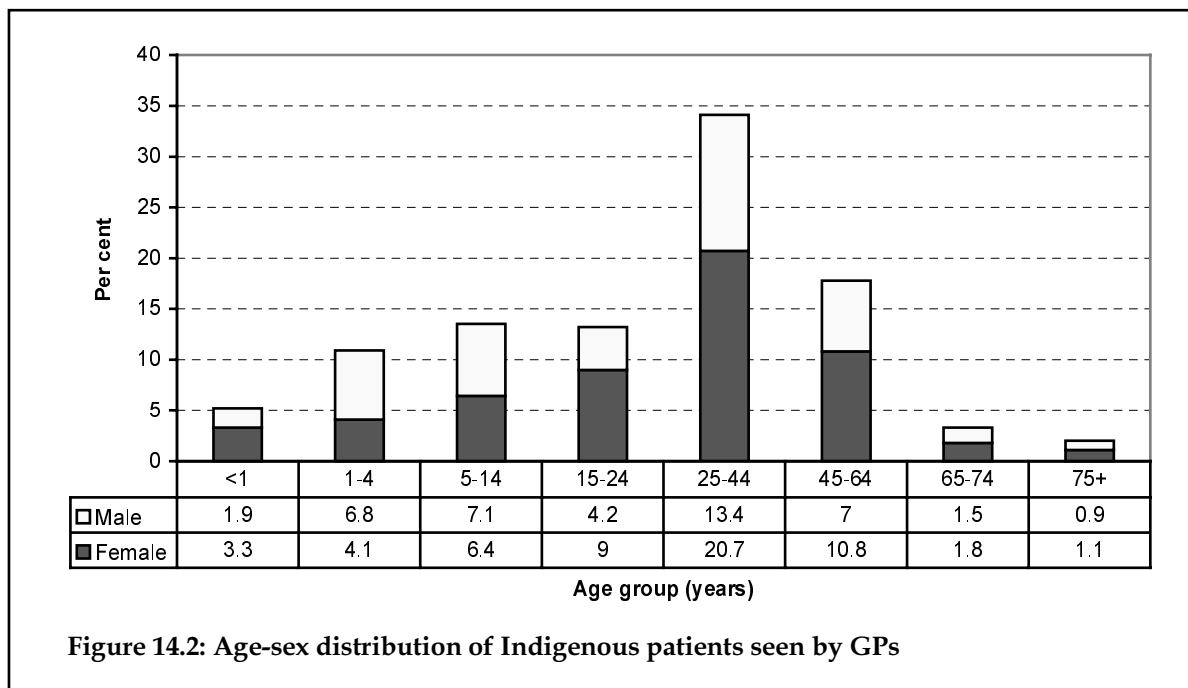
14.1.2 Age–sex distribution of Indigenous persons at encounter

The age–sex distribution of these patients is presented in Figure 14.2. While the patient was male at 43.7% of encounters, paralleling the result for the total dataset (42.3%, Table 6.1), the age distribution of these patients differed markedly from that of all patients at encounter.

Overall, Indigenous patients were younger, almost 30% being children aged less than 15 years (compared with 15.8% in the total dataset, Figure 6.1). While the proportion of persons aged 15–24 years was also greater than in the total database, the major differences were the very high proportion of Indigenous men and women aged 25–44 years (34.1% compared with 26.0% in the total dataset), the lesser proportion in the 45–64 years age group (17.8% compared with 24.4%) and the very small proportion of older persons (5.4%) aged 65 years or more (compared with 24.0%).

14.1.3 Other patient characteristics

Other characteristics of this group also differed from those of all patients. Over 80% held a health care card (compared with 47.3% in the total sample), less than 1% held a Department of Veterans’ Affairs card (compared with 3.4% in the total data) and 15.2% were new to the practice (compared with 9.2% of all encounters). (Results not presented.)



14.1.4 Geographic location

The GPs were asked to record the postcode of the patient's home residence at each encounter. After missing data were removed (n=38) the postcodes were classified according to State and by the Rural, Remote and Metropolitan Area (RRMA) classification.

Distribution by State/Territory

The distribution of Indigenous patient residence by State is presented in Figure 14.3 and compared with the distribution of residence for non-Indigenous persons. One-third of the Indigenous patients resided in Queensland and almost as many resided in New South Wales (28.5%). Over 10% lived in each of South and Western Australia and there was only a small proportion living in each of the other States and Territories. The comparative data for non-Indigenous people demonstrate that the relative proportion of Indigenous patients seen by GPs in Queensland, South Australia, Western Australia and the Northern Territory was high, while the relative proportion seen in Victoria was very low.

Distribution by RRMA

In Figure 14.4, RRMA distribution of the patient postcode of residence for the Indigenous persons consulting GPs in this study is compared with the RRMA distribution for non-Indigenous persons. Over 40% of these Indigenous patients lived in capital cities, a lesser proportion than for non-Indigenous patients (67.7%). Indigenous persons were more likely than non-Indigenous persons to reside in small, large and other rural areas and about one in ten lived in remote centres, other remote areas or offshore. Non-Indigenous persons living in remote areas represented only 1.2% of all non-Indigenous patients consulting participating GPs.

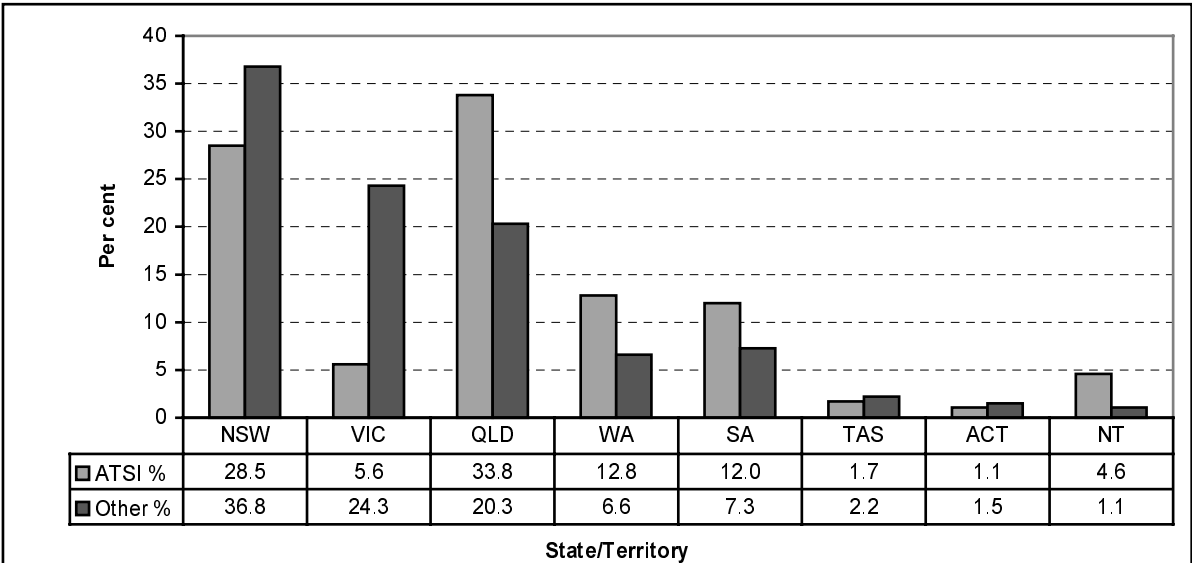


Figure 14.3: Geographic location of indigenous and non-Indigenous patients by State/Territory

