

9 Explanatory notes

Background

In 1990, the Australian Health Ministers' Advisory Council (AHMAC) commissioned the Australian Institute of Health and Welfare to develop national health labour force statistics about the major registrable health professions. Data collections based on a national minimum data set were developed, addressing the labour force planning needs of the health professions, government, service providers and educational institutions. In addition to pharmacy, published data from the collection are available for medicine, dentistry, nursing, podiatry and physiotherapy.

The National Health Information Management Group of AHMAC reviewed national health labour information requirements in 1997 and decided that collecting and processing timely data within existing State health authority resources would mean conducting future national collections annually for medicine, biannually for nursing, and on a rolling three-year cycle for pharmacy, dentistry and several allied health occupations.

Scope and coverage

The scope of the data is all pharmacists registered with the pharmacy board in each State and Territory and eligible to practise.

The coverage may exclude pharmacists who registered for the first time during the current year. These pharmacists may not be required to renew their registration at the standard renewal date if the initial registration in that State or Territory has occurred within the preceding year.

Method

The main data in this publication were obtained from a pharmacy labour force survey conducted by each State and Territory pharmacy registration board. Each pharmacy board, except for that in the Northern Territory, sent a survey questionnaire to pharmacists as part of the annual registration renewal process. Each State and Territory health authority forwarded a computer file of the survey data to the Institute for aggregation into a national data set.

The Western Australian board dispatches its renewal notices in May; New South Wales and the Australian Capital Territory dispatch in October; Tasmania in November; and South Australia, Victoria and Queensland in December. The Northern Territory board registers pharmacists on application and has no annual renewal process.

The pharmacy boards of Tasmania and the Northern Territory did not conduct the survey in 1995. Data have therefore been estimated for Tasmania and the Northern Territory by using the last available labour force proportions (that is, 1992 data for Tasmania and 1993 data for the Northern Territory) scaled to available registration numbers. Data could not be obtained from Victoria for 1995, so 1996 data have been used, scaled to 1995 registration numbers.

Response rate

Based on the total of the registrations in each State and Territory, the response rate to the survey (excluding Tasmania and the Northern Territory) was 86.0%. The individual response rates were 94.5% for New South Wales, 73.5% for Victoria, 88.5% for

Queensland, 91.4% for Western Australia, 79.4% for South Australia and 73.5% for the Australian Capital Territory. However, complete data were not available for all responding pharmacists, either because not all survey questions were completed or because pharmacy board initial registration data were incomplete or not provided.

The overall response rate can only be estimated and not determined with complete accuracy. It is known that at least some pharmacists who were registered in more than one State or Territory completed a questionnaire in just one State or Territory. The incidence of this occurrence cannot be ascertained because matching survey records among States and Territories is not possible.

Labour force estimates

Pharmacists may register in more than one State or Territory. In estimating the pharmacy labour force, it is therefore important to reduce as much as possible the consequent duplication in statistics.

The estimation of the number and characteristics of currently employed pharmacists in each State and Territory was based on the responses of those pharmacists employed solely or mainly in the State or Territory of registration. Pharmacists who were on leave for three months or more, although employed were excluded from most tables of employed pharmacists because not all States and Territories collected data from pharmacists who were on leave.

Where data were unavailable for Victoria, Tasmania and the Northern Territory in 1995, it was assumed that labour force characteristics were in the same proportion of registrations in 1995 as the labour force characteristics in 1996 for Victoria, 1992 for Tasmania and 1993 for the Northern Territory. The proportions were applied to 1995 registrations to estimate the numbers of pharmacists in the labour force.

It is assumed for all estimates that non-respondents to the survey had the same labour force characteristics as had respondents, and the survey data were scaled up to the registrations in each State and Territory by distributing the non-response numbers on the basis of this assumption. This process may overestimate the number of pharmacists in the labour force in each State and Territory if non-respondents are more likely to be those with multiple registrations not in their home State or Territory or not in the pharmacy labour force. This survey error will be greater in the two Territories, which have a higher proportion of pharmacists registered in other jurisdictions and lower proportions of pharmacists practising solely in the Territories.

Additional data sources

Additional data were obtained as follows:

- data for students enrolled in and completing higher education courses from the Department of Employment, Education, Training and Youth Affairs;
- international migration data from the Department of Immigration and Multicultural Affairs;
- Pharmaceutical Benefits Scheme data from the Department of Health and Family Services;
- data on the number of practising community pharmacists in other countries from the 1997 OECD Health Data File.

Definitions

Arrivals

Foreign citizens arriving in Australia. Excludes Australian citizens and permanent residents returning to Australia.

Departures

Australian citizens and permanent residents departing Australia. Excludes foreign citizens departing Australia.

