

Indicator 3.20 Electronic prescribing and clinical data in general practice

Indicator definition

Description: Percentage of general practices in the Practice Incentives Program (PIP) who transfer clinical data electronically or use electronic prescribing software.

Numerator: Number of practices in the PIP who transfer clinical data electronically or use electronic prescribing software.

Denominator: Number of practices in the PIP.

Presentation: Percentage of general practices in the PIP who transfer clinical data electronically or use electronic prescribing software.

Rationale and evidence

The PIP provides financial incentives for aspects of general practice that contribute to quality care and better patient outcomes. In 2002, PIP practices covered 78% of all patient care provided by GPs, measured in terms of SWPE (see Appendix 3: Technical notes for definition of SWPE). The use of electronic software to generate prescriptions electronically improves safety by reducing errors of prescribing and dispensing, and adverse drug reactions. Electronic transfer of clinical information improves practice efficiency by providing access to timely and reliable clinical data, and improved maintenance of health records for patients.

What the data show

- In May 2003, there were 4,331 practices participating in PIP and using either electronic prescribing or data connectivity software, representing 94% of all PIP practices. Most PIP practices (3,948, or 86%) used electronic prescribing and transferred clinical data electronically.
- Between August 1999 and May 2003, the use of computers increased from 50% to 90.5% for prescribing, and from 68% to 89.7% for sending and receiving clinical data.
- Use of computers for electronic prescribing was highest in rural areas (94 to 96%), lowest in remote areas (84 to 87%), and metropolitan areas were inbetween (89 to 90%). Use of computers for sending and/or receiving clinical data showed a similar pattern.
- The advantages of using computers for electronic prescribing as a measure of safety include the generation of a typed script, compared to a hand written script; provision of automatic warnings for drug reactions and assistance with dosage calculation. The PIP electronic prescribing incentive applies only to the generation of a typed script. Whether the other advantages of electronic prescribing are realised depends on the GP implementing the patient medical record component of the software, and the extent to which this happens is not known. Without the patient medical record, the drug reaction, dosage calculation and other functions of the software associated with the medical record do not operate.

- The PIP electronic transfer of clinical data incentive requires that a practice transmit or receive patient clinical information electronically. However, the incentive does not prescribe the proportion of information that must be transmitted in this manner.

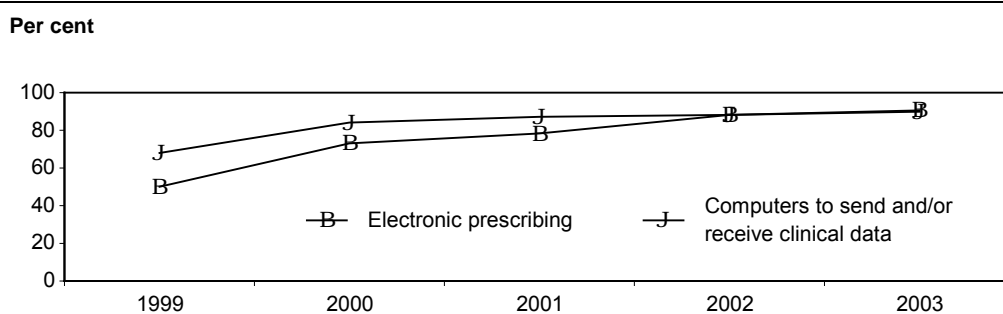


Figure 3.20(a): Use of computers for clinical purposes, percent of PIP practices, by year, Australia, August 1999 to May 2003

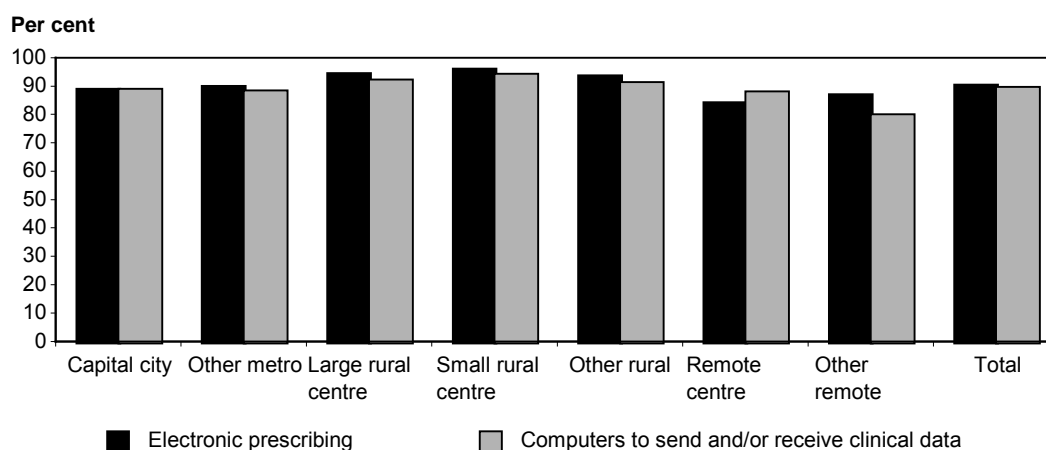


Figure 3.20(b): Use of computers for clinical purposes, PIP practices, by geographical region, Australia, May 2003

Source: Australian Government Department of Health and Ageing (unpub.)