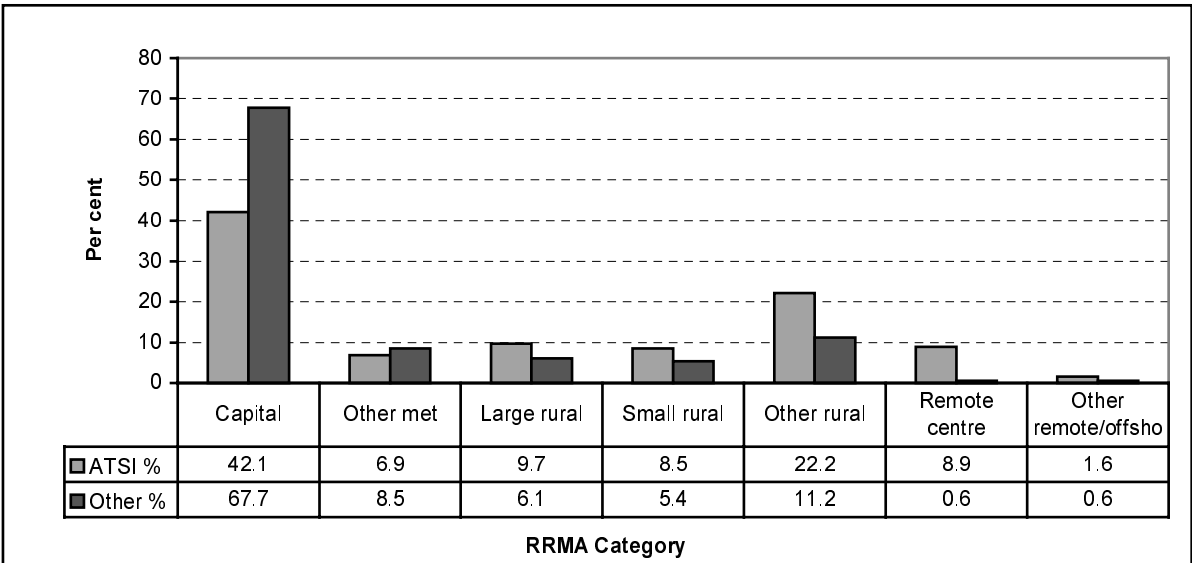


Figure 14.4: Geographic location of Indigenous and non-Indigenous patients by RRMA category

14.1.5 Nature of morbidity managed

Problems managed by ICPC-2 chapter

The distribution of the problems managed in encounters with Indigenous people is presented in terms of ICPC-2 chapters and compared with the distributions for all encounters in Table 14.1. Due to the relatively small sample size the confidence intervals around the results for Indigenous people are broad and in most cases this rendered any differences in the two distributions of no statistical significance. The exception was the relative rate of management of problems associated with the circulatory system which arose at a rate of 10.0 per 100 encounters, a significantly lower rate than in the total dataset (16.1 per 100). Other differences of interest (although not statistically significant) included the high relative rate of management of problems related to pregnancy and family planning (7.4 per 100 encounters compared with 4.9). In contrast the relative frequency of problems associated with the eye, and with the female and the male genital systems was somewhat lower than that of the total BEACH population (Table 14.1).

Table 14.1: Distribution of problems managed by ICPC-2 chapter

Problems Managed	Indigenous encounters			All encounters		
	Rate per 100 encs (N=1,163) ^(a)	95% LCI	95% UCI	Rate per 100 encs (N=140,824) ^(a)	95% LCI	95% UCI
Respiratory	28.0	22.8	33.1	24.3	23.6	25.0
Skin	16.5	10.2	19.2	16.5	16.0	17.0
Musculoskeletal	13.0	9.4	16.6	16.9	16.3	17.5
General & unspecified	11.7	7.3	16.2	13.2	12.7	13.7
Digestive	11.2	7.3	15.1	10.2	9.9	10.5
Psychological	10.6	5.7	15.5	10.5	10.0	11.0
Circulatory	10.0	5.8	14.1	16.1	15.4	16.8
Endocrine & metabolic	9.0	4.9	13.2	8.8	8.4	9.2
Pregnancy & family planning	7.4	2.2	12.6	4.1	3.7	4.4
Ear	7.0	2.0	12.0	4.9	4.7	5.1
Neurological	4.4	0.0	10.0	4.0	3.8	4.2
Female genital system	4.0	0.7	7.4	6.3	5.9	6.6
Urology	2.7	0.0	6.6	2.8	2.7	3.0
Eye	1.9	0.0	7.1	2.8	2.7	3.0
Blood	1.6	0.0	5.9	1.7	1.5	1.9
Social problems	1.0	0.0	21.0	0.8	0.6	0.9
Male genital system	0.8	0.0	14.6	1.4	1.3	1.5
Total problems	138.8	132.9	144.8	145.3	143.5	147.2

(a) Figures do not total 100 as more than one problem can be managed at each encounter

Note: Abbreviations: Encs – encounters, UCI – Upper confidence interval, LCI – Lower confidence interval

The most frequent individual problems managed

The ten most frequently managed problems at encounters with Indigenous people are listed in decreasing order of frequency in Table 14.2 with comparative results for the total dataset. Although the wide confidence intervals generated by the small sample size rendered none of the differences statistically significant, some interesting patterns emerged. The relative rate of respiratory problems as a whole was earlier demonstrated to be slightly higher at encounters with Indigenous people (28 per 100 encounters compared with 24 in the total dataset). However the differences in relative rates for the more frequent individual respiratory problems were very large. For example, URTI was managed at a rate of 9 per 100 encounters in this sub-group compared with 6.8 in the total dataset. The rate of acute bronchitis was also high (5.1 compared with 3.3) as was asthma (4.5 compared with 3.2) and tonsillitis. Diabetes was managed at almost double the overall rate (5.1 compared with 2.6). In contrast hypertension was far less frequently managed (4.3 compared with 8.3 per 100 encounters) as were immunisation/vaccination and depression.

