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## INTRODUCTION

### The annual pharmacist workforce survey

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Each year, as part of the annual registration process for pharmacists in NSW, an Annual Workforce Survey is sent to each pharmacist currently registered with the Pharmacy Board of New South Wales. This report provides an overview of information from the 2002 workforce survey.

The response rate to the survey was slightly lower than for 2001, decreasing from 83.0% to 81.1%. The continued support of the Pharmacy Board of New South Wales, professional organisations and pharmacists participating in the survey is appreciated.

#### Availability of survey information

The previous summary of the Annual Survey data was produced in 2003, entitled "Profile of the Pharmacist Workforce in NSW, 2001". This profile reproduces the same data as for the 2001 survey, including the analysis of data on hospital pharmacists. Additional survey analysis data such as additional cross tabulations can be obtained by forwarding a written request to the contact address in the front of the publication. Contact should be made to clarify the information required and to determine if a fee may apply. A charging policy is available on request.

Strict procedures are followed to ensure the privacy of individual pharmacists who respond to the Survey. There is no access to identifying data, as individual names and addresses are not provided by the Board on the data file. Survey information will not be made available in any format that enables the identification of individual respondents.

#### Methodology

##### Timing of the 2002 Survey

Information from the 2002 Annual Workforce Survey relates to the 2002 registration renewal period. Renewal notices and surveys were forwarded in October 2002 to pharmacists registered with the Pharmacy Registration Board of New South Wales at that time. The renewal fee was due by the end of December in order for the pharmacist to be retained on the register, as non-financial pharmacists had their status altered by Board consent in mid January. Survey respondents completed the survey with

information about their usual working situation at that time. Information regarding the registration status of pharmacists was provided by the Board which related to the period for 2002.

### **Workforce Survey coverage**

Information from the Annual Workforce Survey does not cover all registered pharmacists in NSW. Only those registrants renewing their registration are forwarded a survey form. This normally excludes:

- **New registrants:** New registrants include new local graduates, interstate graduates and overseas trained pharmacists registering for the first time with the NSW Board who have had their qualifications recognised in NSW. These persons will normally not receive the Workforce survey, but some new registrants do receive the survey form if they also renew in the same financial year. If new registrants return a survey form, they are reclassified for the purposes of this profile as renewals (see Table 1.1).
- **Restorations:** Restorations are persons who have been restored to the register after a period in which they were not financial. These persons will not normally receive the annual survey. Some pharmacists are restorations simply due to late payment and may have returned a survey form.
- **Technical restorations:** Some dentists are restorations simply due to late payment, as they are removed from the register and then reinstated on receipt of the payment of the renewal fee. These dentists have usually completed a survey form, and therefore if they have provided survey data they have been included in the data analysis for this profile. Prior to the 2000 profile the definition of respondents was those pharmacists **renewing** their registration who completed or part completed a survey form.

Care should be taken when interpreting this data as some individual pharmacists may be included in more than one of the categories during the twelve month period.

The definition of response has been applied to those respondents who completed the question on workforce status. In addition, a number of dentists have not completed the question on workforce status, but have completed the majority of the remainder of the survey form including the provision of a New South Wales postcode for work location, as well as other data such as hours worked. It was therefore decided for data completeness, to include both of those categories in the definition of respondents, as a workforce status could be derived.

### **Figures have not been adjusted for non-response**

Data in this publication have not been adjusted for unknown information (both survey non-response and registration data such as year of birth). When interpreting the tables, consideration should be given to the impact of unknown data:

- The absence of data due to non-response results in an under-representation of the size of the workforce in individual tables.
- The workforce characteristics of non-respondents may differ from the characteristics of survey respondents (for example, respondents may be more likely than non-respondents to be in the workforce). Weighting the survey data according to non-response alone may result in an over-estimation or under-estimation in some categories.
- The workforce characteristics of pharmacists who are not part of the survey target group (that is, new registrants and restorations) may differ from the characteristics of the survey population.