Notes

1. This data is only indicative of activity in general practice as not all practices participate in PIP and participation varies across Australia.
2. The last quarter of the financial year has been supplied from 2001 as it is the most stable quarter as policy changes tend to be introduced at the beginning of financial years.
3. 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 = 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 5 000 or more; Other remote area = all remaining SLAs in the remote zone. (Further information on the RRMA geographical classification in Appendix 4.)

Indicator related to:

3.11 Management of diabetes

Indicator 3.21 Adverse events treated in hospitals

Indicator definition

Description: Proportion of hospital separations where an adverse event treated and/or occurred.

Numerator: Number of hospital separations where an adverse event was reported as a reason for hospitalisation or was treated during the hospitalisation.

Denominator: Total number of hospital separations.

Presentation: Number of adverse events treated and/or occurring in hospitals as a proportion of total hospital separations.

Rationale and evidence

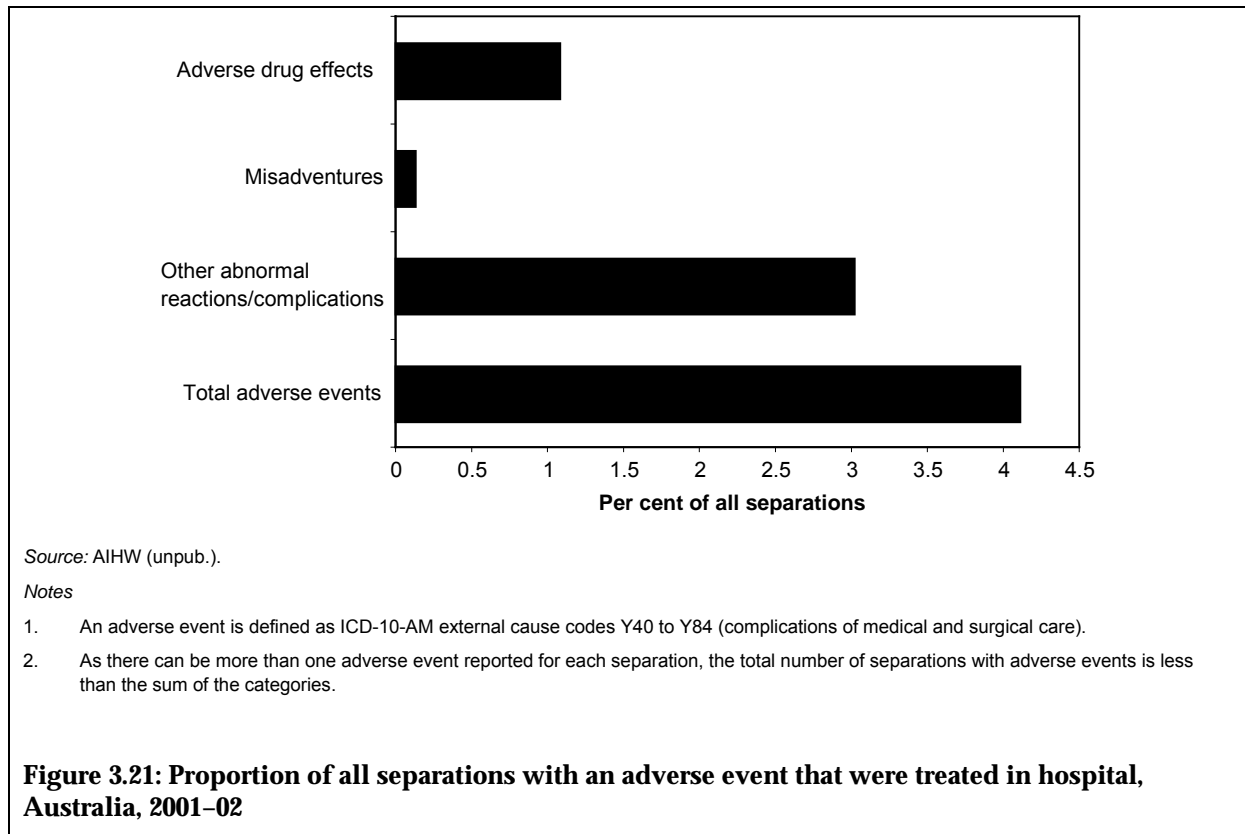
Adverse events occur when harm arises from health care management, rather than from the patient's underlying disease or condition. All health care carries risks of adverse events, but the Australian Council for Safety and Quality in Health Care, government health authorities and others are working to support those who work in the health system to deliver safer patient care, for example in the areas of medication use and health care-associated infections (ACSQHC 2003). The Council is also working to improve the reporting and analysis of data on adverse events, in order to inform patient safety improvement activities. Increasing reports of adverse events may therefore reflect these initiatives, rather than increased risks in health care.

