10 General practice

General practice is a major component of Australia's healthcare system and plays an important role in the delivery of health services. General practitioners (GPs) form part of the primary health care system and are at the interface between primary care and other parts of the health system. Consequently, support for general practice is an important part of government strategy to improve health outcomes in Australia.

Descriptive information about services provided in general practice is contained in section 10.1. Policy developments in general practice are discussed in section 10.2, a framework of performance indicators is presented in section 10.3 and key results are discussed in section 10.4. Future directions for reporting are covered in section 10.5 and relevant terms are defined at section 10.6.

Supporting tables

Supporting tables for chapter 10 are provided on the CD-ROM enclosed with the Report. The files are provided in Microsoft Excel 97 format as \Publications\Reports\2003\Attach10A.xls and in Adobe PDF format as \Publications\Reports\2003\Attach10A.pdf.

Supporting tables are identified in references throughout this chapter by an 'A' suffix (for example, table 10A.3 is table 3 in the electronic files). These files can be found on the Review web page (www.pc.gov.au/gsp). Users without Internet access can contact the Secretariat to obtain these tables (see details on the inside front cover of the Report).

10.1 Profile of general practice

Definitions, roles and responsibilities

General practitioners form part of the medical practitioner workforce. The medical practitioner workforce comprises doctors trained in a specialty — including general practice — and other medical practitioners (OMPs). All GPs trained since 1996

must undertake the general practice specialist training program in order to achieve vocational registration under the *Health Insurance Act 1973* (Cwlth). The Royal Australian College of General Practitioners (RACGP) defines a GP as: 'a medical practitioner who provides primary, comprehensive and continuing care to patients and their families within the community' (Britt *et al.* 1999, p. XXXV). For the purposes of Medicare, 'recognised' GPs are those who are vocationally registered under section 3F of the *Health Insurance Act 1973* (Cwlth), hold fellowship of the RACGP or equivalent, or hold a recognised training placement (Britt *et al.* 1999). A summary of common health terms is provided at section 10.6.

In Australia, GPs are an important source of primary health care.[1] The services provided by GPs include: diagnosing and treating illness (both chronic and acute); providing preventative care through to palliative care; referring patients to consultants, allied health professionals, community health services, and hospitals; and acting as gatekeepers for other health care services (DHFS 1996). GPs may also be involved in teaching, research and activities related to other government services, such as those provided by Centrelink.

While the majority of GPs are private practitioners who provide services as part of a general practice (funded largely by the Commonwealth Government's Medicare Benefits Schedule, supplemented in some instances by patient contributions), they may also be employed by hospitals or other organisations in full time or part time capacities. Over recent years, there has also been an emerging trend of corporate entities purchasing general practices and in some cases, amalgamating these practices into medical centres that include other health services. In some parts of rural Australia, GPs provide a range of services to admitted patients, and rural and urban GPs sometimes staff emergency departments, although this latter role is declining (DHAC 2000a). State and Territory governments fund services provided by visiting medical officers or salaried doctors to public patients in public hospitals, and visiting medical and other primary health care services provided in rural and remote areas. State and Territory governments are also responsible for registering and licensing GPs in their jurisdiction. Commonwealth, State and Territory governments provide incentives for GPs to locate in rural and remote areas.

[1] Primary care refers to the care provided at the patient's first point of contact with the health care system. Other examples of primary care include services provided by community health centres, pharmacists in local pharmacies, nurses in the home and a number of other health providers in noninstitutional settings.

Funding

Almost all of the services provided by private GPs are funded in part by the Commonwealth Government through Medicare and the Department of Veterans' Affairs (DVA). This is illustrated by the *Bettering the Evaluation and Care of Health* (BEACH) study of general practice activity in Australia. About 1000 GPs participate in the BEACH study each year, with each participant recording details of 100 consecutive patient encounters. The 2002 BEACH study involved 983 GPs who each recorded 100 patient encounters (98 300 encounters). After post-stratification weighting there were 96 973 encounters (table 10A.6). (Britt *et al*. (2000) define an 'encounter' as any professional interchange between a patient and a GP.) The BEACH study found that in 2001-02 93.9 per cent of all encounters with GPs were for services funded by Medicare or DVA (table 10.1).

Table 10.1 **Encounters by source of funding, 2001-02[a, b]**

	Number	*Rate per 100 encounters[c]*	*95% LCL[d]*	*95% UCL[d]*
GPs participating in the BEACH study	983	..	..	..
Total encounters for which BEACH data were recorded	96 973	..	..	..
Encounters with missing data	7 336	..	..	..
Direct consultations[e]	87 564	97.7	97.4	98.0
No charge	552	0.6	0.2	1.1
Medicare paid[f]	84 196	93.9	93.5	94.4
Workers compensation	1 799	2.0	1.8	2.3
Other paid (hospital, State, etc.)	1 019	1.1	0.2	2.0
Indirect consultations[g]	2 072	2.3	1.8	2.8

a April 2001 to March 2002. **b** Britt *et al.* (2000) define an 'encounter' as any professional interchange between a patient and a GP. **c** Missing data removed. Percentage base (N = 89 636). **d** UCL = upper confidence limit; LCL = lower confidence limit. **e** Categories do not add up to total direct consultations because there is overlap in some cases. **f** Includes Commonwealth payments made through DVA. **g** Indirect consultations are those at which the patient is not seen by the GP but which generate a prescription, a referral, a certificate or other service. They are usually the result of a phone call by a patient. **..** Not applicable.

Source: Britt *et al.* (2002b); table 10A.6.

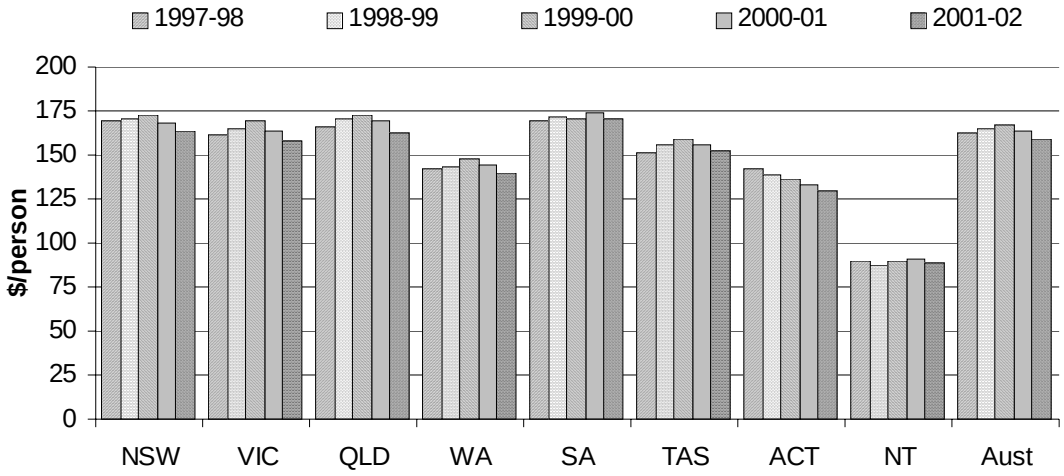
Medicare fee-for-service payments comprised 81.7 per cent of Commonwealth expenditure on GPs in 1998-99 (and 63.1 per cent of total expenditure on GPs from all sources) (table 10A.7). The Commonwealth also provided payments for GPs through the DVA local medical officer arrangements,[2] the Divisions of General Practice Program, the Practice Incentives Program (PIP) and the GP Immunisation

[2]Local medical officers are GPs who are registered with the DVA to provide services to veterans and other DVA beneficiaries.

Incentives Scheme (DHAC 2000a). Non-government sources contributed 22.8 per cent of total expenditure on GPs in 1998-99, comprising payments by insurance schemes (including private health insurance, workers compensation and third party insurance) and by private individuals (table 10A.7).

The cost to the Commonwealth Government of general practice was approximately $3.1 billion in 2001-02, including non-Medicare funding and expenditure by DVA. This was equivalent to expenditure of $159 per person in 2001-02 (figure 10.1). Some primary care services are provided by salaried GPs in community health settings particularly in rural and remote areas through accident and emergency departments and Aboriginal Community Controlled Health Services (ACCHSs). Consequently, expenditure reported through Medicare fee-for-service statistics will be understated in jurisdictions with larger proportions of rural and remote populations.

Figure 10.1 **Commonwealth Government real expenditure per person on general practice (2001-02 dollars)[a]**



a The data used include Medicare, PIP, DVA, Divisions and General Practice Immunisation Incentives Scheme data.

Source: Department of Health and Ageing (DHA) (unpublished); table 10A.8.

State and Territory governments also provide funding for general practice in a number of areas. Generally, this funding is provided indirectly through mechanisms such as support services for GPs. Expenditure on rural programs for general practice is one of the main areas funded by States and Territories — examples include assistance with housing and relocation, education programs and assistance with employment for spouses and family members of doctors in rural areas. Other types of expenditure are directed towards providing education and support services in areas such as diabetes management, smoking cessation, sexual health, and mental

health and counselling. Funding in these areas is often provided through grants to bodies such as secretariats that help coordinate and deliver these support services to GPs and the community.

Size and scope of sector

In 2001-02, there were 24 307 GPs and OMPs billing Medicare in Australia, which represents 123.3 per 100 000 people — a decline from 132.3 per 100 000 in 1996-97 (table 10A.9). Care needs to be taken in interpreting head counts of doctors billing Medicare as not all OMPs are GPs. In addition, some GPs provide only small numbers of services attracting Medicare benefits and there are substantial numbers of doctors working in clinical practice part time.

Figure 10.2 presents the distribution of full time workload equivalent (FWE) GPs across jurisdictions. An FWE is calculated for each doctor by dividing the doctor's Medicare billing (schedule fee value of claims processed by the Health Insurance Commission during the reference period) by the mean billing of full time doctors. The data exclude services provided by medical practitioners working with the Royal Flying Doctor Service, some doctors working in Aboriginal Medical Services and salaried doctors working in public hospitals without the right of private practice. In addition, the data are based on doctors' Medicare claims, which for some doctors, particularly in rural areas, represent only part of their workload. General practitioners in rural or remote areas spend more of their time working in local hospitals than those in metropolitan centres.

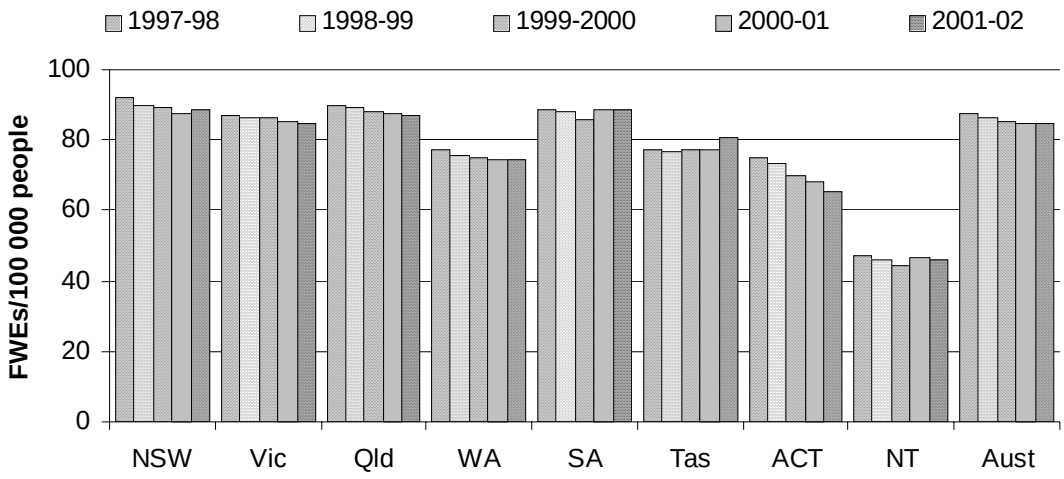
Australia-wide in 2001-02, there were 84.9 FWE GPs per 100 000 people. The highest number per 100 000 was in SA (88.8) and the lowest was in the NT (46.1) (figure 10.2).

Consulting a GP was the second most common health-related action of Australians in 1995 (the last year for which data are available), after use of medications (ABS 1997). The average consultation with a GP lasts just under 15 minutes (box 10.1).

Consultations per standardised whole patient equivalent (SWPE)[3] in 2000-01 were highest in NSW (6.6) and lowest in the NT (4.7) (figure 10.3), and were generally highest in capital cities and lowest in remote areas — declining with population density (table 10A.11).

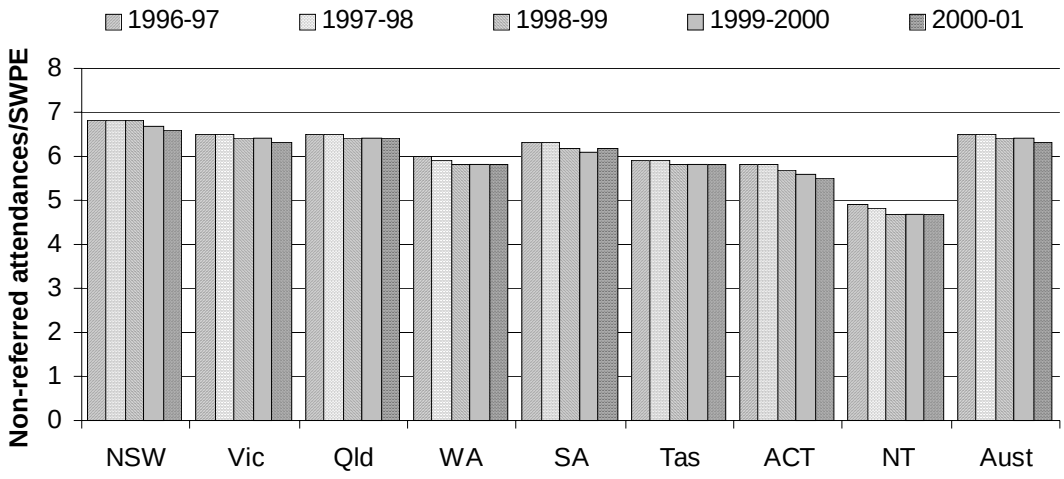
[3] 'Standardised whole patient equivalent' is an indicator of practice workload based on the number of patients seen. The SWPE value for a jurisdiction is the sum of the fractions of care provided by doctors in that jurisdiction to their patients, weighted for the age and sex of each patient in accordance with national ratios.

Figure 10.2 **GPs (full time workload equivalent) per 100 000 people**



Source: DHA (unpublished); table 10A.9.

Figure 10.3 **Non-referred attendances per standardised whole patient equivalent[a]**



a SWPE is an indicator of practice workload based on the number of patients seen. The SWPE value for a jurisdiction is the sum of the fractions of care provided by doctors in that jurisdiction to their patients, weighted for the age and sex of each patient in accordance with national ratios.