Table 14.2: Most frequent individual problems managed

Problem managed	Indigenous encounters			All encounters		
	Rate per 100 encs ^(a) (N=1,614)	95% LCI	95% UCI	Rate per 100 encs ^(a) (N=140,824)	95% LCI	95% UCI
URTI	9.0	2.5	15.4	6.8	6.4	7.3
Acute bronchitis/bronchiolitis	5.1	0.0	10.4	3.3	3.0	3.6
Diabetes*	5.1	0.2	9.9	2.6	2.4	2.7
Acute otitis media/myringitis	4.6	0.0	9.4	1.8	1.6	2.0
Asthma	4.5	0.5	8.6	3.2	3.0	3.4
Hypertension*	4.3	0.0	9.9	8.3	7.8	8.7
Pre/post natal check-up*	4.0	0.0	10.8	1.0	0.7	1.4
Immunisation all*	3.2	0.0	9.6	5.2	4.7	5.7
Depression*	2.7	0.0	7.3	3.5	3.3	3.7
Tonsillitis*	2.6	0.0	9.3	1.5	1.3	1.6

* Includes multiple ICPC-2 or ICPC-2 PLUS codes (see Appendix III)

Note: Abbreviations: Encs - encounters, UCI - Upper confidence interval, LCI - Lower confidence interval, NOS - Not otherwise specified

14.1.6 Conclusion

This brief summary of the characteristics of Indigenous people who visited GPs participating in BEACH and the outline of the morbidity managed provides an indication of the health services provided to the Indigenous population by private general practitioners. The AIHW recently published a report about the health of this community but these results were not available at the time (ABS 1999). The estimates of the total number of private general practice consultations with Indigenous people in Australia suggest that, outside the Aboriginal Medical Services, GPs have an important role in the care of the Indigenous population. In any assessment of the health of the Indigenous population these services must be considered.

14.2 Indirect encounters

This is the first time data about indirect GP–patient encounters have been collected in a national general practice activity survey. Indirect services are those which occur when GPs take a telephone call from a patient (e.g. asking for advice) or receive a call or message requesting a service such as a repeat prescription. As they have not seen the patient they do not receive any government benefits for these services.

14.2.1 Services provided at indirect encounters

There were 3,024 indirect encounters, representing 3.1% of all encounters. At least one indirect encounter was recorded by more than two-thirds (n=636) of participating GPs. More than one service type could be provided at these encounters (e.g. a prescription and a referral) but at most only one service was involved, 3,096 services being provided at a rate of 102 per 100 indirect encounters (Table 14.3).

The most common clinical service resulting from these encounters was a prescription (55.2 per 100 indirect encounters). Services other than prescriptions, referrals and certificates ('Other') were also provided relatively frequently (29.8 per 100 encounters) and these would include advice about treatment of a problem. Referrals were provided at a rate of 13.5 and certificates at a rate of 3.8 per 100 indirect contacts recorded.

Table 14.3: Services provided at indirect encounters

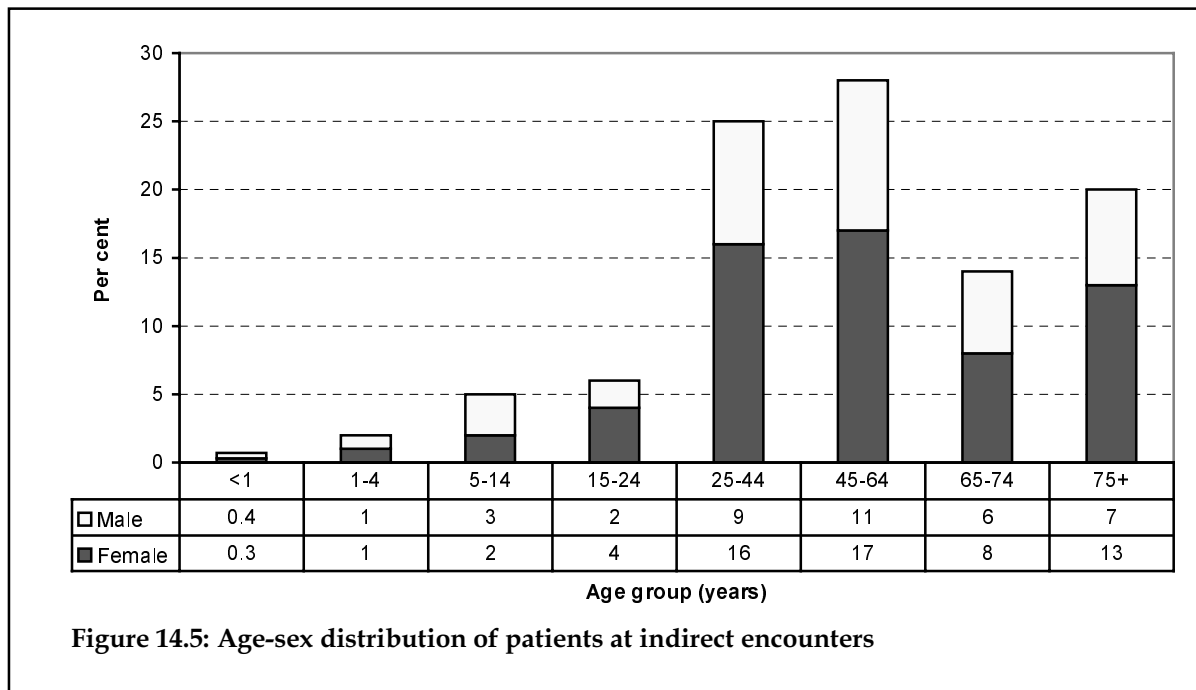
Service provided	Number of encs	Rate per 100 indirect encs ^(a)	95% LCI	95% UCI
Prescription	1,670	55.2	51.8	58.6
Referral	409	13.5	11.5	15.6
Certificate	115	3.8	0.9	6.7
Other	902	29.8	26.3	33.3
Total	3,024	114.8	..	..

(a) Figures do not total 100 as more than one service can be provided at each encounter.

Note: Abbreviations: Encs – encounters, UCI – Upper confidence interval, LCI – Lower confidence interval

14.2.2 Age–sex distribution of patients

The age–sex distribution of patients involved in indirect encounters is graphically presented in Figure 14.5. Women were slightly over-represented at these encounters, 61.3% being female compared with 57.7% at all encounters. Young people were least likely to have indirect encounters and the proportion of patients aged between 25 and 44 years was not different to that of all encounters. However, women aged between 45 and 64 years were over-represented in indirect encounters (17% compared with 14% at all encounters), as were elderly women (13% compared with 7%).



14.2.3 Problems managed at indirect encounters

For the majority of indirect encounters only one problem was managed. There were 3,474 problems managed a rate of 115 per 100 encounters, significantly less than average (145 per 100). Of those problems for which the status was specified (n=2,099), 18% were said to be new to the patient (compared with 38% of all problems). These new cases may well be those associated with 'other' services such as advice about self-management of an acute problem.