Hospital separation data from the AIHW *National Hospital Morbidity Database* includes information that can be used to identify the proportion of public and private hospital separations associated with adverse events that occurred in a previous admission or in non-hospital health care, but which resulted or contributed to a new hospital admission, or those that occurred and were treated during a single admission. Not all hospital adverse events are identifiable in the data, so adverse events that occurred during a hospital admission but manifested after discharge (and did not result in a readmission) are not identified. Similarly, some types of adverse event (such as those associated with obstetric care, in-hospital patient falls and accidental poisoning associated with incorrect use of drugs) are not identifiable. Thus, the data shown here can be interpreted as representing selected adverse events in health care that have resulted in, or have affected, hospital admissions, rather than all adverse events that occurred in hospitals.

What the data show

- In 2001–02, there were 262,168 separations from hospital for which an adverse event was reported. These included 7,531 with misadventures (such as an accidental cut, perforation or laceration during a surgical operation), 192,383 separations with complications (such as post-operative infections and haemorrhages) and 68,162 with an adverse drug effect (when the drug had been used correctly).

- Overall, in 2001–02 4.1% of hospital separations were reported with adverse events, about the same as in 2000–01 (4.2%). The proportion of separations for which adverse events were reported cannot be directly compared between hospitals, because the risks depend on the types of patients and procedures undertaken, and there may also be differences in data reporting practices.



Indicator related to:

3.20 Electronic prescribing and clinical data in general practice

Indicator 3.22 Enhanced Primary Care services

Indicator definition

Description: Percentage of GPs using Enhanced Primary Care (EPC) items.

Note: EPC items may be claimed by vocationally registered GPs and non-vocationally registered GPs, but not by specialists or consultant physicians. They are referred to as 'GPs' for this indicator.

Numerator: Number of GPs eligible to claim EPC items who claimed 375 or more non-referred attendances ('active' GPs) within a jurisdiction during a quarter and also claimed at least one EPC item during the quarter.

Denominator: Total number of GPs eligible to claim EPC items who claimed 375 or more non-referred attendances within the jurisdiction during the quarter.

Presentation: Percentage of GPs using EPC items over time and by state and territory.

Rationale and evidence

The EPC Medicare items provide a framework for a multidisciplinary approach to health care through a more flexible, efficient and responsive match between care recipients' needs and services available. They provide annual voluntary health assessments for older Australians and care planning and case conferencing services for people of any age with chronic conditions and complex, multidisciplinary care needs.

The percentage of 'active' GPs who use EPC items in the MBS is a measure of the extent of GP involvement in continuity and coordination of care.

What the data show

- The uptake of Medicare EPC items by GPs increased from 23% in quarter 4, 2000, to 46% in quarter 2, 2002, and remained at 44% during the following two quarters.
- There were 7,454 'active' GPs who used at least one Medicare EPC item in quarter 4, 2002, compared with 3,933 in quarter 4, 2000.
- At 47%, the uptake for quarter 4 of 2002 was highest in South Australia. It was close to the national average (44%) in other jurisdictions except the Northern Territory and the Australian Capital Territory, where it was 16% and 28% respectively.
- During 2001–02, a total of 449,800 EPC services were provided, an increase of 287,678 services (mostly care planning), compared with the previous year (Australian Government Department of Health and Ageing, GP Access Branch, unpub.)

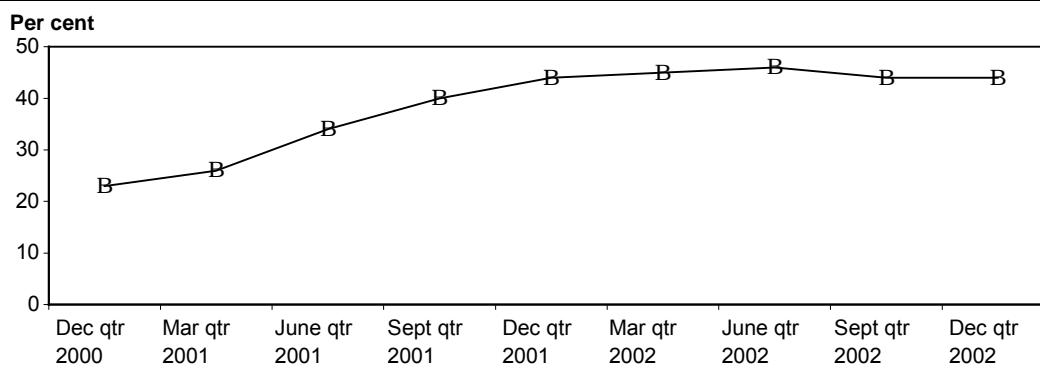


Figure 3.22(a): Percentage of 'active' GPs using Medicare enhanced primary care (EPC) items, by quarter, 2000 to 2002, Australia