Source: DHA (unpublished); table 10A.10.

Box 10.1 **'Time for care'**

According to a study, the average GP consultation lasts just under 15 minutes. The study also shows that consultations with female GPs are longer on average (15.9 minutes) than those with male GPs (average 14.3 minutes). This finding was consistent with previous research that suggested female GPs deal with more psychological problems (such as depression) and more social problems. It was also found that younger male doctors (under 45 years) practising in metropolitan areas had the shortest average consultations at a little over 13 minutes. The GPs with the longest consultations, averaging 16.7 minutes, were rural female GPs aged 55 years and over.

The study was based on the timed length of 31 000 consultations for which a Medicare item number was claimed, from a random sample of 926 GPs. The study was undertaken between April 2000 and March 2001. The study shows that the average length of consultations varies greatly between different GPs, ranging from less than 10 minutes to more than 30 minutes. Consultations with a few GPs averaged less than 10 minutes, but the data show that the great majority of doctors are not in this category.

Source: Britt *et al.* (2002a).

Use of general practice services by Indigenous and non-Indigenous people

The Australian Institute of Health and Welfare (AIHW) and the (then) Department of Health and Aged Care report *Expenditures on health services for Aboriginal and Torres Strait Islander people, 1998-99* provides an analysis of data on the utilisation of general practice services collected in the BEACH survey. A series of adjustments were made to address under-identification and other methodological issues in the BEACH survey (AIHW 2001). These adjustments rest on a fundamental assumption that the characteristics of Indigenous people captured by the BEACH survey are identical to the people that were not covered in the survey. The adjusted data indicate that for every dollar expended on non-Indigenous people under the Medicare Benefits Schedule, 41 cents was spent on Aboriginal and Torres Strait Islander people. For Pharmaceutical Benefits Scheme (PBS) expenditure, 33 cents was spent on Indigenous Australians for every dollar expended for non-Indigenous people.

The BEACH study of general practice activity in Australia includes questions to identify encounters between Indigenous patients and participating GPs, however, the data should be treated with care. First, the sample frame has not been designed to produce statistically significant results for population sub-groups such as Indigenous Australians. Given that Indigenous Australians make up 2.4 per cent of

the Australian population, sample surveys such as BEACH generally do not identify sufficient Indigenous people to produce reliable results unless an additional sample has been specifically chosen to target Indigenous Australians. Therefore, the BEACH survey does not generally produce statistically reliable information for this population group.

Second, the identification of Indigenous Australians is not complete. In the BEACH survey there are more 'not stated' responses on the Indigenous question (10 per cent) than 'yes' responses. It can be assumed, therefore, that the survey consistently undercounts the number of Indigenous people visiting doctors. In addition, there is no information on whether the health characteristics of those who have been inaccurately 'not identified' are significantly different to those that have been identified. This affects the accuracy of the detailed results of the survey for Indigenous Australians.

There were 982 encounters between Indigenous patients and GPs in the 2001-02 BEACH study, which represented 1.0 per cent of encounters in the study — a lower proportion than the 2.4 per cent of the Australian population identified as Indigenous in June 2001 (tables A.1 and A.7 in the Statistical Appendix). Of the Indigenous encounters, 87.1 per cent stated they were Aboriginal, 9.7 per cent stated they were Torres Strait Islanders and 3.2 per cent said they were both.

The location of practices of the 272 GPs who saw Indigenous people was markedly different to that of the total GP sample. Only 54.6 per cent of GPs who saw Indigenous people practised in capital cities, compared with 69.3 per cent of the total sample. In contrast, 2.3 per cent of these GPs practiced in remote areas compared with 0.5 per cent of the total sample and approximately one quarter (24.6 per cent) practiced in small rural or other rural areas, compared with 15.4 per cent of the total sample (table 10A.1).

Indigenous people are more likely to live outside urban areas than non-Indigenous people, which may affect their access to and use of general practice services. In 1996, 26.1 per cent of Indigenous people lived in remote and very remote areas compared to only 2.0 per cent of non-Indigenous people (CGC 2001). Indigenous encounters by remoteness are shown in table 10A.2.

General practitioners treating Indigenous people tended to be younger — 13.6 per cent were aged 35 years or less, compared with 7.1 per cent of the total GP sample, and 31.5 per cent were aged 35 to 44 years, compared with 26.8 per cent of the total sample (Britt *et al* 2002b).

The age distribution of Indigenous patients differed markedly from that of the total sample of patients for all encounters. Overall, Indigenous patients were significantly

younger than the total sample of patients encountered. The proportion of Indigenous patients aged less than 44 years was 68.2 per cent compared with 48.6 per cent in the total data set. This difference was apparent in all the younger age groups. In contrast, the proportion of encounters with older Indigenous people was lower than that of the total data set. Only 8.9 per cent of Indigenous patients were over 65 years, compared with one in four in the total sample. The different age structure for Indigenous patients reflects the much younger age profile of the Indigenous population.

The ABS estimated residential population figures for 2001 show that 38.9 per cent of the Indigenous population was aged under 15 years, compared to 20.2 per cent of the non-Indigenous population. Only 2.8 per cent of the Indigenous population was aged over 65 years, compared with 12.4 per cent of the non-Indigenous population (tables A.1 and A.7 in the Statistical Appendix).

Most encounters (92.7 per cent) between GPs and Indigenous people in 2001-02 were paid for by the Commonwealth through Medicare, with standard surgery consultations accounting for 73.2 per cent of encounters (table 10.2).

Table 10.2 **Indigenous encounters by source of funding, 2001-02**

	Number[a]	*Rate per 100 encounters*	*95% LCL*[b]	*95% UCL*[b]
Direct consultations	916	97.6	96.5	98.6
No charge	12	1.3	–	21.3
MBS items of service	870	92.7	89.8	95.7
Standard surgery consultations	689	73.2	67.7	79.1
Workers compensation	12	1.3	–	25.9
Other paid (hospital, State, etc.)	22	2.3	–	17.7
Indirect consultations	23	2.4	–	5.5

[a] Missing data removed. [b] LCL = lower confidence limit; UCL = upper confidence limit. – Nil or rounded to zero.

Source: Britt *et al*. (2002b).

The most common reasons for encounters given by Indigenous patients are provided in table 10.3 with the comparative results from the total data set. The only significant difference between the more common reasons for encounters with Indigenous people and the total data set was the rate of requests for a checkup (either of a general nature or of a specific body system), which was significantly lower than the average at Indigenous encounters (5.2 per 100 Indigenous encounters compared with 13.4 per 100 total encounters).

Table 10.3 **Most frequent reasons for encounter, Indigenous patients and all patients, 2001-02**

	Indigenous encounters			*All encounters*		
Patient reasons for encounter	*Rate per 100 encounters (*n=982)	*95% LCL*[a]	*95% UCL*[a]	*Rate per 100 encounters (*n=*96 973)*	*95% LCL*[a]	*95% UCL*[a]
Prescription—all[b]	8.3	5.2	11.3	9.8	9.2	10.3
Cough	6.9	2.8	11.0	6.5	6.1	6.9
Check-up—all[b]	5.2	1.2	9.1	13.4	12.7	14.0
Back complaint[b]	4.4	–	9.2	3.8	3.6	4.1
Test results[b]	4.2	–	11.9	4.7	4.4	5.1
Immunisation all[b]	3.9	–	8.3	4.6	4.1	5.1
Fever	3.9	–	8.3	2.0	1.7	2.3
Abdominal pain[b]	2.9	–	6.1	2.1	2.0	2.3
Throat symptom/ complaint	2.7	–	6.5	3.8	3.4	4.1
Rash[b]	2.7	–	7.1	2.8	2.6	3.0
Diabetes (non-gestational)[b]	2.4	–	5.6	1.0	0.8	1.2
Total reasons for encounters	**149.5**	**143.6**	**155.5**	**149.2**	**147.4**	**150.9**

[a] LCL = lower confidence level; UCL = upper confidence level. [b] Includes multiple primary care classification codes. – Nil or rounded to zero.

Source: Britt *et al*. (2002b); table 10A.3.

The 10 most common problems managed at encounters with Indigenous and non-Indigenous people are presented in table 10.4. The wide confidence intervals generated by the small sample size rendered none of the differences statistically significant.

Table 10.4 **Indigenous and non-Indigenous health problems managed, 2001-02**

	Indigenous encounters			*All encounters*		
Problems managed	*Rate per 100 encounters* (n=982)	*95% LCL*[a]	*95% UCL*[a]	*Rate per 100 encounters* (n=96 973)	*95% LCL*[a]	*95% UCL*[a]
Hypertension[b]	6.6	3.1	10.2	9.0	8.6	9.5
Diabetes[b]	6.0	3.1	8.9	3.1	2.9	3.3
Asthma	5.0	–	10.5	2.8	2.6	3.0
Upper respiratory tract infection	4.9	1.0	8.8	6.2	5.8	6.6
Immunisation (all)[b]	4.6	–	12.2	4.7	4.2	5.1
Acute bronchitis/ bronchiolitis	3.9	0.3	7.5	2.7	2.5	3.0
Depression[b]	3.2	–	6.7	3.4	3.2	3.6
Back complaint[b]	3.1	–	8.5	2.6	2.4	2.8
Acute otitis media/ myringitis	3.0	–	6.1	1.3	1.2	1.5
Lipid disorder	2.3	–	5.7	2.9	2.7	3.1
General checkup[b]	2.2	–	6.0	1.8	1.6	2.0
Urinary tract infection[b]	2.1	–	5.8	1.6	1.5	1.7
Impetigo	2.1	–	11.0	0.2	–	0.5
Pregnancy[b]	2.0	–	5.0	0.9	0.7	1.1
Sub-total	501	35.2	..	29.9	..	..
Total problems	**144.7**	**136.8**	**152.7**	**143.4**	**141.7**	**145.2**

[a] LCL = lower confidence level; UCL = upper confidence level [b] Includes multiple primary care classification codes. – Nil or rounded to zero. .. Not applicable.

Source: Britt *et al.* (2002b); table 10A.4.

Table 10.5 summarises the major management activities associated with encounters with Indigenous people. The relative rate of problems managed at encounter were almost identical in the Indigenous encounters and in the total data set. There were no statistically significant differences in any of the other encounter variables due to wide confidence intervals generated by the small size of the Indigenous encounter sample.

Table 10.5 **Summary of management activities for Indigenous patients, 2001-02**

	Number	*Rate per 100 encounters (*n=*983)*	*95% LCL*[a]	*95% UCL*[a]
Problems managed	1422	144.7	136.8	152.7
New problems	606	61.7	52.9	70.5
Work-related	19	1.9	–	6.6
Medications	1176	119.7	105.5	134.0
Prescribed	1001	101.0	85.8	118.0
Advised OTC[b]	58	5.9	0.9	10.9
GP supplied	117	11.9	–	28.8
Other treatments	559	56.9	46.9	66.9
Clinical	427	43.5	35.2	51.8
Procedural	132	13.4	10.0	16.9
Referrals	106	11.9	7.6	16.2
Specialist	62	6.3	3.0	9.7
Allied health services	35	3.5	0.3	6.8
Pathology	375	38.1	22.6	53.7
Imaging	92	9.3	5.4	13.2
Total management activities	**1469**	**149.5**	**143.6**	**155.5**

[a] LCL = lower confidence limit, UCL = upper confidence limit. [b] OTC = over the counter.

Source: Britt *et al.* (2002b); table 10A.5.

10.2 Policy developments in general practice

Workforce

Limits on the numbers of doctors training for general practice and those trained overseas have resulted in the GP workforce remaining relatively static over recent years. Different programs in each jurisdiction are addressing the rural doctor shortage and a new system to deliver general practice vocational training through regional programs has been established.

New training opportunities have been introduced to support non-vocationally registered rural doctors to achieve registration, which will increase the level of patient fee rebates under Medicare. This is expected to improve the financial viability of rural practice. Specific programs are addressing issues associated with accessing female GPs in rural areas by encouraging short term rural placements.

Quality

Diabetes and asthma are health priority areas, where new chronic disease initiatives encourage the use of a more systematic approach to illness care through general practice disease registers, recall and reminder systems, links with other providers, and use of audit and feedback linked to regional quality improvement programs. Preliminary work done through the National Divisions Diabetes Program has provided a base for models of care.

There are also a number of 'Quality Use of Medicines' initiatives that focus on improving patient health outcomes, while reducing growth in the PBS; in particular, the educational activities of the National Prescribing Service (NPS) and the Enhanced Divisional Quality Use of Medicines Program.

The NPS uses evidence-based strategies to educate and inform prescribers about high quality and appropriate prescribing. It focuses on providing independent information about medicines to prescribers. NPS coverage is being expanded so that it can extend its support to all Divisions of General Practice and work more systematically with specialists, pharmacists and hospital doctors.

The aim of the Enhanced Divisional Quality Use of Medicines Program is to maintain or improve standards of patient care, while reducing the rate of growth of prescribing costs in specified areas. The three drug groups targeted under the program are antibiotics, peptic ulcer drugs and cardiovascular drugs. The program is delivered through Divisions of General Practice in partnership with the NPS, whose activities it complements.

Practice Incentives Program

The PIP directly rewards general practices for parts of their service that are important to providing quality care, but which are not covered by fee-for-service arrangements. The PIP targets information management/information technology, after hours care, rural and remote practice, teaching of medical students, and also includes incentives for quality prescribing and for providing care plans and case conferences. In 2001-02, incentives were introduced through the PIP for improved management of asthma and diabetes, and for increasing cervical screening rates. Incentives were also introduced for practices in rural and other areas of need to employ a practice nurse or Aboriginal Health Worker.

Accreditation against the RACGP's Standards for General Practice is an entry requirement for participation in the PIP. From 1 January 2002, practices need to be

accredited or registered for accreditation to be eligible for PIP. Practices registered for accreditation need to attain full accreditation within 12 months.

Domiciliary Medication Management Review

Domiciliary Medication Management Review (DMMR) is a new service that encourages GPs and pharmacists to work collaboratively to review the medication management needs of patients in the community for whom quality use of medicines may be an issue. The service involves the patient, his or her GP and pharmacist, and other members of the health care team working together to ensure that the patient understands his or her medication and uses it optimally.

General practitioners claim for their involvement in DMMRs through a new item in the Medicare Schedule. Pharmacists are able to claim a fee for their involvement through funding under the Third Community Pharmacy Agreement.

The DMMR should result in improved patient satisfaction, as well as enhanced understanding of and concordance with medication regimens. It should also have positive clinical benefits for patients and lead to improved relationships between GPs, pharmacists and patients.

10.3 Framework of performance indicators

The performance indicator framework is based on the shared government objectives for general practice, which reflect the primary care role of GPs (box 10.2).