Geographic classification

The *Rural, Remote and Metropolitan Areas Classification* (RRMA), November 1994, of the Department of Health and Family Services has been used to classify the geographic location of the main job of responding pharmacists in the following seven categories. The data used in determining these categories are based on the 1991 population census.

Metropolitan areas

- *Capital cities* consist of the State and Territory capitals: Sydney, Melbourne, Brisbane, Perth, Adelaide, Hobart, Darwin and Canberra.
- *Other metropolitan centres* consist of one or more statistical subdivisions which have an urban centre of population of 100,000 or more: Newcastle, Wollongong, Queanbeyan (part of Canberra–Queanbeyan), Geelong, Gold Coast–Tweed Heads and Townsville–Thuringowa.

Rural zones

- *Large rural centres* are statistical local areas where most of the population reside in urban centres of population of 25,000 to 99,999: Albury–Wodonga, Dubbo, Lismore, Orange, Port Macquarie, Tamworth, Wagga Wagga (NSW); Ballarat, Bendigo, Shepparton–Mooroopna (Vic); Bundaberg, Cairns, Mackay, Maroochydore–Mooloolaba, Rockhampton, Toowoomba (Qld); Whyalla (SA); and Launceston (Tas).
- *Small rural centres* are statistical local areas in rural zones containing urban centres of population between 10,000 and 24,999: Armidale, Ballina, Bathurst, Broken Hill, Casino, Coffs Harbour, Echuca–Moama, Forster–Tuncurry, Goulburn, Grafton, Griffith, Lithgow, Moree Plains, Muswellbrook, Nowra–Bombaderry, Singleton, Taree (NSW); Bairnsdale, Colac, Echuca–Moama, Horsham, Mildura, Moe–Yallourn, Morwell, Ocean Grove–Barwon Heads, Portland, Sale, Traralgon, Wangaratta, Warrnambool (Vic); Caloundra, Gladstone, Gympie, Hervey Bay, Maryborough, Tewantin–Noosa, Warwick (Qld); Mount Gambier, Murray Bridge, Port Augusta, Port Lincoln, Port Pirie (SA); Albany, Bunbury, Geraldton, Mandurah (WA); and Burnie–Somerset, Devonport (Tas).
- *Other rural areas* are the remaining statistical areas within the rural zone: for example, Cowra Shire, Temora Shire, Guyra Shire (NSW); Ararat Shire, Cobram Shire (Vic); Cardwell Shire, Whitsunday Shire (Qld); Barossa, Pinnaroo (SA); Moora Shire, York Shire (WA); George Town, Ross (Tas); and Coomalie, Litchfield (NT).

Remote zones

These are generally less densely populated than rural statistical local areas and hundreds of kilometres from a major urban centre. Data in this publication are reported for the zone which comprises the two areas shown below.

- *Remote centres* are statistical local areas in the remote zone containing urban centres of population of 5,000 or more: Blackwater, Bowen, Emerald, Mareeba, Moranbah, Mount Isa, Roma (Qld); Broome, Carnarvon, East Pilbara, Esperance, Kalgoorlie–Boulder, Port Hedland, Karratha (WA); and Alice Springs, Katherine (NT).
- *Other remote areas* are the remaining areas within the remote zone: for example, Balranald, Bourke, Cobar, Lord Howe Island (NSW); French Island, Orbost, Walpeup (Vic); Aurukun, Longreach, Quilpie (Qld); Coober Pedy, Murat Bay, Roxby Downs (SA); Coolgardie, Exmouth, Laverton, Shark Bay (WA); King Island, Strahan (Tas); and Daly, Jabiru, Nhulunbuy (NT).

Hours worked

The total number of hours per week worked in all pharmacy related jobs. Excludes time spent on travel between work locations (except travel to call-outs) and unpaid professional and/or voluntary activities.

Full-time: 35 hours or more per week.

Part-time: less than 35 hours per week.

Pharmacy labour force

The pharmacy labour force in each State and Territory consists of:

- pharmacists employed in pharmacy, including the practice of pharmacy, or work which is principally concerned with the discipline of pharmacy, (for example, pharmacy research, administration, or the teaching of pharmacy); plus
- pharmacists not employed in pharmacy who were looking for work in pharmacy.

Pharmacists counted as being employed in pharmacy include those on maternity or other extended leave of more than three months.

Symbols and other interpretations

Data may not add to the totals shown as a result of the estimation process for non-response.

Percentages may not add to 100.0 as a result of rounding.

Percentages printed as 0.0 may denote less than 0.05%.

Italics within a table denote a subtotal.

. . denotes not applicable.

n.a. denotes not available.