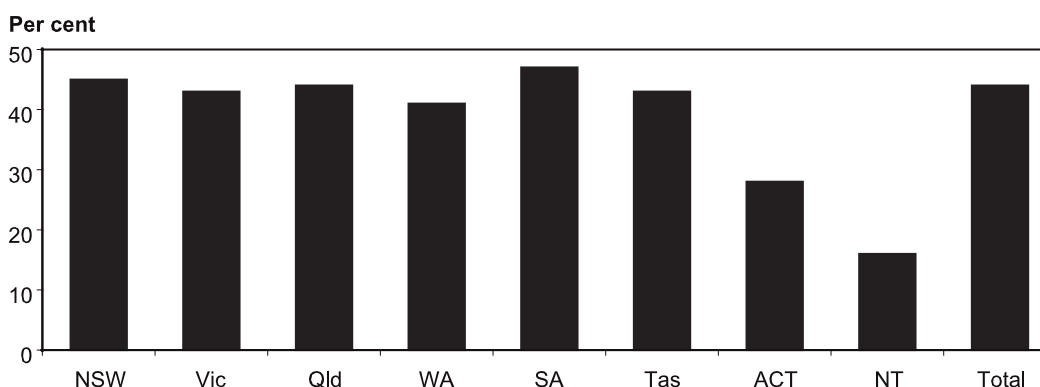


Figure 3.22(b): Percentage of 'active' GPs using Medicare EPC items by state and territory, December quarter 2002

Source: Australian Government Department of Health and Ageing, GP Access Branch (unpub.)

Notes

1. The enhanced primary care items include health assessments (A14), multidisciplinary care plans (A15 sub-group1) and case conferences (A15 sub-group 2, excluding items relating to Consultant Physicians and Psychiatrists). It does not include services that qualify under the Department of Veterans' Affairs National Treatment Account or services provided in public hospitals.
2. Percentage of 'active' GPs using EPC items is estimated by dividing the number of medical practitioners who claimed at least one EPC item within the State/Territory, during the Quarter and who also claimed 375 or more NRAs (see note 2) within the State/Territory during the Quarter, by the number of medical practitioners (including Vocationally Registered GPs (VR GPs) and non-Vocationally Registered GPs (non-VR GPs), but not including specialists or consultant physicians) who claimed 375 or more NRAs within the State/Territory, during the Quarter.
3. NRAs refer to VR-GP, non-VR GP non-referred attendances and EPC attendances. They do not include services that qualify under the Department of Veterans' Affairs National Treatment Account. They do not include services provided in public hospitals.

Indicator related to:

3.07 Potentially preventable hospitalisations

3.11 Management of diabetes

Indicator 3.23 Health assessments by general practitioners

Indicator definition

- Description:** Percentage of eligible older people who have received an enhanced primary care (EPC) annual voluntary health assessment.
- Numerator:** Number of people in the eligible population who received an annual voluntary health assessment in the financial year 2001–02. The indicator includes voluntary health assessments undertaken both in consulting rooms and wholly or partly in the patient’s home, by a medical practitioner including a Vocationally Registered GP or a non-Vocationally Registered GP, but not a specialist or consulting physician.
- Denominator:** Estimated number of people in the eligible population. For the non-Indigenous Australian population, the eligible population is defined as people aged 75 years and over who are not hospital in-patients or living in a residential aged care facility. For Aboriginal and Torres Strait Islander people, the eligible population is defined as people aged 55 years and over who are not hospital in-patients or living in a residential aged care facility.
- Presentation:** Percentage of eligible older people who have received an EPC assessment.

Rationale and evidence

In November 1999, new MBS items were introduced to provide for annual voluntary health assessments for older Australians. Annual voluntary health assessments for older Australians provide an opportunity for a GP to undertake an in-depth assessment of the patient’s health. Health assessments cover the patient’s medical, physical, psychological and social function. These assessments enable more timely preventive and treatment actions to enhance the health of the patient.