Box 10.2 **Objectives for general practice**

General practice aims to promote the health of Australians by:

- acting as a main point of entry to the health care system;
- providing health care which promotes changes in lifestyle behaviour and prevents possible illness;
- coordinating and integrating health care services on behalf of clients; and
- providing continuity of care,

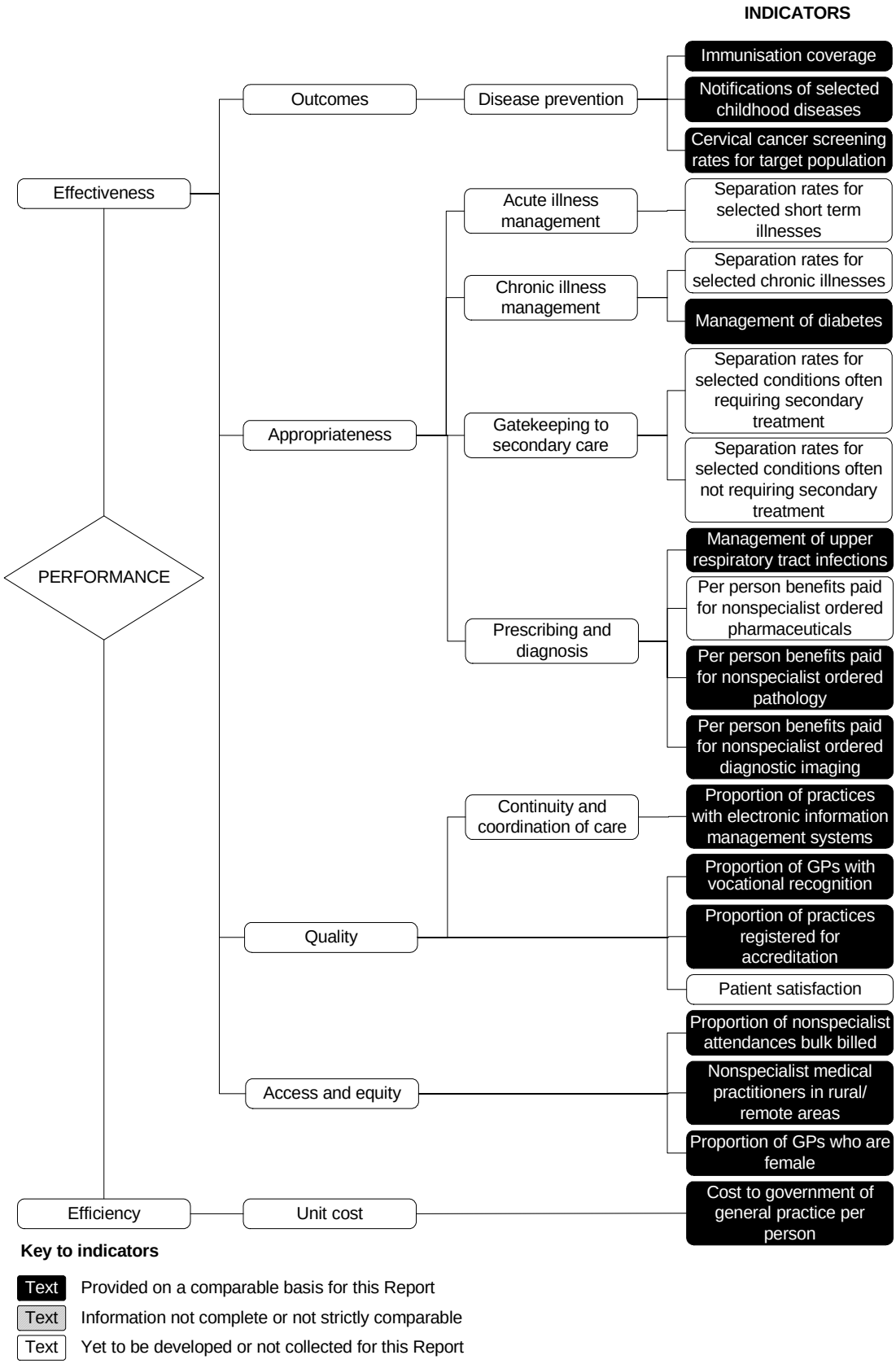
in an equitable and efficient manner.

The performance indicator framework aims to inform analysis of the effectiveness and efficiency of policies targeted at general practice services (figure 10.4). The

framework is evolving over time as better indicators are developed and as the focus and objectives for general practice change.

The performance indicator framework shows which data are comparable in the 2003 Report (figure 10.4). For data that are not considered strictly comparable, the text includes relevant caveats and supporting commentary. Chapter 1 discusses data comparability from a Report-wide perspective (see section 1.6).

Figure 10.4 **Performance indicators for general practice**



10.4 Key performance indicator results

Different delivery contexts, locations and types of client may affect the effectiveness and efficiency of health services. Appendix A contains detailed statistics and short profiles on each State and Territory, which may assist in interpreting the performance indicators presented in this chapter.

Outcomes

Disease prevention — immunisation coverage

The level of immunisation coverage has been included in the framework because GPs are encouraged to achieve high immunisation coverage levels under the General Practice Immunisation Incentives Scheme. The Scheme provides incentives for the immunisation of children in the age group of 0–6 years. GPs see 93 per cent of children in this age group seven times a year on average (DHAC 1999). The aim is to have full immunisation of the 90 per cent of all children who attend 90 per cent of all general practices (DHAC 1999). The introduction of the Scheme, however, has had variable impacts in different States and Territories, depending on the structure of service provision.

Child immunisation services are delivered by many providers (table 10.6). The Australian Childhood Immunisation Register (ACIR) records suggest that since data were first collected in 1996, GPs have played a major role in immunising children under seven years of age in NSW, Queensland, WA, SA and Tasmania. In Victoria, local governments share the main immunisation provider role with GPs. Territory governments are the significant providers in the ACT and in the NT through community health centres (table 10.6).[4]

Around 90.2 per cent of Australian children aged 12 to 15 months at 30 June 2002 were assessed as fully immunised, down from 91.5 per cent at 30 June 2001 (figure 10.5).[5] Between 88.5 and 91.7 per cent of children in all jurisdictions were fully immunised (figure 10.5).

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4 Approximately 40 per cent of children aged 0–6 years in the NT are Indigenous, living in remote communities that are not serviced by a GP. Since GPs provide immunisation services to only a small proportion of children in the NT, immunisation coverage rates are a weak indicator of GP performance in the NT.

5 Full immunisation at 12 months includes immunisation against diptheria, tetanus, whooping cough, polio and Haemophilus influenzae type b.

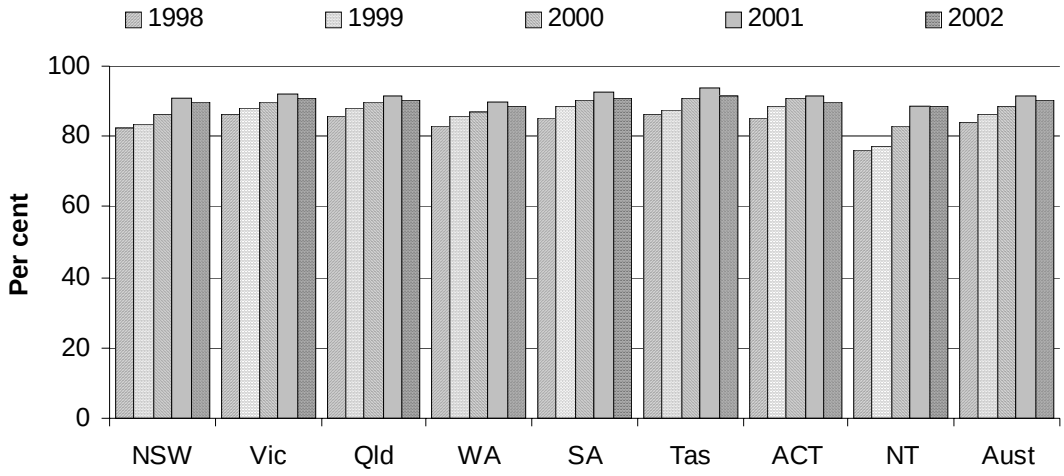
Table 10.6 **Valid vaccinations supplied to children under seven years of age by the type and State/Territory of the immunising provider, 2002 (per cent)[a]**

Provider	*NSW*	*Vic*	*Qld*	*WA*	*SA*	*Tas*	*ACT*	*NT*	*Aust*
GPs	82.8	50.6	83.2	62.9	69.5	85.1	38.1	3.0	69.9
Council	6.8	48.3	7.8	8.1	17.5	14.3	–	–	18.4
State and Territory health department	–	–	–	5.1	0.1	0.1	40.2	–	1.2
Flying doctor service	–	–	0.4	–	0.2	–	–	–	0.1
Public hospital	2.9	0.2	3.1	5.4	4.8	0.2	1.1	1.8	2.5
Private hospital	0.2	–	–	–	–	–	–	1.0	0.1
Aboriginal health service/worker	0.5	0.1	0.5	0.5	0.3	–	0.2	6.5	0.5
Aboriginal health worker	–	–	0.5	–	0.1	–	–	0.2	0.1
Community health centre	6.8	0.8	4.5	18.0	7.6	0.4	20.4	87.5	7.3
Community nurse	–	–	–	–	–	–	–	–	–
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

a At 30 June 2002. Data collected since 1 January 1996. – Nil or rounded to zero.

Source: DHA (unpublished); table 10A.15.

Figure 10.5 **Proportion of children aged 12 to 15 months who were fully immunised (per cent)[a, b, c]**



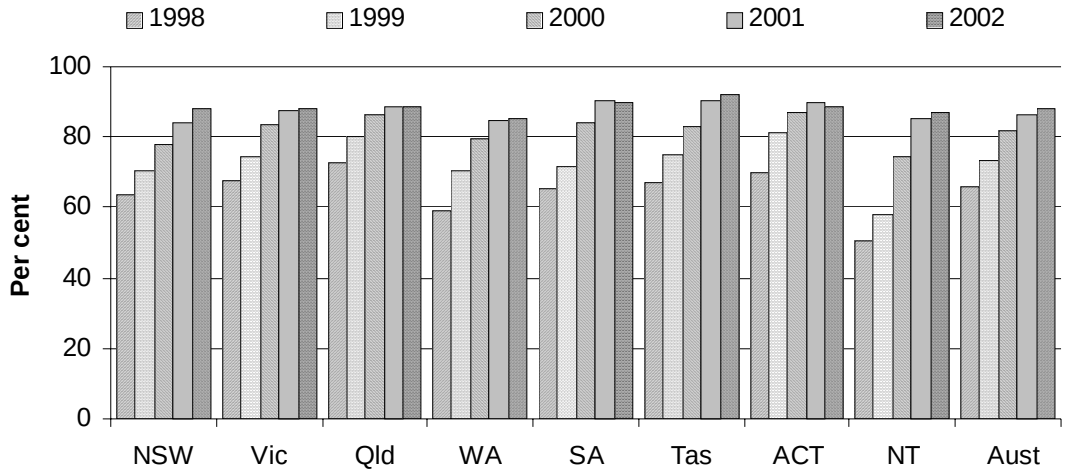
a Coverage measured at 30 June for children turning 12 months of age by 31 March. **b** The ACIR includes all children under seven years of age who are registered with Medicare. By the age of 12 months, over 98 per cent of Australian children have been registered with Medicare (NCIRS 2000). **c** There may be some underreporting by providers, and as a result, vaccine coverage estimates calculated using ACIR data should be considered minimum estimates (NCIRS 2000).

Source: DHA (unpublished); table 10A.16.

Nationally, 88.1 per cent of children aged 24 to 27 months at 30 June 2002 were assessed as being fully immunised, an increase from 86.6 per cent at 30 June 2001

(figure 10.6).[6] Tasmania recorded the highest proportion (91.8 per cent), while WA recorded the lowest (85.0 per cent).

Figure 10.6 **Proportion of children aged 24 to 27 months who were fully immunised (per cent)[a, b, c]**



[a] Coverage measured at 30 June. [b] The ACIR includes all children under seven years of age who are registered with Medicare. By the age of 12 months, over 98 per cent of Australian children have been registered with Medicare (NCIRS 2000). [c] There may be some underreporting by providers, and as a result, vaccine coverage estimates calculated using ACIR data should be considered minimum estimates (NCIRS 2000).

Source: DHA (unpublished); table 10A.17.

Disease prevention — notifications of selected childhood diseases

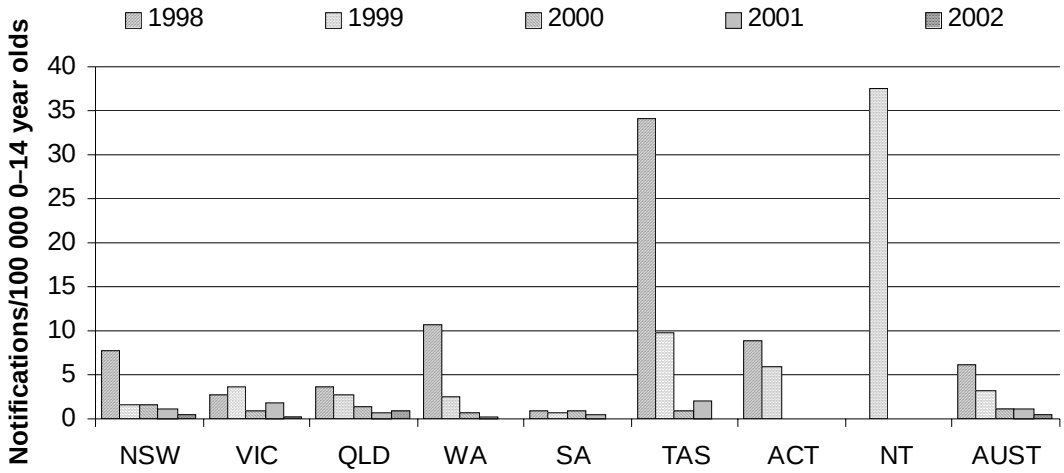
Notification rates for selected childhood vaccine-preventable diseases (measles, pertussis (whooping cough) and *Haemophilus influenzae* type b) are used as an indicator because the activities of GPs can influence the rate of these diseases through immunisation. The debilitating effects of these diseases can be long term or even life threatening. The complications from measles, for example, can include pneumonia, which occurs in one in 25 cases. As part of the Immunise Australia Seven Point Plan, Australia has embarked on a strategy to eliminate measles. The indicator for the rate of notifications for selected childhood diseases reflects the number of notifications for 0–14 year olds per 100 000 people in that age group.