The ten problems most often managed at indirect encounters are listed in order of frequency in Table 14.4 and their relative frequency is compared with that in the total dataset.

As with the earlier analysis of encounters with Indigenous persons the relatively small sample size for indirect encounters resulted in wide confidence intervals even for the more frequent events and this rendered the majority of differences between morbidity managed at indirect encounters and that managed at all encounters statistically insignificant. The exception was the relative frequency of 'prescription', the most common label used by GPs to describe the problem under management at indirect encounters (6.1 per 100 encounters compared with 1.4 per 100 total encounters). With the exception of immunisation/vaccination which would logically be associated with a need for a prescription to be filled prior to presenting for its administration, the other frequently managed problems were chronic in nature. They included hypertension, asthma, osteoarthritis, depression, sleep disturbance, and anxiety.

Table 14.4: Most frequent problems managed (top 10) at indirect encounters

Problem managed	Indirect encounters					All encounters		
	Number	% total problems	Rate per 100 encs ^(a) (N=3,025)	95% LCI	95% UCI	Rate per 100 encs ^(a) (N=140,824)	95% LCI	95% UCI
Prescription all*	210	6.1	7.0	2.5	11.4	1.4	1.1	1.7
Hypertension*	168	4.9	5.6	2.7	8.4	8.3	7.8	8.7
Depression*	100	2.9	3.3	0.8	5.8	3.5	3.3	3.7
Sleep disturbance	96	2.8	3.2	0.0	6.3	1.6	1.5	1.8
Asthma	89	2.6	3.0	0.0	5.9	3.2	3.0	3.4
Lipid disorder	80	2.3	2.6	0.0	6.2	2.5	2.3	2.7
Anxiety*	79	2.3	2.6	0.0	6.4	1.7	1.5	1.9
Back complaint*	78	2.2	2.6	0.0	5.4	2.7	2.4	2.9
Osteoarthritis*	69	2.0	2.3	0.0	5.1	2.2	2.0	2.4
Immunisation all*	66	1.9	2.2	0.0	9.2	5.2	4.7	5.7
<i>Subtotal</i>	<i>1,035</i>	<i>29.8</i>	<i>..</i>	<i>..</i>	<i>..</i>	<i>..</i>	<i>..</i>	<i>..</i>
Total problems	3,474	100.0	146.3	144.6	148.0	145.3	143.5	147.2

(a) Figures do not total 100 as more than one problem can be managed at each encounter. Also only the top 10 problems included

* Includes multiple ICPC-2 or ICPC-2 PLUS codes (see Appendix III)

Note: Abbreviations: Encs - encounters, UCI - Upper confidence interval, LCI – Lower confidence interval, NOS – Not otherwise specified.

Table 14.5: Drugs most frequently prescribed (top 10) at indirect encounters

Generic drug	Number	Rate per 100 encs (N=3,024)	95% LCI	95% UCI
Temazepam	100	3.3	0.0	6.6
Paracetamol & codeine	82	2.7	0.0	5.6
Paracetamol	58	1.9	0.0	5.4
Influenza virus vaccine	53	1.8	0.0	9.7
Oxazepam	52	1.8	0.0	4.7
Diazepam	51	1.7	0.0	4.7
Salbutamol	46	1.5	0.0	5.7
Frusemide (Furosemide)	44	1.4	0.0	6.6
Levonorgestrel/Ethinylloestradiol	42	1.4	0.0	5.1
Warfarin sodium	42	1.4	0.0	7.3
<i>Subtotal</i>	<i>570</i>	<i>..</i>	<i>..</i>	<i>..</i>
Total prescriptions	2192	72.5	64.7	80.2

Note: Abbreviations: Encs-encounters, UCI- Upper confidence interval, LCI – Lower confidence interval,

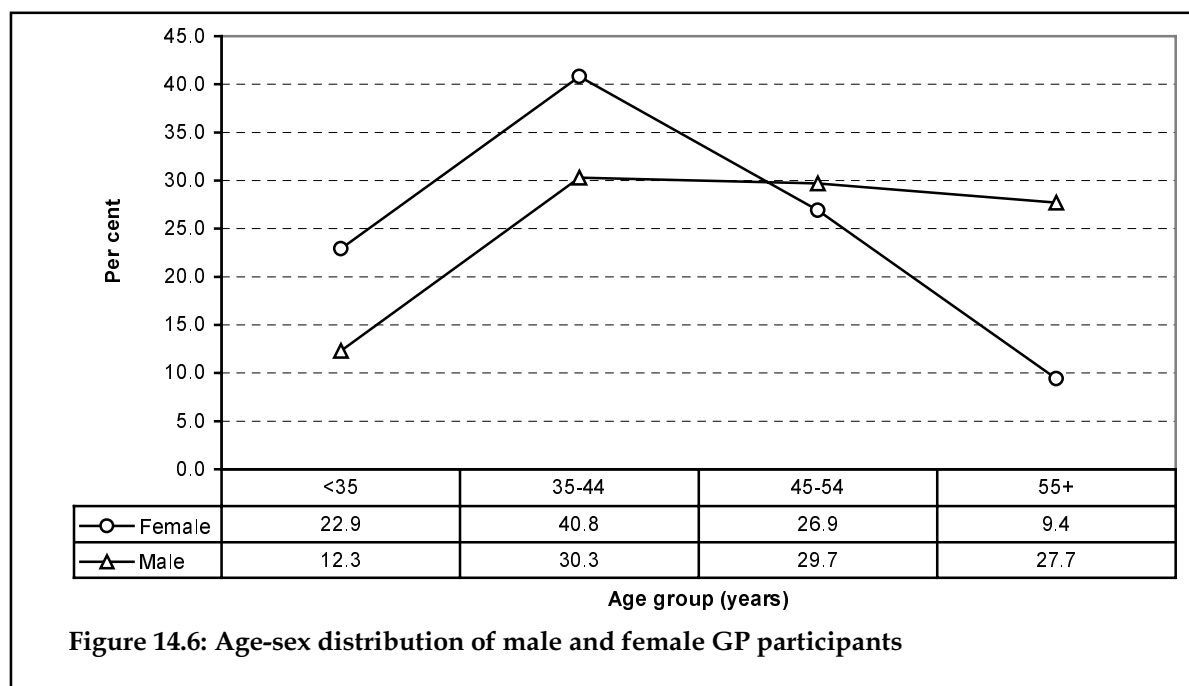
14.2.4 Drugs most frequently prescribed at indirect encounters

The ten drugs most often prescribed at indirect encounters are presented in decreasing order of frequently in Table 14.5. Temazepam was most frequently prescribed (3.3 per 100 indirect encounters), while oxazepam and diazepam were also in the list of commonly prescribed drugs. Second was paracetamol and codeine, followed by paracetamol. Reflecting the inclusion of asthma in the more frequently managed problems, salbutamol was also relatively frequently prescribed at these indirect encounters.