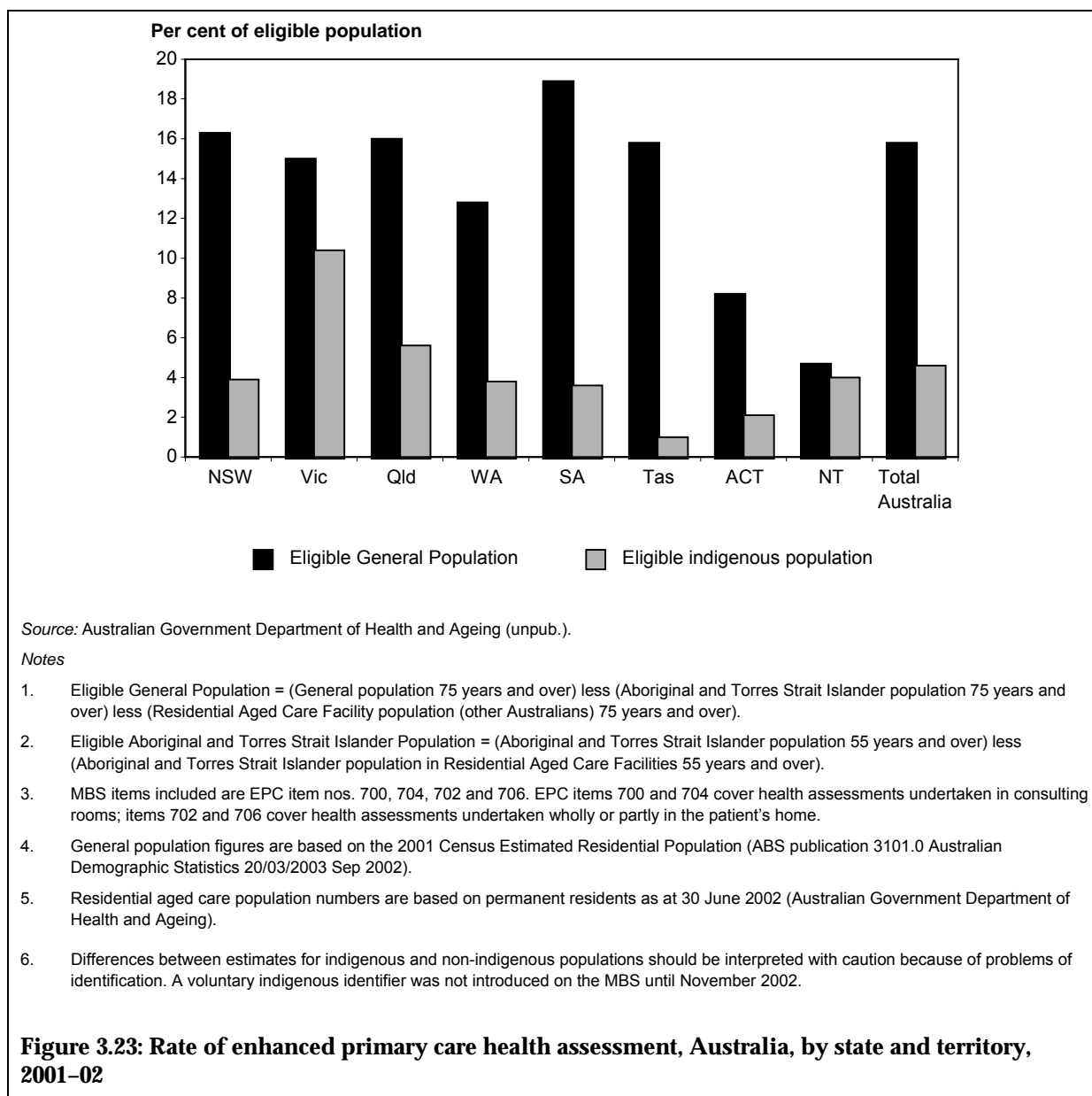
The eligible population is defined in terms of specific age ranges for both the non-Indigenous Australian population and for Aboriginal and Torres Strait Islander peoples. The lower age range for Aboriginal and Torres Strait Islander peoples recognises that they face increased health risks at a much earlier age than most other groups in the population, and broadly reflects the difference in average life expectancy for the two population groups.

Differences between estimates for indigenous and non-indigenous populations should be interpreted with caution because of problems of identification. A voluntary indigenous identifier was not introduced on the MBS until November 2002.

What the data show

- In the financial year 2001–02, 16% of the eligible non-Indigenous Australian population received a voluntary health assessment, compared with 5% in the eligible Aboriginal and Torres Strait Islander population.

- The proportion receiving annual health assessments showed a large variation across States and Territories. For the non-Indigenous Australian population, it varied from 5% in the Northern Territory to 19% in South Australia. For the Aboriginal and Torres Strait Islander population, it varied from 1% in Tasmania to 10% in Victoria.



Indicator related to:

3.07 Potentially preventable hospitalisations

3.11 Management of diabetes

Indicator 3.24 Accreditation in general practice

Indicator definition

Description: Number of general practices accredited against the Royal Australian College of General Practitioners (RACGP) Standards for General Practices.

Presentation: Number of accredited practices participating in the Practice Incentives Program (PIP) and the proportion of general practice services provided by these practices.