In 2002, the notification rate for measles for 0–14 year olds was 0.4 per 100 000 people in that age group. This represents a large decline from the high levels of the early to mid-1990s (table 10A.19). In 2002, notification rates for 0–14 year olds for

[6] Full immunisation at 24 months includes immunisation against diptheria, tetanus, whooping cough, polio, Haemophilus influenzae type b and measles, mumps and rubella.

measles were zero in WA, SA, Tasmania, the ACT and the NT, with very low rates in all other jurisdictions (figure 10.7).

Figure 10.7 **Notification rates for measles among people aged 0–14 years (per 100 000 people aged 0–14 years)[a]**



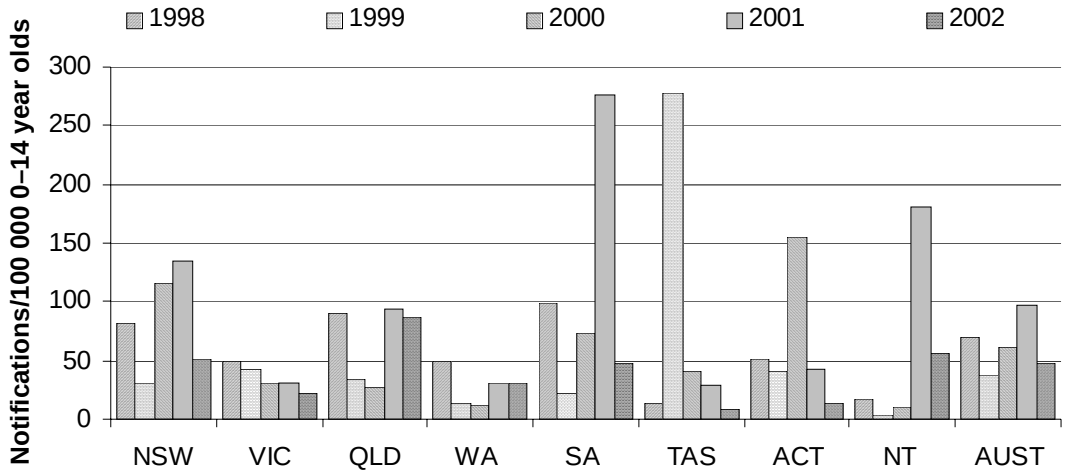
a Notifications for 2002 are to August only and have been adjusted to annual rates for comparison.

Source: DHA (unpublished); table 10A.19.

A severe outbreak of pertussis (whooping cough) occurred in 1997 (table 10A.20). The notification rate for Australia in that year was 156.5 notifications for 0–14 year olds per 100 000 people in that age group. As a result of the increased incidence of pertussis, the then Commonwealth Department of Health and Family Services decided to actively encourage the immunisation of all children against the disease. In 2002, the notification rate for 0–14 year olds in Australia was 47.4 (figure 10.8). The highest rate in 2002 was in Queensland, with 87.1 notifications per 100 000 children aged 0–14 years, and the lowest was in Tasmania, with a notification rate of 9.1.

In recent years, notification rates for *Haemophilus influenzae* type b have remained relatively low in all jurisdictions except the NT (figure 10.9). In 2002, the notification rate Australia-wide was 0.5 (per 100 000 children aged 0–14 years). The NT had a notification rate of 2.9 notifications per 100 000 children aged 0–14 years and WA had a notification rate of 1.9, while Tasmania and the ACT had zero notifications.

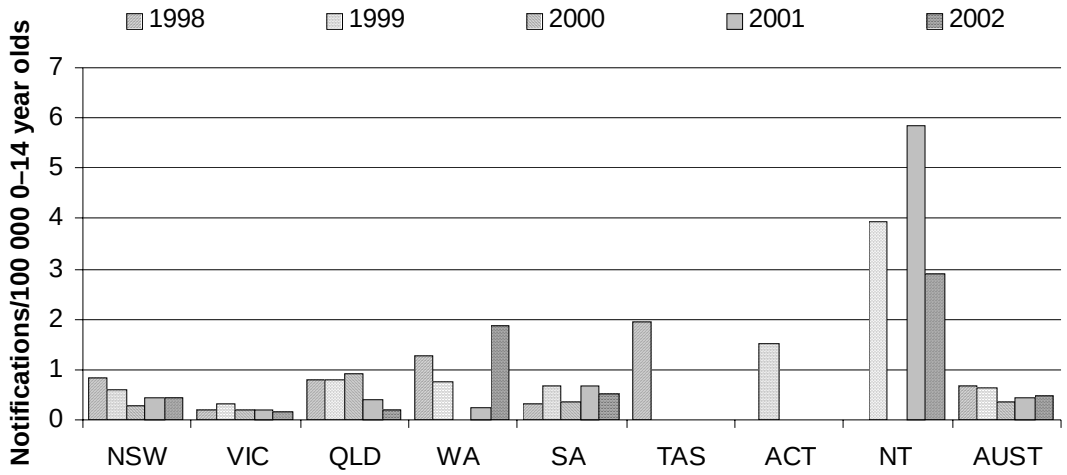
Figure 10.8 **Notification rates for pertussis (whooping cough) among people aged 0–14 years (per 100 000 people aged 0–14 years)[a]**



a Notifications for 2002 are to August only and have been adjusted to annual rates for comparison.

Source: DHA (unpublished); table 10A.20.

Figure 10.9 **Notification rates for *Haemophilus influenzae* type b among people aged 0–14 years (per 100 000 people aged 0–14 years)[a]**



a Notifications for 2002 are to August only and have been adjusted to annual rates for comparison.

Source: DHA (unpublished); table 10A.18.

Disease prevention — cervical screening

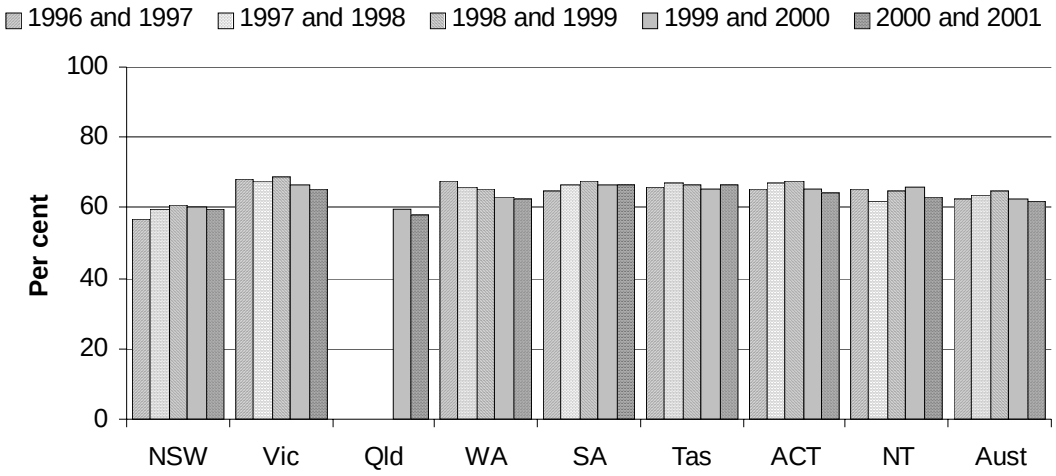
The third outcome indicator for primary care services provided by GPs is the cervical screening rate. Like child immunisation, cervical screening tests (that is, Pap smears) are offered by a range of health care providers under the National

Cervical Screening Program — GPs, gynaecologists, family planning clinics and hospital outpatient clinics. Care needs to be taken in interpreting the results as the level of participation in the program reflects the activities of all health care providers — not only GPs.

General practitioners play an important role in relation to cervical screening as they are often the first point of contact with the health system and are well placed to provide referrals and support where necessary. Medicare data indicates that around 80 per cent of smears are taken by GPs. However, reporting the exact number of smears taken by GPs in relation to other health professionals, such as gynaecologists or staff in women's health centres is difficult. Some smears are sent to public laboratories which do not provide data to the Health Insurance Commission and consequently, the number of smears taken by GPs may be underestimated in the short term. Where this is an issue, procedures are being put in place to ensure that data from public laboratories are aligned with Medicare data reporting requirements. It is anticipated that accurate data on the level of GP involvement in cervical screening may be available for future reports.

The National Cervical Screening Program is targeted at women aged 20–69 years. The screening interval is two years. Figure 10.10 shows that in the 1999 and 2000 screening period, participation rates by women aged 20–69 years were highest in SA and Victoria (each 66.2 per cent) and lowest in Queensland (59.5 per cent) on an age-standardised basis. In the 2000 and 2001 screening period, participation rates were highest in Tasmania (66.6 per cent) and lowest in Queensland (58.2 per cent).

Figure 10.10 **Participation rates of women aged 20–69 years in cervical screening programs (per cent)[a, b, c, d, e]**



a Rates for Australia before 1999 and 2000 have been calculated excluding Queensland because the Queensland Health Pap Smear Register did not start operating until February 1999. **b** Rates for 1996 and 1997 are not age-standardised. **c** The ACT register only records women with an ACT address. **d** All data are adjusted to remove women who have had a hysterectomy. **e** NSW Cervical Screening Program data indicate the participation rate for women aged 20–69 years up to 2001 is 75.1 per cent over 36 months and 84.2 per cent over 48 months.

Source: AIHW; State and Territory Cervical Cytology Registry data; table 10A.21.

Appropriateness

Chronic illness management — management of diabetes

General practitioners can play a significant role in the management of diseases such as diabetes, by diagnosing their patients and enrolling them in structured care, and by following best practice condition management guidelines developed by the profession, including where early intervention is warranted. Over time, good management should start to noticeably affect patients' secondary care requirements, preventing avoidable admissions to hospitals. While good GP management can limit the development of diabetic complications, patient compliance with measures to maintain blood glucose levels within the near-normal range such as medication, diet and physical activity, also plays an important part.

Three indicators for the management of diabetes are presented this year.

- Hospital separation rates for complications of Type 2 diabetes mellitus.
- Hospital separation rates for diseases of the circulatory system — diagnoses where Type 2 diabetes mellitus was an additional diagnosis.

- Hospital separations for lower limb amputations where Type 2 diabetes mellitus was a principal or additional condition.

There are no new data available for two indicators reported in the 2002 Report:

- the proportion of adults with diabetes who have been diagnosed and placed on a diabetes register; and
- the proportion of registered people with diabetes who have had a glycaemic control assessment and the proportion who tested as seriously at risk of future complications.

These indicators were based on data from the National Divisions Diabetes Program Data Collation project carried out in 1999 and 2000. Data may be available for the 2004 Report.

Hospital separations for complications of Type 2 diabetes mellitus

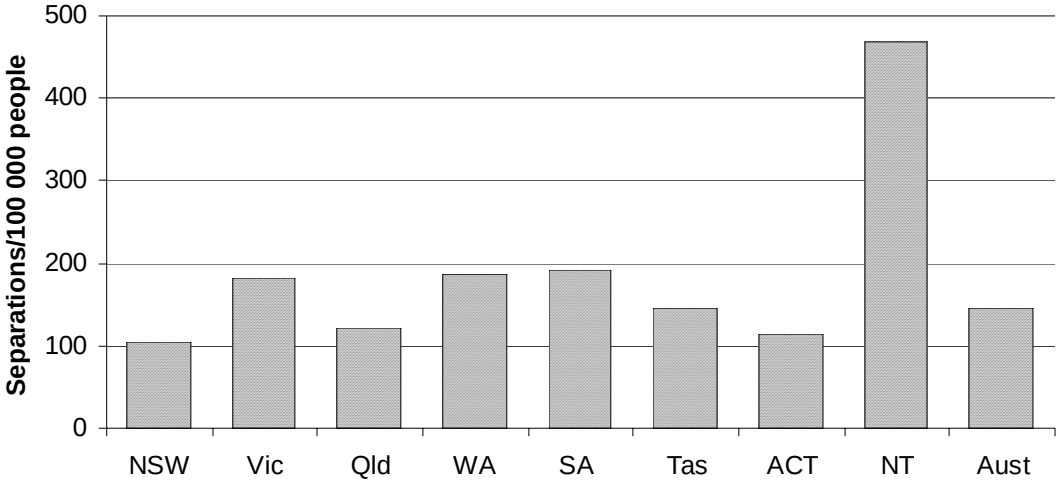
Poorly controlled diabetes mellitus results in the development of various associated conditions, the most common being renal, circulatory and ophthalmic complications which usually require admission to hospital. As primary care providers, GPs are well placed to both detect diabetes early and to provide care which can assist in the prevention or slowing of the development of the complications of diabetes.

Hospital separation rates for Type 2 diabetes and its complications may initially increase as a result of the ageing of the population, increasing longevity, and increasing risk factors, particularly excess weight in recent decades. An extensive program of early diagnosis and management in the primary care sector may eventually lead to a gradual reversal of current trends and continuing reductions in the rates of hospitalisation for diabetes and its complications.

It has been difficult to interpret time trends of hospital separation data in the context of diabetes management in the primary care sector, largely because diabetes coding guidelines and practice have been evolving in the past few years.

Age-standardised rates for hospital separations in all hospitals where the principal diagnosis was Type 2 diabetes mellitus are reported in figure 10.11. Separation rates were highest in the NT (469.6 separations per 100 000 people) and lowest in NSW (104.4 separations per 100 000 people).