## Calculating total unknown data for the survey

In determining the total unknown data for a particular question, consideration should be given to:

- **Unknown data for the question or questions comprising the table**, as indicated at the foot of each table. This may also include information that is unknown due to registration data (eg, year of birth) being unavailable from the Board.
- **Non-response to any filtering questions.** Data on second job will be affected by the lack of the explicit question “Do you have a 2nd job?” The number of persons with second jobs has been estimated from the highest response to any one question (Table 3.5: Field of pharmacy- second job, n= 850) and used to estimate unknown data in relevant questions.
- **Non-response to the survey.** Survey response rates are presented in Table 1.1.

It should be noted that limitations in the survey data prevent a distinction between non-response and alternatives such as “no”, “other” or “zero”. Information regarding this is noted at the foot of the relevant tables.

### Conventions used in this publication

Throughout this publication, figures within the tables may not add to the total shown where it has been necessary to round numbers. Percentages printed as 0.0 may denote less than 0.05%.

*Italics* are used to report unknown data.

0 is used for zero.

**Bold** is used to indicate a total or subtotal.

— denotes not applicable.

n/a denotes data is not available.

## Category of Pharmacist Registration

**Table 1.1: Persons registered as Pharmacists in NSW, 2002**

Category of registration	No. Row %		No. Row %		No. Row %	
	Female		Male		Total	
New registrations(only status) <sup>2</sup>	80	56.0%	48	44.0%	128	100.0%
Restorations	35	66.7%	27	33.3%	62	100.0%
"True" restorations	6	50.0%	10	50.0%	16	100.0%
"Technical" restorations <sup>3</sup>	29	75.0%	17	25.0%	46	100.0%
Renewals	3,366	48.8%	3,327	51.2%	6,693	100.0%
Deletions	0	44.3%	0	55.7%	0	100.0%
New registrations (total) <sup>2</sup>	168	59.2%	116	40.8%	284	100.0%

**Notes:**

<sup>1</sup> The table includes information on pharmacists financial with the Board during 2002

<sup>2</sup> Some pharmacists are included in more than one category during the twelve month period. There were 284 new registrations in total, but 156 of those were also renewals within the survey period. These have been counted as renewals.

<sup>3</sup> There were 46 restorations of the total of 62 who had survey forms, and are therefore categorised as "technical restorations", because they renewed their registration after the cut off date and were then restored to the register.

In 2002, there were 6,883 pharmacists financially registered with the Pharmacy Board of NSW, an increase of 213 from the 6,670 pharmacists registered in 2001. Of these, 3,481 (50.6%) were female and 3,402 (49.4%) were male. Table 1.1 provides an overview of the number of pharmacists in each category of registration.

## Response rate to Workforce Annual Survey

The response rate to the 2002 Pharmacy Workforce Annual Survey was 81.1%, higher than the response rates in 2001 of 81.1%.

**Table 1.2: Response Rate to Pharmacist Annual Workforce Survey, 2000 - 2002**

	No.	Rate	No.	Rate	
	2000		2001		2002
<b>Formal response rate</b>					
<i>Survey respondents</i> <sup>1</sup> who were <i>renewals</i> <sup>2</sup>	5,498		5,427		5,464
<i>Total renewals</i> <sup>2</sup>	6,927	79.4%	6,537	83.0%	6,739 81.1%

- Notes:**
1. A "survey respondent" is defined as a renewal who provides information to the question on working status. There were 1,108 survey forms either with no data on workforce status and workforce status could not be determined, or with no match to Board information. 167 pharmacists did not return any survey form.
  2. "Renewal" is defined as a person recorded as renewing their registration although other actions may also have been recorded (technical restoration, technical renewal, new registration).

Determining the response rate to the survey is complicated by the relationship between the survey and the renewal process. While new registrants and restorations do not generally receive the survey, some may if they also receive a renewal notice within the twelve month survey period. Additionally, some persons sent renewal notices do not renew their registration and therefore do not return surveys. All survey responses from financially registered pharmacists are presented in Tables 1.3 and 1.4. Tables 3.1 to 3.29 describe the working renewals cohort only.