Rationale and evidence

Accreditation of general practice is an indicator of the quality of health care delivered by GPs through a process of continuous quality improvement. It is a voluntary process of peer review that involves the assessment of general practices against standards developed by the RACGP. Accredited practices demonstrate that they have complied with and met various criteria against a set of national standards.

Practices may be accredited by one of two organisations approved to undertake the assessment. Practices can gain accreditation through either Australian General Practice Accreditation Limited (AGPAL) or GPA Accreditation *Plus*.

A measure of the provision of quality health care through general practice is the proportion of practices that are accredited. Data on the number of accredited practices provides the numerator in establishing the proportion of accredited practices. At the end of July 2003, there were 4,774 practices reported as accredited by AGPAL and GPA. As there is no requirement for practices to be centrally registered, however, the total number of practices nationally is not known. It is therefore not possible to calculate the denominator (the total number of practices) to produce a measure of the proportion of practices accredited.

Another option is to measure the proportion of GP services that are provided by accredited practices. In this case, it is possible to determine the denominator (the total number of services) but not the numerator (the number of services provided by accredited practices).

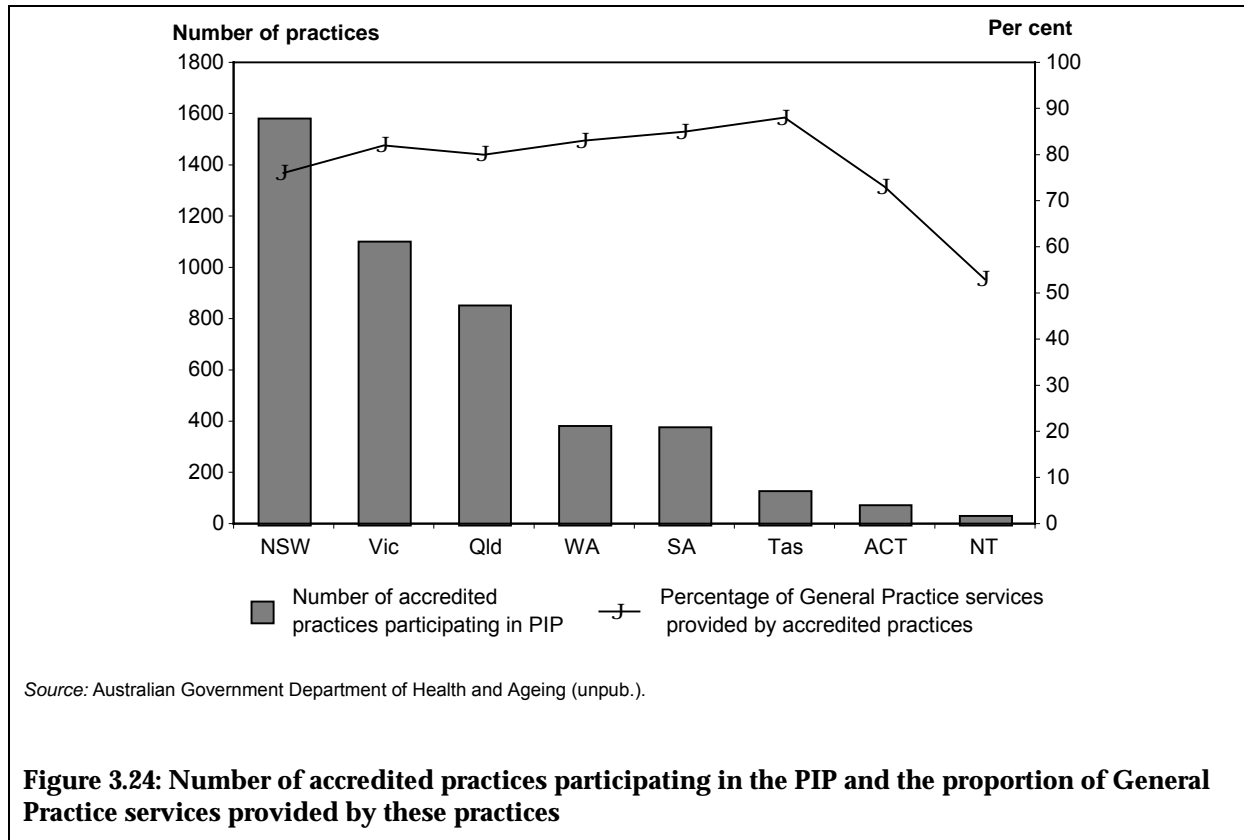
An alternative, which is measurable, is the proportion of services provided by practices participating in the Practice Incentives Program (PIP). Since practices must be accredited or registered for accreditation to join the PIP, data from this Program is broadly representative of the number of accredited practices.