Figure 10.11 **Hospital separation rates for Type 2 diabetes mellitus as principal diagnosis, all hospitals, 2000-01**[a, b, c, d, e, f, g, h, i, j, k, l]

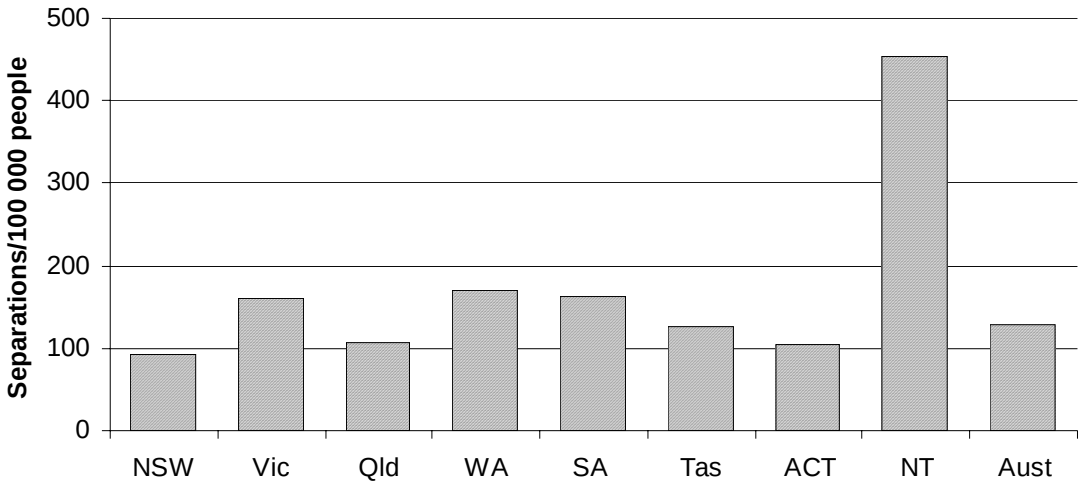


[a] Separation rates are age-standardised to the Australian national population at 30 June 1991 using direct standardisation. [b] Figures include unspecified diabetes. [c] Totals include separations for unspecified complications. [d] Crude rates for each jurisdiction were calculated using ABS estimated resident population by age group for the respective jurisdiction. [e] The figures are based on the ICD-10-AM classification. The codes are E11.x and E14.x, where x=2 renal complications, x=3 ophthalmic complications, x=5 peripheral circulatory complications, x=7 multiple complications, x=8 unspecified complications, x=9 without complications, and x=0,1,4,6 other specified complications. [f] The data are not person-based, but episode-based. A person who is admitted to hospital, say three times in the year, will be counted three times. [g] The principal diagnosis data are episode-based, but the secondary diagnosis data are diagnosis-based. A separation is represented three times in secondary diagnosis if given three different diabetes codes. [h] Age-standardisation tends to exaggerate the effect of multiple episodes for individual patients, particularly in small populations. [i] Although same day admission for dialysis are not normally coded with a principal diagnosis of Type 2 diabetes, the data could include miscoded separations in several jurisdictions. The results for small jurisdictions reflect both this type of distortion and unreliability arising from small numbers. [j] Results for individual complications may be affected by small numbers, particularly in the smaller jurisdictions, and need to be interpreted with care. [k] Treatment of Type 2 diabetes related conditions is also provided in ambulatory care settings. The availability of outpatient services may vary between jurisdictions and over time. [l] Morbidity data are coded under coding standards that may differ over time and across jurisdictions.

Source: DHA unpublished; table 10A.23.

The rate of separations per 100 000 people for Type 2 diabetes mellitus with complications as a principal diagnosis are shown in figure 10.12. At about three times the national rate, NT was much higher than any other jurisdiction.

Figure 10.12 **Hospital separation rates for Type 2 diabetes mellitus with complications as principal diagnosis, all hospitals, 2000-01[a, b, c, d, e, f, g, h, i, j, k, l]**

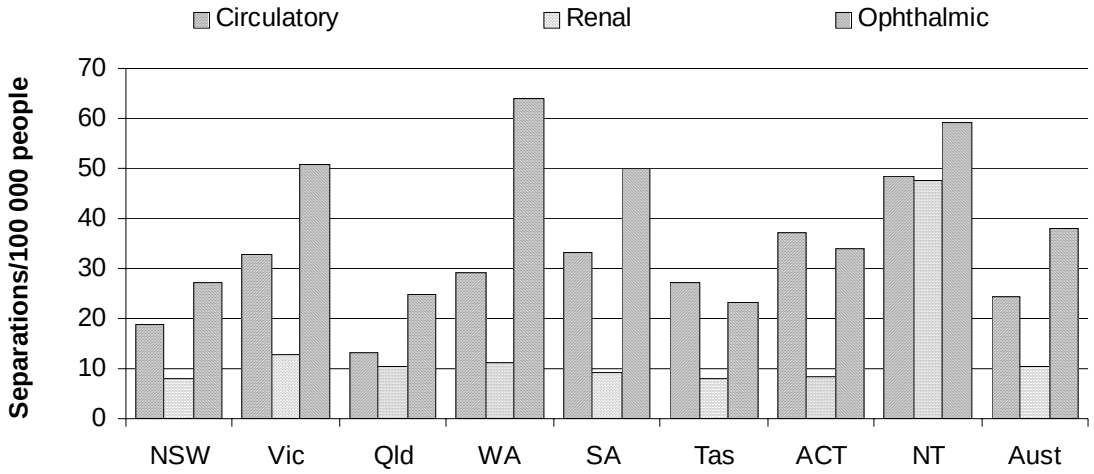


a Separation rates are age-standardised to the Australian national population at 30 June 1991 using direct standardisation. **b** Figures include unspecified diabetes. **c** Totals include separations for unspecified complications. **d** Crude rates for each jurisdiction were calculated using ABS estimated resident population by age group for the respective jurisdiction. **e** The figures are based on the ICD-10-AM classification. The codes are E11.x and E14.x, where x=2 renal complications, x=3 ophthalmic complications, x=5 peripheral circulatory complications, x=7 multiple complications, x=8 unspecified complications, x=9 without complications, and x=0,1,4,6 other specified complications. **f** The data are not person-based, but episode-based. A person who is admitted to hospital, say three times in the year, will be counted three times. **g** The principal diagnosis data are episode-based, but the secondary diagnosis data are diagnosis-based. A separation is represented three times in secondary diagnosis if given three different diabetes codes. **h** Age-standardisation tends to exaggerate the effect of multiple episodes for individual patients, particularly in small populations. **i** Although same day admission for dialysis are not normally coded with a principal diagnosis of Type 2 diabetes, the data could include miscoded separations in several jurisdictions. The results for small jurisdictions reflect both this type of distortion and unreliability arising from small numbers. **j** Results for individual complications may be affected by small numbers, particularly in the smaller jurisdictions, and need to be interpreted with care. **k** Treatment of Type 2 diabetes related conditions is also provided in ambulatory care settings. The availability of outpatient services may vary between jurisdictions and over time. **l** Morbidity data are coded under coding standards that may differ over time and across jurisdictions.

Source: DHA unpublished; table 10A.23.

Figure 10.13 shows the age-standardised separation rates for the three largest groups of Type 2 diabetes complications – circulatory, renal and ophthalmic. In all jurisdictions except Tasmania and the ACT, ophthalmic complications accounted for the highest separation rates. In both Tasmania and the ACT, rates for circulatory complications were highest, marginally above the rates for ophthalmic complications. In the NT, the rates for circulatory and renal complications were high and about the same.

Figure 10.13 **Hospital separation rates for Type 2 diabetes mellitus as principal diagnosis with complications, all hospitals, 2000-01[a, b, c, d, e, f, g, h, i, j, k, l]**

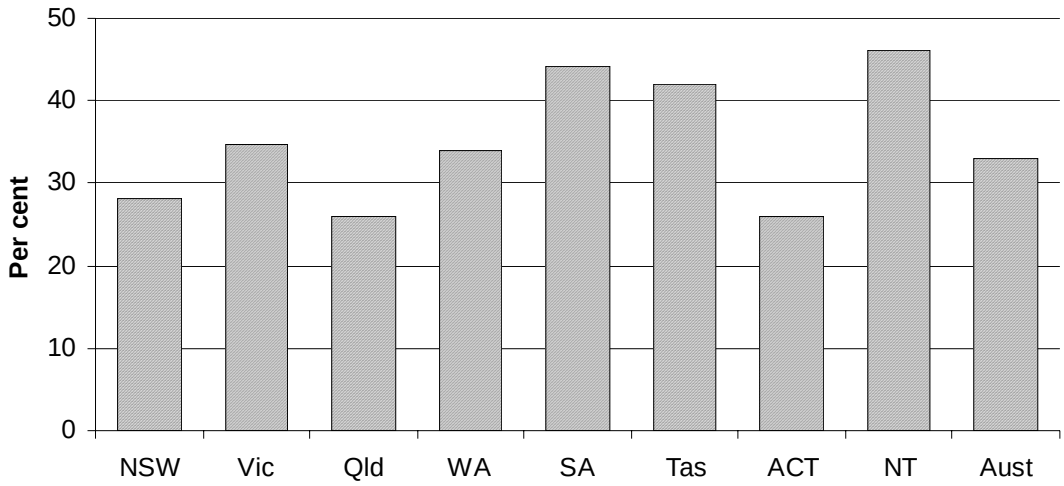


a Separation rates are age-standardised to the Australian national population at 30 June 1991 using direct standardisation. **b** Figures include unspecified diabetes. **c** Totals include separations for unspecified complications. **d** Crude rates for each jurisdiction were calculated using ABS estimated resident population by age group for the respective jurisdiction. **e** The figures are based on the ICD-10-AM classification. The codes are E11.x and E14.x, where x=2 renal complications, x=3 ophthalmic complications, x=5 peripheral circulatory complications, x=7 multiple complications, x=8 unspecified complications, x=9 without complications, and x=0,1,4,6 other specified complications. **f** The data are not person-based, but episode-based. A person who is admitted to hospital, say three times in the year, will be counted three times. **g** The principal diagnosis data are episode-based, but the secondary diagnosis data are diagnosis-based. A separation is represented three times in secondary diagnosis if given three different diabetes codes. **h** Age-standardisation tends to exaggerate the effect of multiple episodes for individual patients, particularly in small populations. **i** Although same day admission for dialysis are not normally coded with a principal diagnosis of Type 2 diabetes, the data could include miscoded separations in several jurisdictions. The results for small jurisdictions reflect both this type of distortion and unreliability arising from small numbers. **j** Results for individual complications may be affected by small numbers, particularly in the smaller jurisdictions, and need to be interpreted with care. **k** Treatment of Type 2 diabetes related conditions is also provided in ambulatory care settings. The availability of outpatient services may vary between jurisdictions and over time. **l** Morbidity data are coded under coding standards that may differ over time and across jurisdictions.

Source: DHA unpublished; table 10A.23.

Treatment for Type 2 diabetes and related conditions is also provided in ambulatory care settings. The number of people accessing ambulatory services is not included in the hospital separations data. Differences across jurisdictions in policy and practice relating to the admission of patients, availability of outpatient services and incentives to admit patients rather than treat them as outpatients will affect estimates of hospital separations. This is partially reflected in the substantial variation in the proportion of same day separations across jurisdictions (figure 10.14).

Figure 10.14 **Same day separations for principal diagnosis of Type 2 diabetes mellitus, all hospitals (per cent), 2000-01** [a, b, c, d, e, f, g, h, i, j, k, l]



[a] Separation rates are age-standardised to the Australian national population at 30 June 1991 using direct standardisation. [b] Figures include unspecified diabetes. [c] Totals include separations for unspecified complications. [d] Crude rates for each jurisdiction were calculated using ABS estimated resident population by age group for the respective jurisdiction. [e] The figures are based on the ICD-10-AM classification. The codes are E11.x and E14.x, where x=2 renal complications, x=3 ophthalmic complications, x=5 peripheral circulatory complications, x=7 multiple complications, x=8 unspecified complications, x=9 without complications, and x=0,1,4,6 other specified complications. [f] The data are not person-based, but episode-based. A person who is admitted to hospital, say three times in the year, will be counted three times. [g] The principal diagnosis data are episode-based, but the secondary diagnosis data are diagnosis-based. A separation is represented three times in secondary diagnosis if given three different diabetes codes. [h] Age-standardisation tends to exaggerate the effect of multiple episodes for individual patients, particularly in small populations. [i] Although same day admission for dialysis are not normally coded with a principal diagnosis of Type 2 diabetes, the data could include miscoded separations in several jurisdictions. The results for small jurisdictions reflect both this type of distortion and unreliability arising from small numbers. [j] Results for individual complications may be affected by small numbers, particularly in the smaller jurisdictions, and need to be interpreted with care. [k] Treatment of Type 2 diabetes related conditions is also provided in ambulatory care settings. The availability of outpatient services may vary between jurisdictions and over time. [l] Morbidity data are coded under coding standards that may differ over time and across jurisdictions.

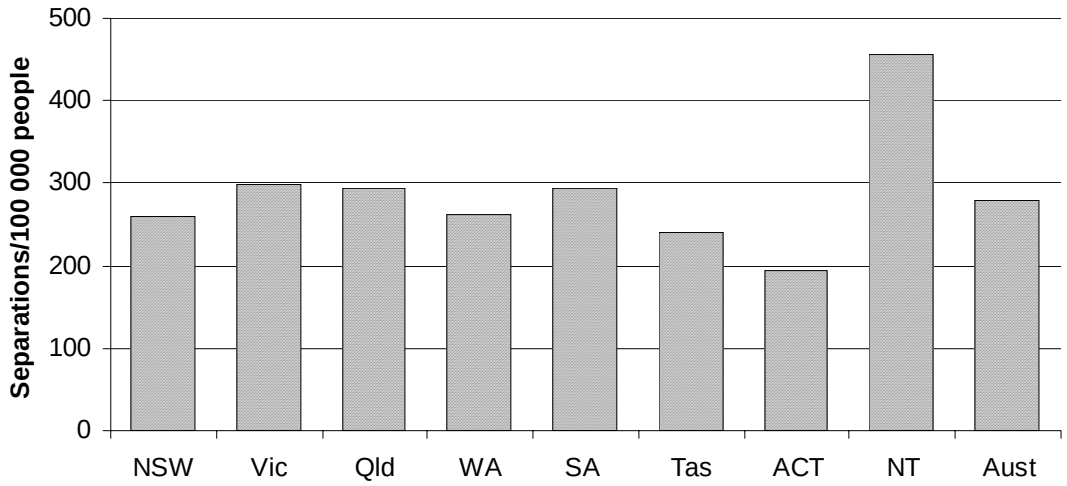
Source: DHA unpublished; table 10A.27.

Hospital separations for diseases of the circulatory system — diagnoses where Type 2 diabetes mellitus was an additional condition

There is a growing body of evidence implicating diabetes in the development of cardiovascular disease, the largest cause of death in Australia. Diabetes and diseases of the circulatory system share common risk factors and diabetes on its own is considered a risk factor for diseases of the circulatory system.

In the NT, hospital separation rates for diseases of the circulatory system where Type 2 diabetes mellitus was an additional diagnosis were over 60 per cent higher than the national average (figure 10.15). Coronary heart disease accounted for a large component of these separations in each jurisdiction (table 10A.24).