14.3 The gender of the GP

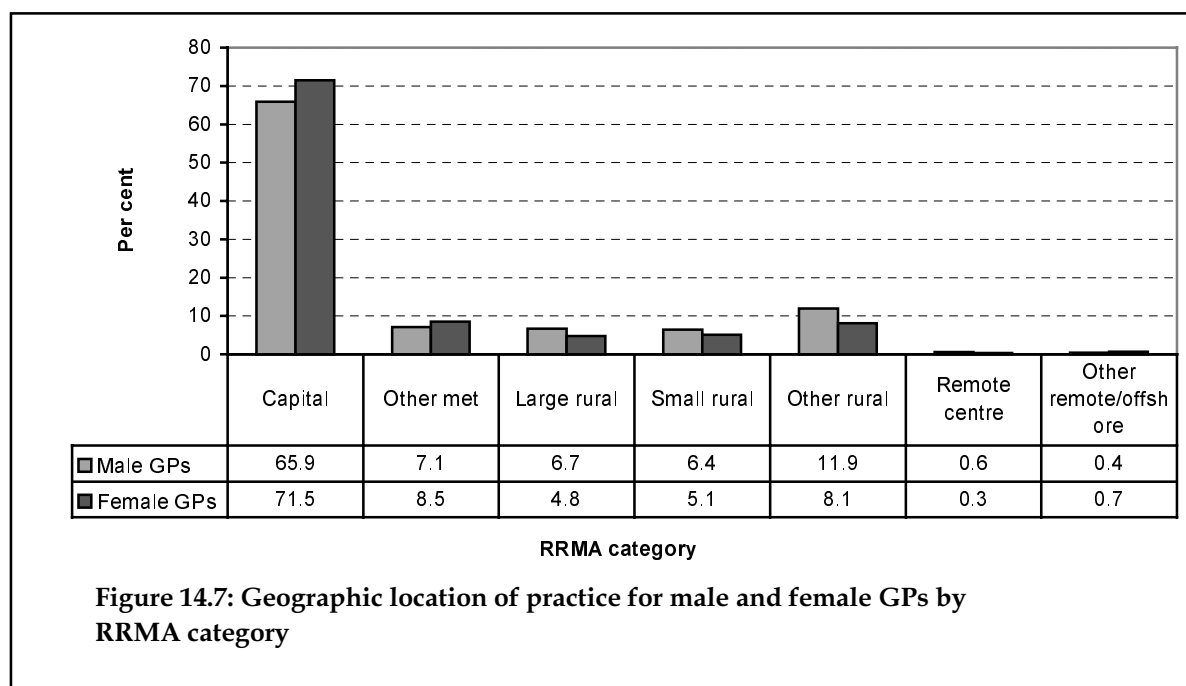
14.3.1 Age distribution of male and female GPs

Of the 984 GPs who participated, 689 (70%) were male and 285 female (30%). Women GPs tended to be younger, less than 10% (compared with 28% of male GPs) being aged over 55 years (Figure 14.6). This aligns with the increasing number of women entering medical schools and the RACGP training program.



14.3.2 Geographic distribution of male and female GPs by RRMA

The postcode of practice served to locate each participating GP in a RRMA category. Figure 14.7 shows that the vast majority of both male and female participating GPs practise in capital cities. However, a lesser proportion of females practiced outside capital cities (18.5%) than did males (24.1%) and this applied in all rural and remote RRMA categories except 'other remote/offshore'.



14.3.3 Age and sex distribution of patients

The patients seen by female GPs tended to be younger than those seen by male GPs. Patients aged less than 25 years made up 29% of female GPs' practice compared with 25% of male GPs' practice and women saw fewer older patients, 19% being 65 years or older compared with 25% of patients seeing male GPs (Figure 14.8).

The gender distribution of patients seen by male and female GPs differed markedly. More than two-thirds of patients (69.6%) seeing women GPs were female, while female patients made up only half (52.8%) the male GPs' patient population (Table 14.6).

14.3.4 Other patient characteristics

There was only one other significant difference in the characteristics of patients seen by male GPs compared with those of women GPs. Patients of male GPs were significantly more likely to hold a Veterans' Affairs Gold card than patients of women GPs (Table 14.6). This may reflect the difference in the age distribution of male and female GPs reported earlier.