At the end of July 2003, there were 4,516 accredited practices participating in the PIP, representing 94.6% of those reported as accredited by AGPAL and GPA. In 2002, these accredited practices participating in the PIP delivered 77.7% of the total number of services provided by general practice in that year.

What the data show

- As at August 2003 there were 4,622 practices participating in the PIP with 4,516, or almost 98%, fully accredited (only practices that are accredited or registered for accreditation can participate in PIP). The remaining 106 practices were registered for accreditation but not yet accredited.

- Data on the number of accredited practices participating in the PIP by geographical location is not currently available. Data from the August 2003 quarter will be used as a reference point to establish future trends.
- The proportion of general practice services provided by accredited practices participating in the PIP exceeds 70% of the total number of GP services in each jurisdiction, with the exception of the Northern Territory. Nationally 77.7% of GP services are provided by these accredited practices participating in PIP.



Indicator 3.25 Health workforce

Indicator definition

Indicator 1

Description: Graduates in pharmacy, medicine and nursing as a percentage of the total pharmacy, medical and nursing workforce.

Numerator: Graduates in pharmacy, medicine and nursing.

Denominator: Total pharmacy, medical and nursing workforce.

Presentation: Percentage.

Indicator 2

Description: Percentage of health practitioners aged 55 years and over.

Numerator: Number of pharmacists, primary care practitioners, medical specialists and nurses aged 55 years and over.

Denominator: Total pharmacy, primary care practitioner, medical specialist and nursing workforce.

Presentation: Percentage.

Rationale and evidence

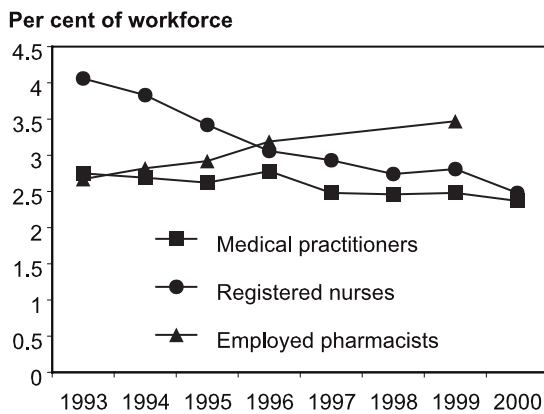
Two key factors that affect the sustainability of the health workforce are whether the number of new entrants are sufficient to replace the existing workforce, and the proportion of the workforce who are close to retirement. A reduction in the numbers graduating as a proportion of the total workforce could indicate sustainability problems. A large proportion of the workforce aged 55 years and over could indicate a problem in the coming decade as that age group starts to retire. These indicators cannot substitute for a full workforce analysis which allows for migration, trends in full-time work, and expected demand increases, but they can indicate that further attention should be given to the issue.

What the data show

- In 1999, 1,248 Australian citizens or permanent residents completed medical bachelor degrees at Australian universities. This figure represented 6% of all employed primary care practitioners and 2.5% of the 50,329 employed medical practitioners in Australia. In 1993, graduates were 2.8% of employed medical practitioners.
- The 7,612 Australian citizens or permanent residents who completed nursing courses in 2000 comprised 4.2% of all employed registered nurses in 2001. This compares with 10,464 who graduated in 1994, making up 6.6% of employed registered nurses in that year. The number of students completed nursing courses has decreased every year since 1994.
- The 649 Australian citizens and permanent residents who completed pharmacy courses in 2000 represented 4.4% of employed pharmacists in 1999. In comparison, the 461

students who completed pharmacy courses in 1994 made up 3.5% of employed pharmacists in that year.

- Between 1995 and 1999, the number of full-time equivalent practitioners per 100,000 population, based on a 35-hour full-time working week, decreased for primary care practitioners (from 145 to 134), for specialists (from 125 to 123) and for nurses (from 1,079 to 1,018). The number of full-time equivalent pharmacists increased from 77 to 83 per 100,000 population.
- Between 1995 and 1999, the average age increased for each of the above health professional groups. Average age was highest for specialists (49.9 years of age in 1999) followed by primary care specialists (47.7 years of age) and pharmacists (46.1 years). Nurses were the youngest profession with an average age of 41.6 years in 1999.
- The percentage of professionals aged 55 years and over increased between 1995 and 1999. The percentage of medical practitioners aged 55 years and over in 1999 was highest for specialists at 31.2%. One quarter (25.1%) of primary care practitioners, 31.0% of pharmacists and 10% of nurses were aged 55 years and over in 1999.