Figure 10.15 **Hospital separation rates for principal diagnosis of selected diseases of the circulatory system where Type 2 diabetes mellitus was an additional diagnosis, all hospitals, 2000-01[a, b]**



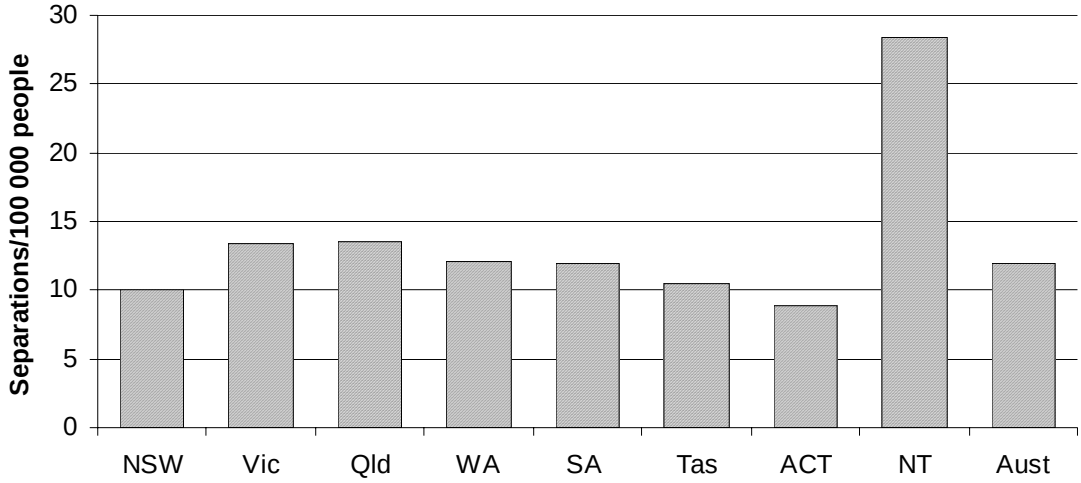
a Includes unspecified diabetes. Separation rates are age-standardised on the Australian total population at 30 June 1991 using direct standardisation. The figures are based on the ICD-10-AM classification. The codes used are E11.x and E14.x, where x= 0-9 for diabetes, and I00-I99 for diseases of the cardiovascular system. **b** The data are not person-based, but episode-based. A person who is admitted to hospital, say three times in the year, will be counted three times.

Source: DHA unpublished; table 10A.24.

Hospital separations for lower limb amputations where Type 2 diabetes mellitus was a principal or additional diagnosis

Amputation of a lower limb can be a serious outcome of diabetes-related complications. In 2000-01, there were 12.0 hospital separations per 100 000 people (age-standardised) for lower limb amputations where Type 2 diabetes mellitus was a principal or additional diagnosis (figure 10.16).

Figure 10.16 **Hospital separation rates for lower limb amputation with principal or additional diagnosis of Type 2 diabetes, all hospitals, 2000-01[a, b]**



a Includes unspecified diabetes. Separation rates are age-standardised on the Australian total population at 30 June 1991 using direct standardisation. The figures are based on the ICD-10-AM classification. The codes are E11.x and E14.x, where x=0-9 for diabetes, and Blocks 1533, 44367, 44370 and 44373 for amputations. **b** The data are not person-based, but episode-based. A person who is admitted to hospital, say three times in the year, will be counted three times.

Source: DHA unpublished; table 10A.26

Prescribing and diagnosis

Per person benefits paid by the Commonwealth Government for pathology tests and diagnostic imaging ordered by GPs are used as indicators of the appropriateness of prescribing and diagnosis. Prescription rates for oral antibiotics most commonly used in the treatment of upper respiratory tract infections are also reported.

Number of prescriptions for oral antibiotics most commonly used in the treatment of upper respiratory tract infections ordered by GPs, per 1000 people with PBS concession cards

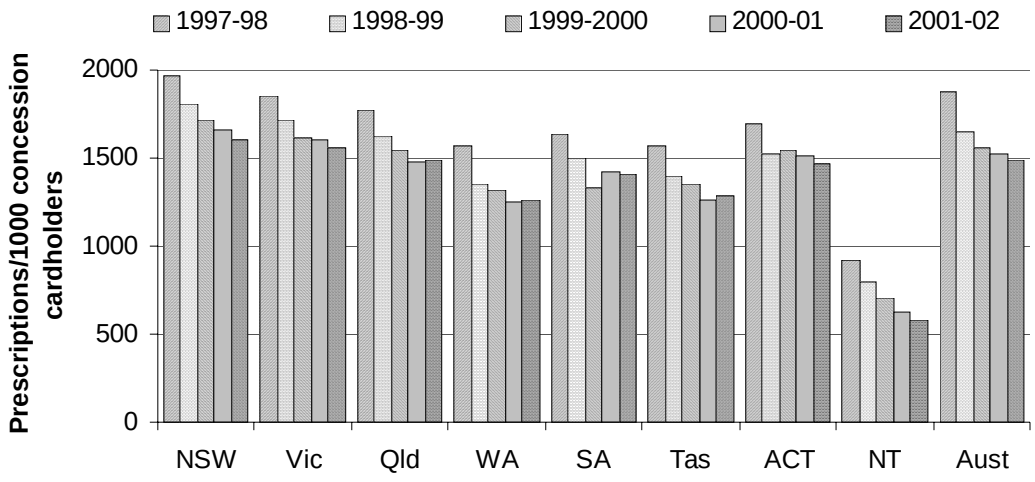
Antibiotics have no efficacy in the treatment of viral infections but are still frequently prescribed when they occur. Consequently, their prescription rates (overall, and particularly in relation to upper respiratory tract infections) are unambiguously too high. Reductions in the rate of prescription of those oral antibiotics most commonly used when patients present with upper respiratory tract infections are an indicator of more appropriate treatment being offered by GPs.

The cost at the pharmacy for most oral antibiotics used to treat upper respiratory tract infections is less than the maximum PBS co-payment. As there is generally no

Commonwealth subsidy for general patients, particulars of such patients obtaining prescriptions of this nature are not recorded by the Health Insurance Commission. With the data on oral antibiotics available for reporting essentially reflecting the requirements of concession cardholders, it is best to eliminate from the numerator any oral antibiotics supplied to general patients, and to use the total number of concession cardholders in the denominator. Even though there are ongoing population ageing effects that may result in increases in the numbers of such beneficiaries and in the complexity of their pharmaceutical needs, if clinical guidelines for the treatment of upper respiratory tract infections were followed more closely by GPs, the trend for prescription of oral antibiotics should nevertheless be downwards.

Prescriptions per 1000 people with PBS concession cards for 2001-02 were highest in NSW (1605.5) and lowest in the NT (575.4) (table 10A.22). Australia-wide, the number of prescriptions decreased between 1997-98 and 2001-02, although there were slight rises in some years in some jurisdictions (figure 10.17). Prescriptions rates fell from 1873.1 in 1997-98 to 1491.6 in 2001-02 (table 10A.22).

Figure 10.17 **Prescription rates for oral antibiotics for upper respiratory tract infections**



Source: DHA (unpublished); table 10A.22.

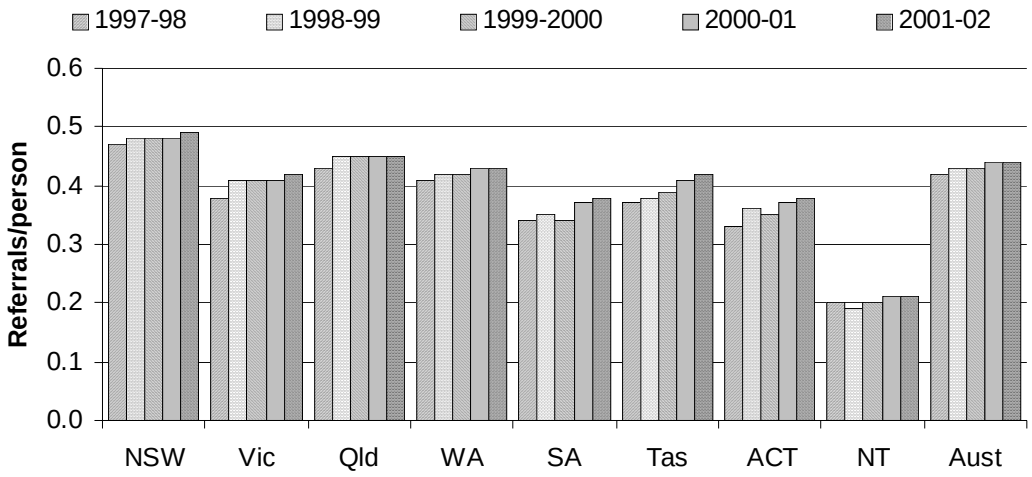
Pathology and diagnostic imaging

Per person benefits paid for GP-ordered pathology tests and diagnostic imaging are used to report on the prescribing and diagnosis patterns of GPs. Differences across jurisdictions in the levels of benefits paid for pathology tests and diagnostic imaging ordered by GPs may indicate inappropriate use of these services in diagnosis and treatment. While high levels of benefits may indicate over-reliance on these

methods of treatment by GPs, it is not possible to determine what the appropriate levels might be. Reporting these data contributes to discussion of such issues.

Figure 10.18 provides contextual information on referrals by GPs per person for diagnostic imaging. For diagnostic imaging in 2001-02, NSW had the highest number of referrals per person (0.49) and the NT the lowest (0.21).

Figure 10.18 **Referrals per person for diagnostic imaging**



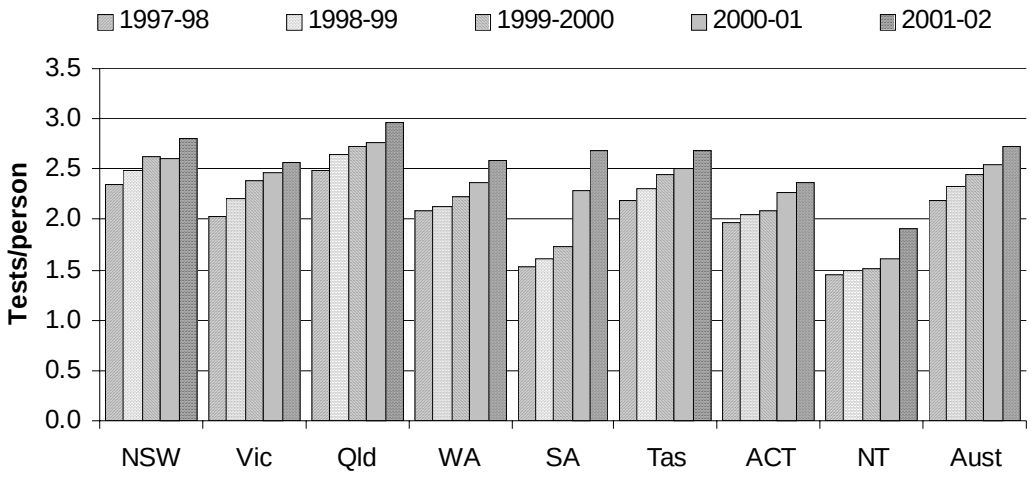
Source: DHA (unpublished); table 10A.29.

Pathology data are presented for the number of tests ordered through Medicare per person rather than the number of referrals (figure 10.19).[7] Pathology services for rural and remote areas in some States (especially in SA) are ordered through State managed, but Commonwealth funded, health program grants — hence, the data may underestimate orders in some jurisdictions, although the amounts are relatively insignificant. For testing ordered through Medicare in 2001-02, Queensland had the highest rate of pathology tests (3.0 per person) and the NT the lowest (1.9 per person). Between 1996-1997 and 2001-02 the national rate of pathology tests increased from 2.1 to 2.7 tests per person (table 10A.28).

Overall in 2001-02, Commonwealth expenditure under Medicare on pathology tests was $47 per person and on imaging was $38 per person. Figure 10.20 shows that benefits paid per person for pathology tests in 2001-02 were highest in Queensland ($54 per person) and lowest in the NT ($34). Benefits paid per person for diagnostic imaging were highest in NSW ($43) and lowest in the NT ($16).

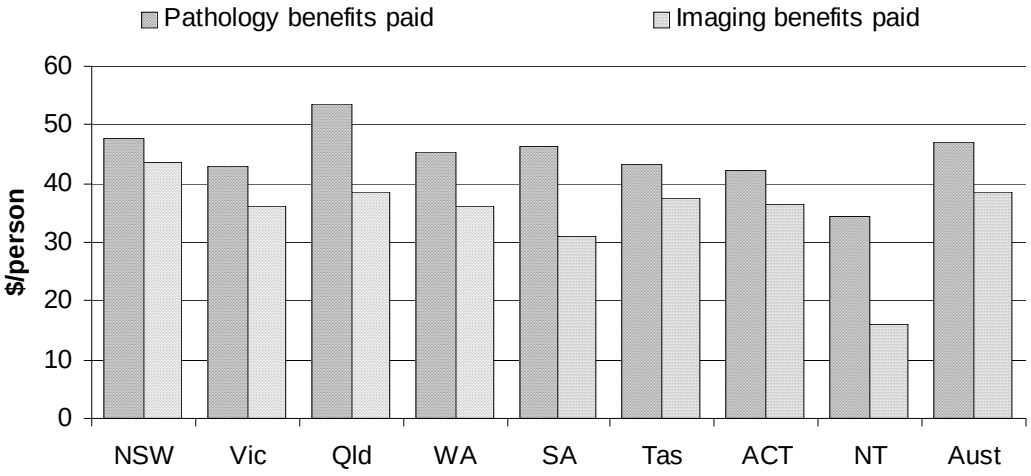
[7] Up to three tests may be recorded following a pathology referral, whereas each imaging referral results in only one test.

Figure 10.19 **Pathology tests per person**



Source: DHA (unpublished); table 10A.28.

Figure 10.20 **Benefits paid per person for pathology tests and diagnostic imaging, 2001-02**



Source: DHA (unpublished); tables 10A.28 and 10A.29.

Quality

Three indicators of the quality of health care delivered by GPs are the proportion of practices with electronic information management systems, the proportion of FWE GPs with vocational recognition, and the proportion of practices that are registered for accreditation.

The proportion of practices with electronic information management systems

The proportion of practices with electronic information management systems is included as a quality indicator because information management/technology is recognised as a useful tool for helping GPs provide and maintain a high quality of care to patients. The use of clinical software and data interchange between GPs and organisations such as Divisions of General Practice, pathology laboratories and hospitals are examples (DHAC 2000b). Electronic information management systems also support directions and reforms in health care that focus on an integrated and evidence-based health system. Under the PIP Information Management, Information Technology initiative, there are two incentives that encourage the computerisation of practices: the electronic prescribing incentive paid for use of bona fide electronic prescribing software to generate the majority of prescriptions, and an incentive paid for the use of computer systems to send and/or receive clinical information.

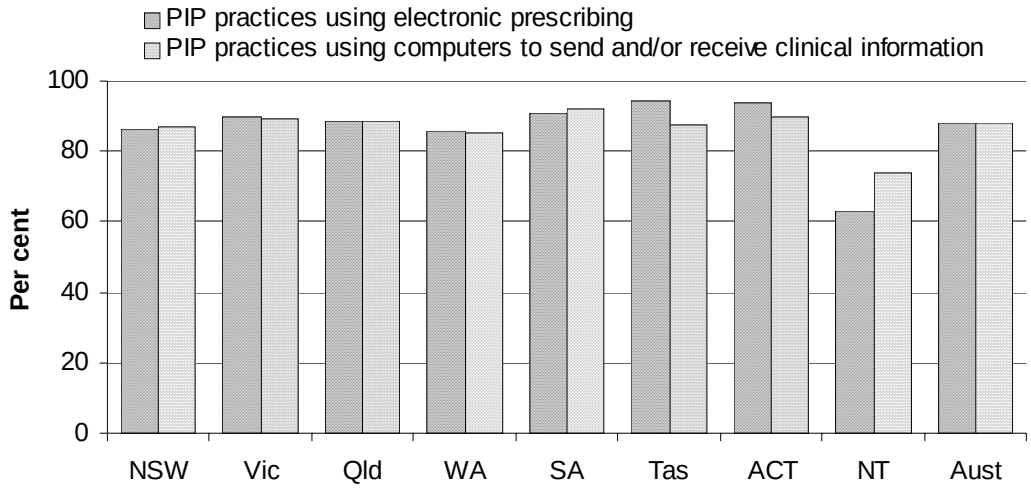
The proportion of practices with electronic information management systems is an indicator of quality which helps to identify the capacity for efficient handling of patient information, including management of screening and other preventive health activities, reminder systems, patient education, record management, data collection and analysis and practice business management (DHAC 2000a). Data on practices with electronic information management systems are available from the PIP.