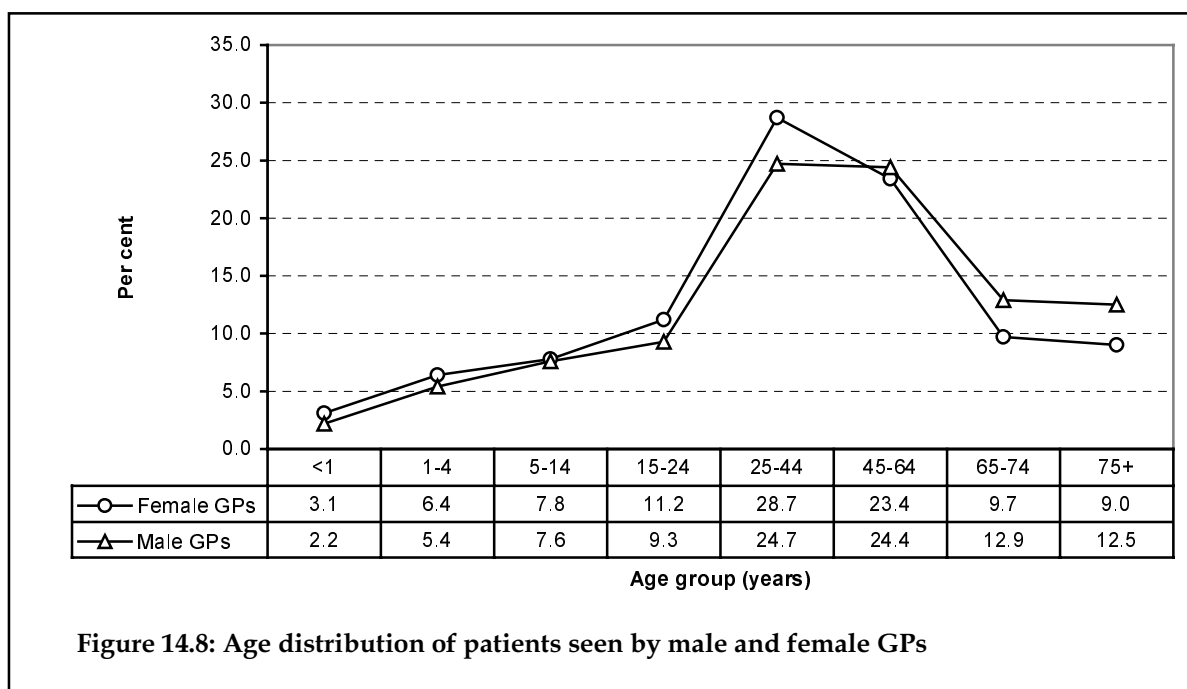


Table 14.6: Characteristics of patients seen by male and female GPs

Patient characteristic	Male GPs			Female GPs		
	Rate per 100 encs (N=73,538)	95% LCI	95% LCI	Rate per 100 encs (N=23,363)	95% LCI	95% LCI
Female	52.8	52.2	53.3	69.6	68.3	70.8
New to practice	9.3	8.5	10.0	8.6	7.8	9.4
Health care card	44.2	42.4	45.9	39.7	36.8	42.6
VA gold card	3.4	3.0	3.7	1.9	1.5	2.2
VA white card	0.4	0.2	0.6	0.4	0.0	0.8
NESB	14.7	12.5	17.0	13.7	10.7	16.6
Aboriginal	1.0	0.2	1.9	1.2	0.0	3.0
Torres Strait Islander	0.1	0.0	0.6	0.1	0.0	0.7
Aboriginal & Torres Strait Islander	*	0.0	0.5	0.1	0.0	3.4

* Less than 0.1 per 100 encounters.

Note: Abbreviations: Encs– encounters, UCI –Upper confidence interval, LCI – Lower confidence interval.

14.3.5 The type and content of encounters

Type of encounters

The proportion of direct and indirect encounters, the proportion of encounters charged to Medicare and the relative rate of home visits did not differ between male and female GPs. While the relative rate of short, standard and prolonged surgery consultations also did not differ, women GPs recorded long surgery consultations at a significantly higher rate (9.2 per 100 encounters) than male GPs (6.2). Male GPs recorded significantly higher rates of encounters under the workers' compensation system (2.1 per 100 encounters) than did their female counterparts (1.3 per 100) (Table 14.7).

Content of encounters

There were marked differences in the content of encounters with male and female GPs. While there was no significant difference in the rate of patient reasons for encounter (demonstrated by the overlapping confidence intervals), women GPs managed a significantly higher number of problems (153.5 per 100 encounter) than did male GPs (142.7 per 100). Women GPs saw relatively higher numbers of new problems (92.3 per 100 encounters) than did male GPs (86.1 per 100) but this was due to the higher overall rate of problem management by women. New problems as a proportion of all problems managed did not differ between female (60.1, 95% CIs 58.4–61.9) and male GPs (60.3, 95% CIs 59.1–61.5).

There was no significant difference in the overall medication rate nor in the prescribing rate per 100 encounters for male and female GPs. However when the higher problem rate at encounters with women GPs was considered and rates compared per 100 problems managed, women GPs had lower overall medication rates (55.7 per 100 problems managed, 95% CIs 54.1–57.3) than did male GPs (60.3 per 100, 95% CIs 59.3–61.4). Women GPs also prescribed fewer drugs per problem (58.5 per 100 encounters, 95% CIs 55.9–61.1) than did their male counterparts (66.4 per 100, 95% CIs 64.6–68.3). While women GPs advised purchase of OTC drugs relatively more frequently per 100 encounters this difference disappeared when rates were considered in terms of the number of problems managed.

Clinical treatments were provided by women GPs relatively more often than by male GPs both in terms of rates per 100 encounters and rates per 100 problems managed. In contrast, male GPs recorded procedural treatments relatively more often than their female counterparts in terms of both number per 100 encounters and per 100 problems managed.

The patient was referred to another provider relatively more often by female GPs (13.3 per 100 encounters) than by male GPs (10.6 per 100 encounters) and this difference was not explained by the higher numbers of problems managed at encounters with women GPs, the difference remaining when tested in terms of rate per 100 problems managed.

Orders for imaging were also more frequently made by women GPs but this difference disappeared when considered in terms of the number of problems managed. In contrast, the rates of ordering for pathology differed markedly between male and female GPs. Females placed a pathology order at a rate of 32.8 test orders per 100 encounters compared with 22.1 per 100 encounters for male GPs. This difference was not explained by the higher rates of problem management by women GPs who placed 21.4 pathology test orders per 100 problems managed (95% CIs 20.0–22.7). Male GPs recorded 15.5 test orders for pathology per 100 problems managed (95% CIs 14.7–16.2). (Note that rates per 100 problems managed are not presented) (Table 14.7).

Table 14.7: The type and content of encounters

Variable	Male GPs (N= 689)			Female GPs (N=285)		
	Rate per 100 encs (N=73,538)	95% LCI	95% LCI	Rate per 100 encs (N=23,363)	95% LCI	95% LCI
Type of encounters	..	..	..	..	..	..
Direct consultations	96.9	96.6	97.3	96.0	95.3	96.8
No charge	1.5	1.1	1.8	1.7	0.1	3.3
Medicare paid	90.2	89.1	91.4	90.5	88.9	92.2
Short surgery consultations	1.4	0.9	1.9	1.3	0.4	2.3
Standard surgery consultations	76.9	75.5	78.3	74.6	72.5	76.7
Long surgery consultations	6.2	5.5	6.9	9.2	8.1	10.3
Prolonged surgery consultation	0.4	0.0	1.4	0.9	0.0	3.1
Home visits	1.8	1.3	2.4	1.5	0.2	2.8
Worker's compensation	2.1	1.8	2.4	1.3	0.9	1.6
Indirect consultations	3.1	2.5	3.6	4.0	3.0	5.0
Content of encounters	..	..	..	..	..	..
Reasons for encounter	144.3	137.7	151.0	152.5	142.5	162.4
Problems managed	142.7	140.6	144.9	153.5	150.0	157.0
New problems	86.1	84.4	87.8	92.3	89.9	94.7
Medications (all)	110.1	107.3	112.8	108.7	104.4	112.9
Prescribed	94.8	91.9	97.8	89.8	85.5	94.1
Advised OTC	8.3	7.4	9.3	10.4	9.7	11.3
Supplied	6.9	5.7	8.1	8.5	6.9	10.1
Other clinical treatments	29.4	27.5	31.4	37.4	34.0	40.7
Procedural treatments	12.3	11.5	13.0	10.5	9.7	11.3
Referrals	10.6	10.1	11.0	13.3	12.4	14.1
Pathology	22.1	20.9	23.2	32.8	30.5	35.0
Imaging	6.8	6.3	7.2	8.0	7.4	8.6

Note: Abbreviations: Encs – encounters, UCI – Upper confidence interval, LCI – Lower confidence interval.

14.3.6 Nature of morbidity

The types of morbidity managed by male and female GPs differed markedly. Table 14.8 provides a comparison for male and female GPs of the relative rates of management of problems in each of the ICPC-2 chapters and for the more frequent specific types of morbidity. The order in which the chapters are presented is that emerging from the total data.