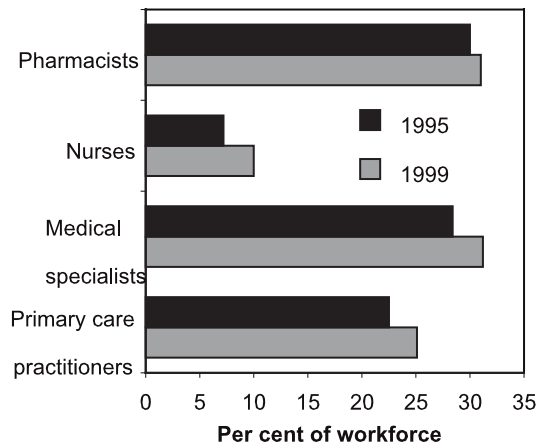


Sources: AIHW: various medical, nursing and pharmacy labour force survey data.

Notes

1. Course completion data includes an unknown but small number of New Zealand citizens.
2. The number of completions for pharmacists for 2000 have been used in place of the 233 completions recorded in 1999, as the 1999 figure was artificially low due to some courses being extended from 3 to 4 years duration.

Figure 3.25(a): Graduates as a percentage of total workforce: doctors, nurses and pharmacists, Australia, 1993 to 2000



Sources: AIHW: various medical, nursing and pharmacy labour force survey data, 1995 and 1999.

Notes

1. Employed (excluding those on extended leave).
2. Nurses include registered and enrolled nurses.
3. Primary care practitioners are those medical practitioners engaged in general practice or in the primary care of patients. They are mostly GPs.
4. Medical specialists are those recognised as specialists by the relevant specialist professional college in Australia.

Figure 3.25(b): Medical, nursing and pharmacy workforces, percentage aged 55 and over, 1995 and 1999

Indicator related to:

3.17 Bulk billing for non-referred (GP) attendances

3.18 Availability of GP services

6 International developments in health sector performance analysis

Interest in the use of performance indicators appears almost universal across health systems internationally and nationally. This interest derives from a wide range of motivations including:

- promoting stronger governance;
- better accountability;
- improved community understanding of health systems;
- enhanced consumer influence within health systems;
- promotion of competition between providers and services; and
- service quality improvement.

International and national work on development of performance indicators has led to many performance indicator frameworks and an enormous proliferation of indicators. This chapter provides a brief overview of some key international developments.

World Health Organization

In the *World Health Report 2000 Health Systems: Improving Performance* (WHO 2000) the WHO attempted to make a major step forward in methods for assessing and comparing national health system performance. The report offered a performance framework (Figure 6.1) that articulated three core goals for health systems: improving health, responsiveness to the expectations of the population, and fairness in financial contributions. The report also identified four core functions of health systems: stewardship, financing, creating resources and delivering services.

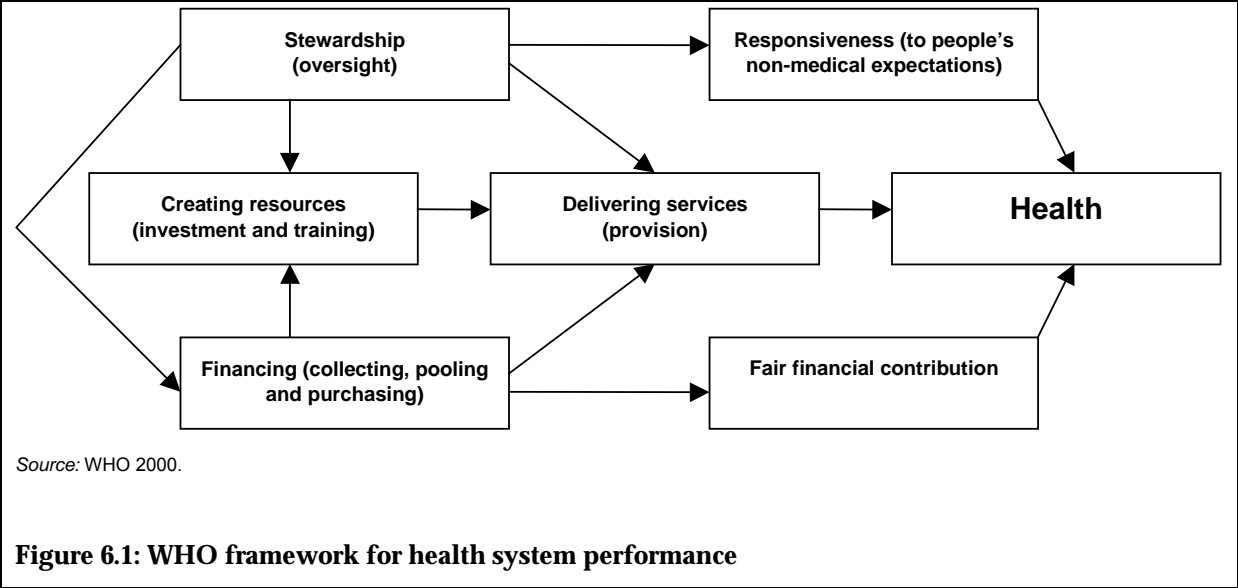


Figure 6.1: WHO framework for health system performance