The PIP structures payments to practices based on patients' ongoing health care needs rather than service volumes, promoting activities such as use of electronic information management systems (including prescribing software), after hours care and teaching medical students. While the PIP does not include all practices in Australia, PIP practices covered around 80 per cent of Australian patients (measured as SWPEs) in May 2001 (DHA unpublished).

The data indicate that the proportion of PIP practices nationally that used electronic prescribing systems in May 2002 was 88.2 per cent (an increase from 78.3 per cent in May 2001) (table 10A.30). The proportion of PIP practices with the capacity to send and/or receive clinical information via use of computer technology was 88.1 per cent in May 2002 (an increase from 87.0 per cent in May 2001) (table 10A.30).

At May 2002, PIP practices in the NT were the least likely to send and/or receive clinical information electronically or to use electronic prescribing software (74.1 per cent and 63.0 per cent respectively) (figure 10.21). Participating PIP practices in Tasmania were most likely to use electronic prescribing software (94.5 per cent) while SA was the most likely to use computers to send and/or receive clinical information (91.9 per cent) (figure 10.21).

Figure 10.21 **Proportion of PIP practices using computers for clinical purposes, May 2002 (per cent)**



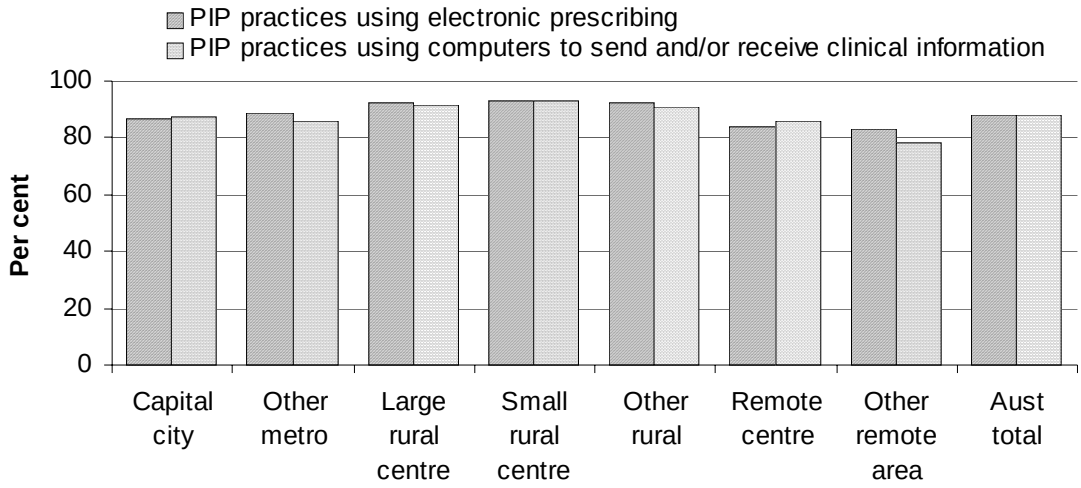
Source: DHA (unpublished); table 10A.31.

In May 2002, PIP practices in all rural areas were more likely to use electronic prescribing and to use computers to send and/or receive clinical information than PIP practices in metropolitan areas or remote areas. PIP practices in remote areas were least likely to use electronic prescribing systems (figure 10.22). Remote practices in Indigenous communities in the NT have difficulty accessing the PIP, which affects coverage of these data.

Vocational recognition

The proportion of full time workload equivalent GPs with vocational recognition indicates the standard of appropriate training of GPs and their ability to deliver services of high quality. In 2001-02, the ACT had the highest proportion (95.9 per cent) and the NT had the lowest proportion (86.3 per cent) (figure 10.23). While this proportion has increased Australia-wide since 1996-97, this trend has not been experienced in all jurisdictions — most notably in Queensland and Tasmania. The proportion of GPs with vocational recognition is lower in remote centres and other remote areas (table 10A.33).

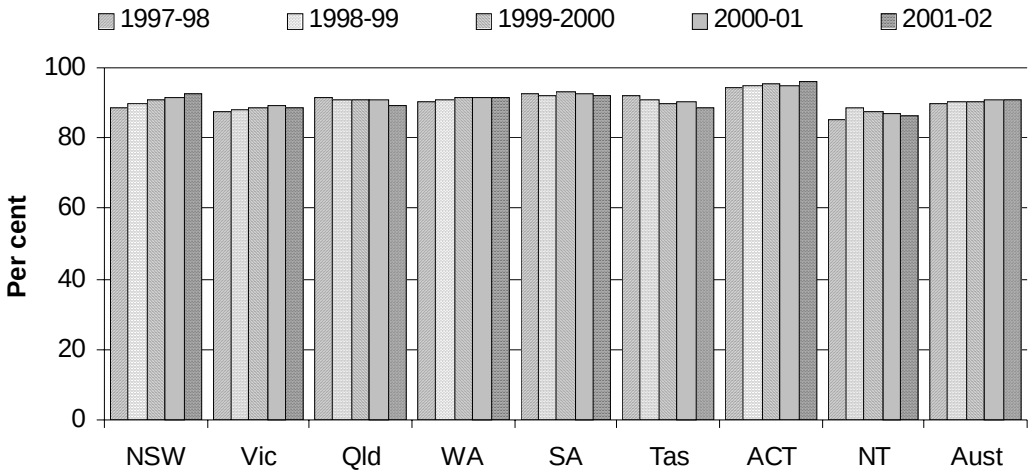
Figure 10.22 **Proportion of PIP practices using computers for clinical purposes, May 2002 (per cent)[a]**



a Capital city = State and Territory capital city statistical divisions; Other metropolitan centre = one or more statistical subdivisions that have an urban centre with a population of 100 000 or more; Large rural centre = Statistical Local Areas (SLAs) where most of the population resides in urban centres with a population of 25 000 or more; Small rural centre = SLAs in rural zones containing urban centres with populations between 10 000 and 24 999; Other rural area = all remaining SLAs in the rural zone; Remote centre = SLAs in the remote zone containing populations of 5000 or more; Other remote area = all remaining SLAs in the remote zone.

Source: DHA (unpublished); table 10A.30.

Figure 10.23 **Proportion of GPs with vocational recognition (full time workload equivalent)**

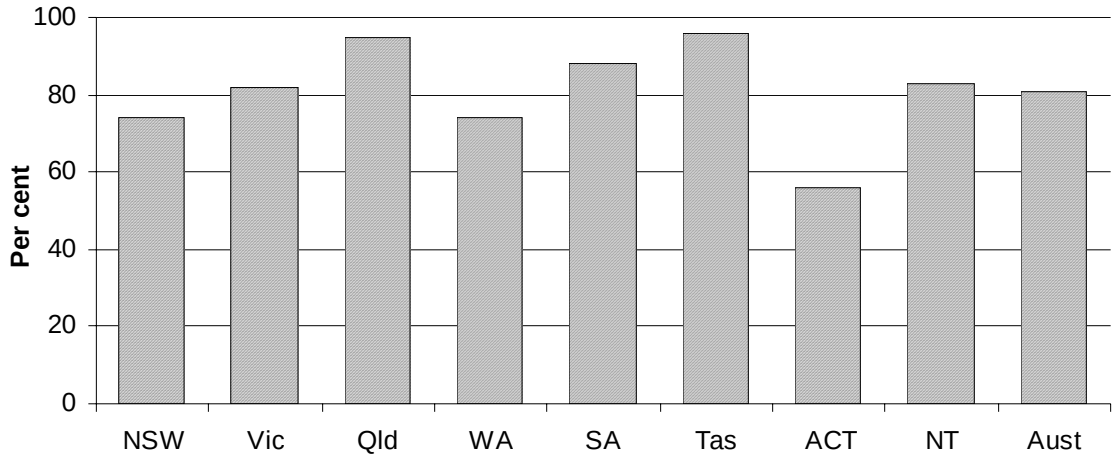


Source: DHA (unpublished); table 10A.32.

Accreditation

Accreditation of practices is a systematic way to help identify quality in general practice and to provide GPs with a framework for improving their practices over time. There are two providers of general practice accreditation services: Australian General Practice Accreditation Limited (AGPAL) and General Practice Australia (GPA). These firms provide a peer review process to assess practices against the RACGP Standards for Social Practices. GPA is a for-profit private company and details of the scope of its activities are not publicly available. Accordingly, 4795 or 81 per cent of eligible practices were registered for accreditation with AGPAL on 3 October 2002. This compares with 65.2 per cent in August 2000 (table 10A.34). Tasmania had the highest proportion of practices registered for accreditation in October 2002 (96.1 per cent) and the ACT had the lowest (56.1 per cent) (figure 10.24).

Figure 10.24 **Proportion of practices registered for accreditation with AGPAL, October 2002 (per cent)**



Source: AGPAL (2002); table 10A.34.

Access and equity

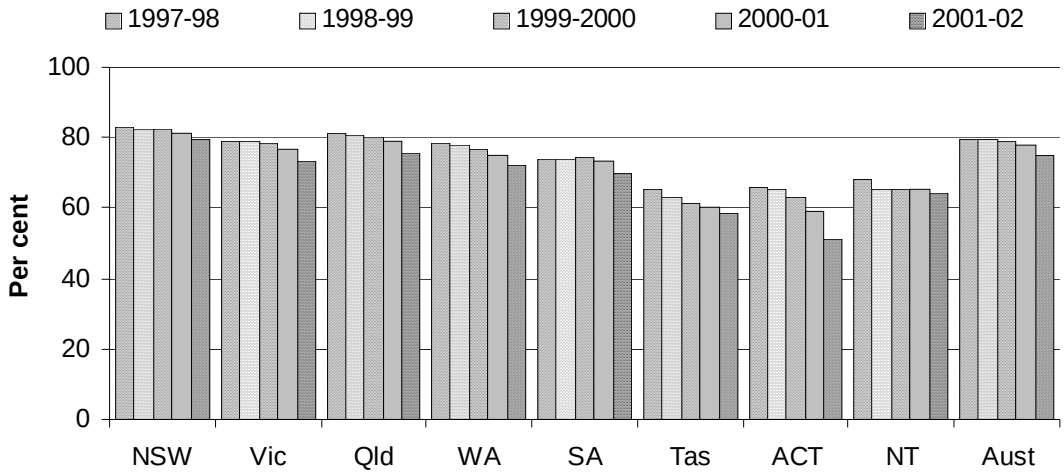
Three indicators are used to measure access and equity in GP service delivery: the proportion of total non-specialist non-referred attendances that are bulk billed, FWE GPs per 100 000 people in rural and remote areas, and the proportion of FWE GPs who are female.

Non-referred attendances that are bulk billed

The proportion of total non-referred attendances that are bulk billed indicates the affordability of GP services. In general practice, patients are either: bulk billed for the medical services provided to them and make no out-of-pocket contribution because the practice bills Medicare direct and receives the schedule fee rebate as full payment for the service; pay for the medical service in full and submit their receipt to Medicare for reimbursement to the extent of the schedule fee rebate; or pay a patient contribution and sign an authorisation allowing the doctor to submit a claim for payment by cheque for the scheduled fee rebate amount. A high proportion of bulk billed services indicates a greater rate of affordability.

Visits to GPs are classed as non-referred attendances under Medicare and these are further disaggregated into services provided by vocationally recognised GPs and those provided by OMPs who are not vocationally recognised. In 2001-02, NSW had the highest proportion of attendances that were bulk billed (79.8 per cent), while the ACT had the lowest (51.2 per cent) (figure 10.25). Australia-wide, the proportion of attendances that were bulk billed has declined from 80.6 per cent in 1996-97 to 74.9 per cent in 2001-02 (table 10A.35). Bulk billing rates are generally lower in rural and remote areas than in capital cities or other metropolitan centres. In 2001-02, bulk billing rates were 80.8 per cent in capital cities, 59.0 per cent in large rural centres and 58.9 per cent in remote centres (table 10A.36).

Figure 10.25 **Non-referred attendances that were bulk billed as a proportion of all non-referred attendances (per cent)**



Source: DHA (unpublished); table 10A.35.

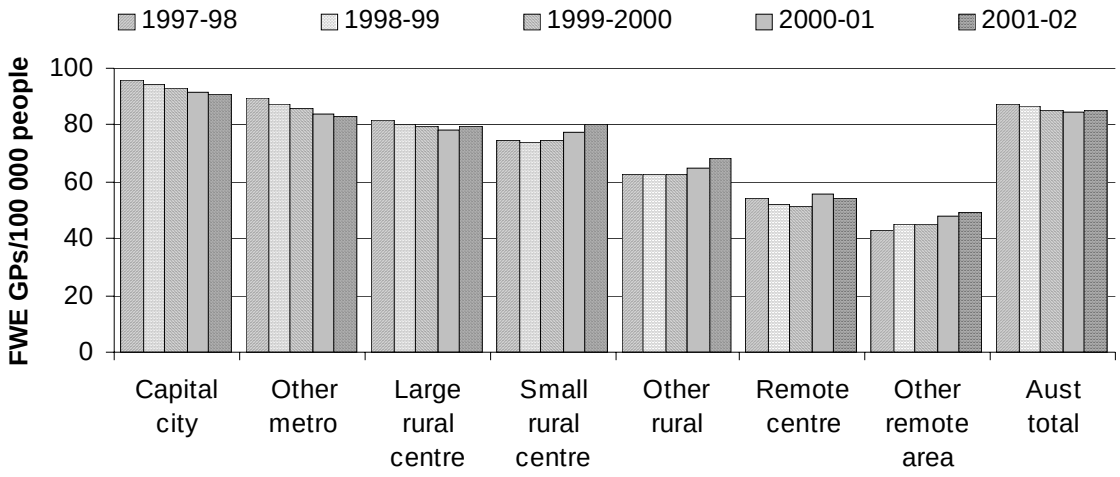
Full time workload equivalent GPs in rural and remote areas

Another important access issue is the ability of people in nonmetropolitan areas to access primary health care services provided by GPs. Commonwealth, State and Territory governments provide incentives for the recruitment and retention of GPs in rural and remote areas.