Male GPs dealt with significantly higher rates of musculoskeletal problems (17.7 per 100 encounters compared with 14.3 per 100 for female GPs). Reflecting the higher proportion of male patients seen by male GPs they also managed male genital problems at a significantly higher rate (1.6 per 100 encounters) than did their female counterparts (0.9).

In contrast, women GPs managed relatively more general/ unspecified problems (16.2 compared with 12.2 per 100 encounters) and those associated with the urological system (3.2 compared with 2.4 per 100 encounters). The very high management rate of problems associated with the female genital system (12.6 compared with 4.3 per 100 encounters) and pregnancy and family planning (6.6 compared with 3.2 per 100 encounters with male GPs) reflects, at least to some degree, the high proportion of females in the patient population attending women GPs. In particular, women GPs undertook Pap smears at a significantly higher rate than did male GPs and the difference was very large (4.3 compared with 0.8 per 100 encounters). Other specific problems managed at significantly higher rates by women GPs included pre/post natal check, oral contraception and menopausal complaints. While there was no significant difference in the relative rate of management of psychological problems overall, women did manage depression relatively more often than male GPs.

14.3.7 Conclusion

This descriptive comparison of male and female GPs has served to demonstrate that they have very different patient populations and deal with a different pattern of morbidity. Their management patterns have also been shown to differ. However, whether the differences in morbidity managed are purely a result of differences in patient populations and whether differences in management patterns are a result only of the morbidity managed must be considered. Earlier research based on the AMTS (1990–91) demonstrated similar differences in the characteristics of male and female GPs, the morbidity managed and treatments provided. (Britt et al. 1996a) When the morbidity patterns were adjusted for differences in GP characteristics other than gender, for the characteristics of their patients and for patient selectivity in the problems brought to GPs of different gender (reflected through patient RFEs), some of these differences disappeared. However, others remained, some differences became greater and new differences emerged.

The above comparisons from the BEACH data are purely descriptive. While differences have again been demonstrated in the patterns of practice of male and female GPs, a more detailed analysis which adjusts for differences in other GP and patients characteristics would be required in order to measure any change that has occurred in male and female GP practice over the intervening years.

Table 14.8: Distribution of problems managed across ICPC-2 chapters and most frequent individual problems within chapter

Problems managed	Male GPs			Female GPs		
	Rate per 100 encs ^(a)	95% LCI	95% LCI	Rate per 100 encs ^(a)	95% LCI	95% LCI
Respiratory	24.6	23.7	25.4	23.4	22.4	24.7
URTI	6.9	6.4	7.5	6.5	5.8	7.2
Acute bronchitis/bronchiolitis	3.4	3.0	3.7	3.1	2.6	3.6
Asthma	3.2	2.9	3.4	3.2	2.9	3.5
Musculoskeletal	17.7	17.0	18.5	14.3	13.4	15.3
Back complaint*	2.8	2.4	3.1	2.3	1.9	2.8
Osteoarthritis*	2.3	2.1	2.6	1.8	1.5	2.2
Skin	16.7	16.1	17.3	15.9	15.0	16.7
Contact dermatitis	1.9	1.7	2.0	1.9	1.6	2.1
Circulatory	16.6	15.7	17.4	14.9	13.8	15.9
Hypertension*	8.4	7.9	8.9	7.9	7.1	8.7
General & unspecified	12.2	11.7	12.8	16.2	15.2	17.1
General check-up*	1.5	1.3	1.8	1.6	1.3	1.9
Psychological	10.1	9.5	10.7	11.7	10.7	12.6
Depression*	3.2	3.0	3.5	4.2	3.8	4.6
Anxiety*	1.7	1.5	1.8	1.8	1.4	2.2
Sleep disturbance	1.6	1.4	1.8	1.6	1.3	1.9
Digestive	10.2	9.9	10.6	10.3	9.7	10.9
Oesophageal disease	1.6	1.4	1.7	1.3	1.0	1.5
Endocrine & metabolic	8.9	8.4	9.4	8.6	7.9	9.2
Diabetes*	2.7	2.5	3.0	2.0	1.7	2.3
Lipid disorder	2.5	2.2	2.7	2.4	2.1	2.8
Female genital system	4.3	4.0	4.5	12.6	11.8	13.4
Female genital check-up/Pap smear*	0.8	0.6	0.9	4.3	3.8	4.7
Menopausal complaint	1.2	1.0	1.3	2.5	2.2	2.7
Ear	4.9	4.6	5.2	5.0	4.6	5.4
Acute otitis media/myringitis	1.7	1.4	1.9	2.1	1.8	2.5
Pregnancy & family planning	3.2	2.9	3.6	6.6	5.9	7.3
Pre/post natal check-up*	0.6	0.5	1.2	1.6	0.9	2.3
Oral contraception*	0.8	0.6	1.0	1.5	1.2	1.8
Neurological	4.0	3.8	4.2	4.0	3.7	4.3
Urology	2.4	2.2	2.6	3.2	2.9	3.4
UTI*	1.6	1.4	1.7	1.9	1.7	2.1

(continued)

Table 14.8 (continued): Distribution of problems managed across ICPC-2 chapters and most frequent individual problems within chapter

Problems managed	Male GPs			Female GPs		
	Rate per 100 encs ^(a)	95% LCI	95% LCI	Rate per 100 encs ^(a)	95% LCI	95% LCI
Eye	2.8	2.7	3.0	2.7	2.5	3.0
Blood	1.6	1.4	1.7	2.1	1.3	2.9
Male genital system	1.6	1.4	1.7	0.9	0.6	1.1
Social problems	0.7	0.4	0.9	1.1	0.9	1.4

(a) Figures do not total 100% as more than one problem can be managed at each encounter. Only selected individual morbidities included

* Indicates multiple ICPC-2 or ICPC-2 PLUS codes (see Appendix III).

Note: Abbreviations: Encs – encounters, UCI – Upper confidence interval, LCI – Lower confidence interval.

14.4 State/Territory data based on patient residence

14.4.1 Summary of data for States and Territories

Participating GPs recorded the postcode of residence for each of the patients encountered, allowing identification of the distribution of patient encounters by State and Territory. While GP practice postcode could also be used to classify State, the patients seeing the GP may well be interstate at the time. The size of the raw datasets for each State or Territory is described in Table 14.9. Though State health departments are not responsible for the costs associated with general practice consultations, they are responsible for other medical services such as those in hospital and are therefore interested in the health of their population.

In a study aiming to represent Australian general practice encounters, the number of encounters reflects the patient and GP population in each State/Territory. It would not be expected that all of the States/territories would have a sufficient sample size to describe specific patterns of care

In the first row of Table 14.9 the number of encounters with patients resident in each of the States is provided. The percentage distribution after removal of missing data (n=310) is presented in the second row. As anticipated the majority of patients (79.5%) resided in New South Wales, Victoria or Queensland. The size of each of these three State datasets is sufficient for individual State based analysis.

Approximately 7,000 encounters were recorded with patients residing in Western Australia, and similar numbers were recorded for residents of South Australia. These sample sizes would allow these two States to gain a broad overview of the more frequent events occurring. However, for less common morbidities or for selected patient groups (such as children or the elderly), reliability may be questionable. Over-sampling of these two States in future years would provide more reliable State results.

The sample sizes for Tasmania, the Northern Territory and the Australian Capital Territory were insufficient for any State/Territory description of general practice activity. Again over-sampling of GPs in these States in future years would provide a valuable data source about the health of the community in each.

Table 14.9: Raw data size by State/Territory (unweighted data)

	NSW	Vic	Qld	WA	SA	Tas ^(a)	ACT ^(a)	NT ^(a)
Encounters ^(b) (n)	35,768	23,208	18,108	7,204	7,188	2,195	1,682	1,238
Row % (N= 98,400)	37.0	24.0	18.7	7.5	7.4	2.3	1.7	1.3
New patients	3,259	2,020	2,035	661	580	..	..	..
Reasons for encounter	54,158	33,874	25,151	10,728	10,580	..	..	..
Problems managed	53,226	34,614	26,165	10,875	10,431	..	..	..
Prescriptions	35,437	21,440	15,697	6,624	6,327	..	..	..
Other treatments	15,261	10,465	8,746	3,503	3,015	..	..	..
Pathology	9,424	5,873	4,756	1,914	2,016	..	..	..
Imaging	2,683	1,671	1,382	573	490	..	..	..
Referrals	4,419	2,772	1,887	830	902	..	..	..

(a) Sample size insufficient for analysis

(b) Missing data removed

14.4.2 Age and sex of patients by State

The gender distribution of patients resident in each State was relatively constant around the national average of 59% female. The age distributions also tended to the national average of 25% in each age group: <25 years, 25–44 years, 45–64 years and 65+, though there was some variance, with a greater proportion of elderly patients in New South Wales (27.0%) and Western Australia (26.7%) and a lesser proportion in Queensland (23.1%) (Table 14.10).

Table 14.10: Encounter based data

	NSW	Vic	Qld	WA	SA
Sex of patient (%)	..	..	..	..	..
Male	41.2	39.8	41.7	41.5	42.0
Female	58.8	60.2	58.3	58.5	58.0
Age of patient (%)	..	..	..	..	..
<1 year	2.3	2.1	2.8	1.6	2.1
1–4 years	5.2	4.8	5.8	4.5	5.4
5–14 years	7.1	6.6	8.1	6.0	7.5
15–24 years	9.0	9.7	10.6	9.3	10.3
25–44 years	24.8	26.7	25.4	26.8	26.5
45–64 years	24.7	23.7	24.3	25.1	23.5
65–74 years	13.4	13.0	11.6	13.5	12.0
75+ years	13.6	13.4	11.5	13.2	12.7
Other patient characteristics	..	..	..	..	..
New to practice	9.2	8.8	11.4	9.3	8.2
Aboriginal/Torres Strait Islander	0.9	0.2	1.5	2.1	1.6
NESB	16.5	16.5	6.8	13.6	11.0
Health care card	44.0	47.1	47.9	49.6	48.3

The relative frequency of new patient presentations varied between 8.2 per 100 encounters in South Australia and 11.4 per 100 in Queensland. The number of Indigenous persons seen differed between States even more. In Queensland these patients were seen at a rate of 1.5 per 100 encounters, while in Victoria only 0.2% of encounters were with Indigenous persons. Patients with a non-English speaking background were most commonly residents of New South Wales, Victoria (16.5% NESB in each), Western Australia (13.6%) and South Australia (11.0%). The relative number of NESB patients in Queensland was far less.

14.4.3 Nature of morbidity managed

The relative frequencies of the most common problems managed (drawn from the national BEACH dataset) are provided for each of the States in Table 14.11. Note that the National result (column 1) is based on the weighted total dataset while the State results are unweighted. There was some variance between states in the relative rates of management of many of the listed problems, the relative order of the top ten problems remained almost the same.

Table 14.11: Relative frequencies of the national top 20 problems managed by State^(a)

Most frequent problems managed (rate per 100 encounters)	National (N=96,901)	NSW (N=35,768)	Vic (N=23,208)	Qld (N=18,108)	WA (N=7,204)	SA (N=7,188)
Hypertension*	8.3	9.5	8.3	7.3	8.0	8.3
URTI*	6.8	6.7	6.2	5.9	5.6	6.0
Immunisation/vaccination (all)*	5.2	5.3	5.1	5.2	7.9	5.1
Depression*	3.5	3.4	4.2	3.7	3.6	3.2
Acute bronchitis/bronchiolitis	3.3	3.0	3.6	3.3	2.2	3.0
Asthma	3.2	3.0	3.3	3.1	2.8	3.1
Back complaint*	2.7	2.5	2.7	3.1	3.0	2.5
Diabetes*	2.6	2.5	2.8	2.1	2.5	2.9
Lipid disorder	2.5	2.9	2.3	1.8	2.9	2.1
Osteoarthritis*	2.2	2.4	2.0	1.8	2.4	2.4
Sprain/strain*	1.9	1.5	1.7	1.8	2.0	2.2
Contact dermatitis	1.8	1.8	2.0	1.5	1.6	2.0
Acute otitis media/myringitis	1.8	1.6	1.5	1.9	1.6	1.6
Anxiety*	1.7	1.7	2.0	1.5	1.5	2.1
Sleep disturbance	1.6	1.8	1.6	1.7	1.8	1.6
UTI*	1.6	1.8	1.7	1.5	1.9	1.6
Female genital check-up/Pap smear*	1.6	2.0	2.1	1.6	2.2	2.1
Sinusitis acute/chronic	1.6	1.5	1.4	1.6	1.2	1.5
General check-up*	1.6	1.5	1.6	2.0	1.6	1.9
Oesophageal disease	1.5	1.7	1.2	1.5	1.5	1.4

(a) Results are only provided for States with sufficient sample size

* Includes multiple ICPC-2 or ICPC-2 PLUS codes (see Appendix III)

14.4.4 Conclusion

This overview of State based data has served to provide each State with an indication of the BEACH data available to them from the 1998–99 data collection period. More detailed analyses could be conducted for the larger States. Such data could be combined with hospital separation data, ABS National Health Survey data and other health information to provide each State and Territory with a more complete picture of the health of their community. In smaller States and Territories over-sampling would be required in future BEACH years to ensure sufficient reliability.