Many rural GPs provide a wide range of services in their own practices and in the public hospital system, including consultations, anaesthetics, obstetrics, psychiatric triage, emergency medicine, and relatively complex trauma procedures and operations. The comparatively low number of rural GPs per person means that they are often stretched in responding to their community's physical and mental health care needs (figure 10.26).

There were 84.9 FWE GPs per 100 000 people in Australia in 2001-02 — 90.8 per 100 000 in capital cities; 54.5 per 100 000 in remote centres; and 49.0 in other remote areas (figure 10.26).

Figure 10.26 **Full time work load equivalent GPs per 100 000 people by region[a]**



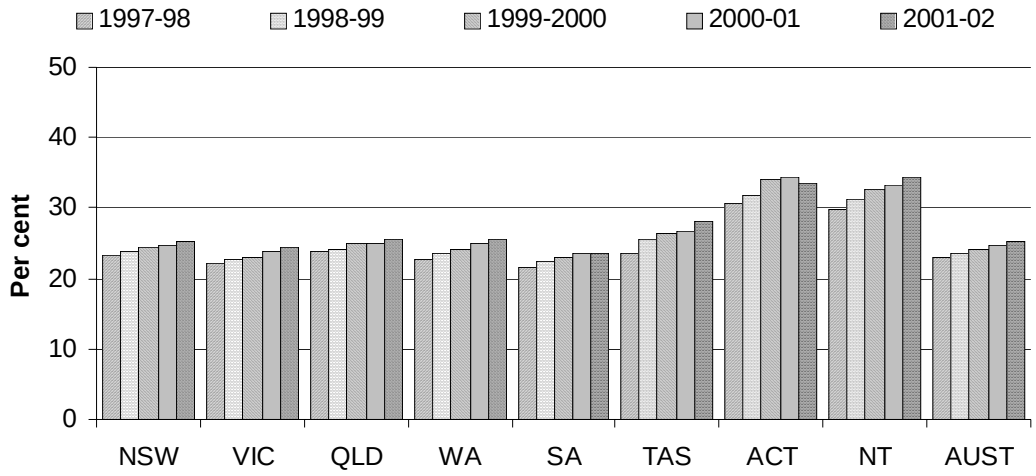
a Capital city = State and Territory capital city statistical divisions; Other metropolitan centre = one or more statistical subdivisions that have an urban centre with a population of 100 000 or more; Large rural centre = Statistical Local Areas (SLAs) where most of the population resides in urban centres with a population of 25 000 or more; Small rural centre = SLAs in rural zones containing urban centres with populations between 10 000 and 24 999; Other rural area = all remaining SLAs in the rural zone; Remote centre = SLAs in the remote zone containing populations of 5000 or more; Other remote area = all remaining SLAs in the remote zone.

Source: DHA (unpublished); table 10A.37.

Full time workload equivalent GPs who are female

The final access indicator relates to female FWE GPs as a proportion of all FWE GPs. As a measure of access, this recognises that some female patients may be uncomfortable discussing health matters with a male GP. There were 24 307 GPs in 2001-02, with 8510 of these being female. Approximately one-third of total GPs are females, representing approximately one-quarter of FWE GPs (tables 10A.9 and 10A.38). The proportion of female FWE GPs in 2001-02 was highest in the NT (34.4 per cent) and lowest in SA (23.7 per cent) (figure 10.27). In 2001-02, there were 42.4 female FWE GPs per 100 000 female population compared with a total of 84.9 male and female FWE per 100 000 people (tables 10A.9 and 10A.38).

Figure 10.27 **Female full time workload equivalents as a proportion of all FWE GPs**



Source: DHA (unpublished); table 10A.38.

Efficiency

Unit cost

The cost to government of general practice per person is the only suggested efficiency indicator for GP services at this stage.[8] This indicator should be interpreted with care, however, as a higher cost per person may reflect service substitution between primary care and hospital services or specialist services (the latter both potentially higher cost than primary care). As previously mentioned, some primary care services are provided by salaried GPs in community health

8 Includes non-Medicare funding and expenditure by the DVA.

settings, particularly in rural and remote areas through accident and emergency departments and ACCHSs. Consequently, expenditure reported through Medicare fee-for-service statistics will be understated in jurisdictions with larger proportions of rural and remote populations.

Nationally, the annual cost per person in 2001-02 was $159 (figure 10.1). Commonwealth expenditure in that year was highest in SA ($170 per person) and lowest in the NT ($89 per person) (table 10A.8).

10.5 Future directions in performance reporting

The key challenge for the Steering Committee in future years is to improve the reporting of general practice services delivered to special needs groups, especially Indigenous people. In addition, as mentioned in the Health preface, the Review is developing a performance reporting framework that reflects choices about the combination of health services provided across the health service spectrum (primary, secondary and tertiary). The Coordinated Care Trials are an example of experiments in this area. With a view to exploring this issue, the Review is undertaking work on primary, public and community health and on the interaction between health and other services, such as aged care.

Quality

No routinely collected data relating to patient satisfaction as an indicator of the quality of GP services are available at present. Definitional problems surrounding this indicator still exist. Nevertheless, patients' views of, or complaints about, general practice could be used as a proxy measure of dissatisfaction.

Patient safety is another potentially important source of quality data for general practice. There are no Australia-wide data available on the prevalence of harmful incidents in general practice, although some work has been done on the types of incidents occurring (box 10.3). The Steering Committee is hopeful that progress will be made in both these areas to enable future reporting.

Box 10.3 **Analysing potential harm in Australian general practice: an incident monitoring study**

Between October 1993 and June 1995, a study was conducted in Australia to collect data on incidents of potential or actual harm to general practice patients and to evaluate the possible causes of these incidents.[9] A nonrandom sample of 324 GPs participated in the study and submitted 805 incident reports.

According to the results, 76 per cent of the incidents reported were considered preventable and 27 per cent had potential for severe harm. Major immediate consequences were reported in 17 per cent of incidents and 4 per cent resulted in the patient's death.

Incidents were grouped into pharmacological, non-pharmacological, diagnostic and equipment. Pharmacological incidents (such as use of inappropriate drugs, prescription error or administering error) were the most frequent and largely preventable (51 per 100 incidents). In contrast, diagnostic events (such as missed or delayed diagnosis) were less preventable and potentially more harmful (34 per 100 incidents). Of the 38 deaths reported, 30 involved a diagnostic incident.

Ineffective communication was a frequent contributing factor, with patients with mental health problems or poor or no English language skills particularly at risk.

While the study does not indicate the prevalence of incidents of potential or actual harm to general practice patients, it demonstrates some of the types of incidents occurring in Australian general practice. Limitations to the validity of the data include the nonrandom sample, limited recognition of incidents, selectivity in reporting incidents and the lack of an alternative perspective (such as the patient's view).

Source: Bhasale et al. (1998).

9 An incident was broadly defined as 'an unintended event, no matter how seemingly trivial or commonplace, that could have harmed or did harm a patient'. This criterion included near misses where the harm may have been averted but the potential for harm existed.

10.6 Definitions

Table 10.7 **Terms**

Term	*Definition*
Age-standardised	Removing the effect of different age distributions (across jurisdictions or over time) when making comparisons, calculated by weighting the age-specific rates for each jurisdiction by the national age distribution.
Ambulatory services	Services provided by an acute care hospital to non-admitted patients.
Casemix adjustment	Adjustment of data on cases treated to account for the number and type of cases. Cases are sorted into diagnosis related groups that represent a class of patients with similar clinical conditions requiring similar hospital services.
Cervical screening rates for target population	Proportion of women screened against cervical cancer in the age group 20–69 years.
Community health services	Health services for individuals and groups delivered in a community setting, rather than in hospitals or private facilities.
Consultations	The different types of services provided by GPs.
Cost to government of general practice per person	Cost to the Commonwealth Government of total non-referred attendances by non-specialist medical practitioners per person.
Divisions of General Practice	Geographically based networks of GPs. Currently there are 121 Divisions of General Practice. The Divisions of General Practice Program (DGPP) evolved from the former Divisions and Projects Grants Program established in 1992. The aim of the DGPP is to improve health outcomes for patients by encouraging GPs to work together and link with other health professionals to upgrade the quality of health service delivery at the local level. Around $72 million was provided by the Commonwealth in 2000-01 under the DGPP.
Fully immunised at 12 months	A child that has completed three doses of Diptheria, Tetanus, Pertussis vaccine, three doses of Oral Polio Vaccine, three doses of HbOC (HibTITER) (or two doses of PRP-OMP (PedvaxHIB)) and one dose of Measles, Mumps, Rubella.
Fully immunised at 24 months	A child that has received four doses of Diptheria, Tetanus, Pertussis vaccine, three doses of Oral Polio Vaccine, four doses of HbOC (HibTITER) (or three doses of PRP-OMP (PedvaxHIB)) and one dose of Measles, Mumps, Rubella.
Full time workload equivalents	A measure of medical practitioner supply based on claims processed by Medicare in a given period. The calculation is made by dividing the practitioner's Medicare billing by the mean billing of full time practitioners for that period. Full time equivalents (FTEs) are calculated in the same way as full time workload equivalents, however FTEs are capped at one for each practitioner.
General practice	The organisational structure in which one or more GPs provide and supervise health care for a 'population' of patients. Includes medical practitioners who work solely with one specific population, such as women's health and Indigenous health.

(Continued on next page)

Table 10.7 **(Continued)**

Term	*Definition*
General practitioner	Medical practitioners who, for the purposes of Medicare, are vocationally registered under section 3F of the *Health Insurance Act 1973* (Cwlth), hold fellowship of the Royal Australian College of General Practitioners or equivalent, hold a recognised training placement or are otherwise entitled to bill Group A1 Medicare Benefits Schedule items. Or other medical practitioners who have at least half of the schedule fee value of their Medicare billing from non-referred attendances, consisting solely or predominantly of Group A2 items.
Health management	An ongoing process beginning with initial client contact and including all actions relating to a client. Includes assessment/evaluation; education of the person, family or carer(s); diagnosis and treatment, and problems associated with adherence to treatment; and liaison with or referral to other agencies.
Immunisation coverage	A generic term indicating the proportion of a target population that is fully immunised with a particular vaccine or the specified vaccines from the Australian Standard Vaccination Schedule for that age group.
Management of diabetes	• Hospital separation rates for complications of Type 2 diabetes mellitus. • Hospital separation rates for diseases of the circulatory system — diagnoses where Type 2 diabetes mellitus was an additional diagnosis. • Hospital separations for lower limb amputations where Type 2 diabetes mellitus was a principal or additional condition.
Management of upper respiratory tract infections	Number of prescriptions for oral antibiotics most commonly used in the treatment of upper respiratory tract infections ordered by GPs, per 1000 people with Pharmaceutical Benefits Scheme concession cards.
Non-referred attendances	GP services, emergency attendances after hours, other prolonged attendances, group therapy and acupuncture. All attendances for specialist services are excluded as these must be 'referred' to receive Medicare reimbursement.
Non-specialist attendances that are bulk billed	Number of non-referred attendances that are bulk billed and provided by non-specialist medical practitioners divided by the total number of non-referred attendances.
Non-specialist medical practitioners by region	Number of full time workload equivalent non-specialist medical practitioners practising in capital cities, other metropolitan centres and rural/remote areas, divided by the total number of FWE non-specialists.
Notifications of selected childhood diseases	Number of cases of measles, pertussis and *Haemophilus influenzae* type b notified by State and Territory health authorities.
Other medical practitioner	A medical practitioner other than a recognised general practitioner who has at least half of the schedule fee value of his/her Medicare billing from non-referred attendance items consisting solely or predominantly of Group A2 items.

(Continued on next page)

Table 10.7 **(Continued)**

Term	*Definition*
Other specialist	A medical practitioner not classified as a general practitioner, other medical practitioner or recognised specialist who undertakes a majority of specialist work, but who is not formally recognised as a specialist by Medicare. Also includes specialists with recognition in one field, but working in an unrelated field.
Pap smear	A procedure for the detection of cancer and pre-cancerous conditions of the female genital tract.
Per person benefits paid for GP-ordered pathology	Total benefits paid for pathology tests ordered by GPs divided by the population.
Per person benefits paid for GP-ordered diagnostic imaging	Total benefits paid for diagnostic imaging tests ordered by GPs divided by the population.
Primary care	The primary health and community care sector which includes services that: • are the first point of contact for people; • have a particular focus on prevention of illness or early intervention; and/or • are intended to maintain people's independence and maximise their quality of life through care and support at home or in local community settings.
Prevalence	The proportion of the population suffering from a disorder at a given point in time (point prevalence) or during a given period (period prevalence).
Preventative interventions	Programs designed to decrease the incidence, prevalence and negative outcomes of disorders.
Proportion of GPs who are female	Number of all full time workload equivalent GPs who are female divided by the total number of full time workload equivalent GPs.
Proportion of GPs with vocational recognition	Number of full time workload equivalent GPs who are vocationally recognised divided by the total number of full time workload equivalent GPs.
Proportion of practices registered for accreditation	Number of practices that have registered for accreditation through Australian General Practice Accreditation Limited divided by the total number of practices in the Divisions of General Practice.
Proportion of practices with electronic information management systems	Number of practices with electronic prescribing and/or electronic connectivity, registered under the Practice Incentives Program, divided by the total number of practices registered.
Public health	The organised, social response to protect and promote health and to prevent illness, injury and disability. The starting point for identifying public health issues, problems and priorities, and for designing and implementing interventions, is the population as a whole or population subgroups. Public health is characterised by a focus on the health of the population (and particular at-risk groups) and complements clinical provision of health care services.

(Continued on next page)

Table 10.7 **(Continued)**

Term	*Definition*
Psychiatrist	A medical practitioner with specialist training in psychiatry.
Reasons for encounter	The expressed demand of the patient for care as perceived and recorded by the GP.
Recognised general practitioner	A vocationally registered general practitioner, a Fellow of the Royal Australian College of General Practitioners or equivalent, or a general practice registrar in a training placement.
Recognised immunisation provider	A provider recognised by the Health Insurance Commission as a provider of immunisation to children.
Recognised specialist	A medical practitioner classified as a specialist on the Medicare database earning at least half of his/her income from relevant specialist items in the schedule, having regard to the practitioner's field of specialist recognition.
Screening	The performance of tests on apparently well people to detect a medical condition at an earlier stage than would otherwise be possible without the test.
Standardised separation rates for selected conditions often requiring secondary treatment	Age and sex-standardised hospital separation rates for hip replacements, lens insertion and angioplasty.
Vocational recognition	Vocationally recognised GPs are registered separately for Medicare purposes, and receive higher Medicare benefits for services.

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