## Work Status

There were 5,464 pharmacists who provided data on workforce status, with 4,281 working renewal survey respondents in 2002, unadjusted for non response. Working renewals are those respondents who:

- Were financially registered and renewed their registration in 2002
- Returned a workforce survey indicating their work status; and
- Indicated that their work status was one of the following three categories:
  - Working in pharmacy only in NSW
  - Working in pharmacy mainly in NSW, but also in other states
  - Working in pharmacy in NSW, but on extended leave (see Table 1.3)

**Table 1.3: Work status of Pharmacist Workforce Survey respondents<sup>1</sup>, NSW, in 2002**

Work Status	No.	%	No.	%	No.	%	%
	Female		Male		Total		Female
<b>Working in pharmacy</b>							
Only in NSW	2,152	76.8%	2,055	77.2%	4,207	77.0%	51.2%
Mainly in other states, but also in NSW	23	0.8%	33	1.2%	56	1.0%	41.1%
Mainly in NSW, but also in other states	12	0.4%	26	1.0%	38	0.7%	31.6%
Only in states other than NSW	89	3.2%	152	5.7%	241	4.4%	36.9%
Working in NSW but currently on leave	34	1.2%	2	0.1%	36	0.7%	94.4%
Working overseas	108	3.9%	83	3.1%	191	3.5%	56.5%
<b>Not Working in/ practicing in pharmacy</b>							
Currently not working	207	7.4%	179	6.7%	386	7.1%	53.6%
Currently working, not in pharmacy	176	6.3%	133	5.0%	309	5.7%	57.0%
<b>Total</b>	<b>2801</b>	<b>100.0%</b>	<b>2,663</b>	<b>100.0%</b>	<b>5,464</b>	<b>100.0%</b>	<b>51.3%</b>
<i>Non-response to survey question<sup>1</sup></i>	516		592		1108		

**Notes:** 1.

There were 6,572 forms from physiotherapists renewing their registration, of whom 1,108 did not reply to the question on work status and a work status could not be derived. (see Note 1 to Table 1.2)

The workforce participation rate was 78.4% in total, and similar for males and females.

## Pharmacists seeking work

**Table 1.4: Seeking Work in Pharmacy in NSW, 2002**

Nature of work sought	No.	%	No.	%	No.	%	%
	Female		Male		Total		Female
<b>Not looking for work in pharmacy</b>	336	90.1%	288	94.1%	624	91.9%	53.8%
<b>Looking for work in pharmacy:</b>							
- either full time or part time	5	1.3%	2	0.7%	7	1.0%	71.4%
- full time	4	1.1%	0	0.0%	4	0.6%	100.0%
- part time	27	7.2%	16	5.2%	43	6.3%	62.8%
- not specified	1	0.3%	0	0.0%	1	0.1%	100.0%
<b>Total</b>	<b>373</b>	<b>100.0%</b>	<b>306</b>	<b>100.0%</b>	<b>679</b>	<b>100.0%</b>	<b>54.9%</b>
<i>non response</i>	10	2.6%	6	1.9%	16	2.3%	

**Note:** Table includes only those survey respondents in Table 1.3 who indicated that they were not currently working or currently working but not in pharmacy (n=695)

## Estimating Workforce Size

**Table 1.5: Estimating the Size of the Pharmacist Workforce, 2000-2002**

	No.		
	2000	2001	2002
Size of Workforce (Unadjusted) <sup>1</sup>	4,282	4,221	4281
Total respondents to work status	5,498	5,427	5464
% working	77.9%	77.8%	78.3%
No. of renewals <sup>2</sup>	6,917	6,537	6,739
1) estimated workforce from renewals	5,387	5,084	5,280
No. of new registrants <sup>3</sup>	150	123	128
2) estimated workforce from new reg. (90%)	135	111	115
No. of restorations <sup>3</sup>	10	25	16
3) estimated workforce from restorations (80%)	8	20	13
<b>Total Estimated Workforce (1+2+3)</b>	<b>5,530</b>	<b>5,215</b>	<b>5,408</b>
Total number of new registrations	349	219	284
Total number of financial restorations	30	43	62

- Notes:**
- 1 The unadjusted size of the workforce is based on renewals and technical restorations who answered the work status question as working in NSW (see Section on work status). This is the workforce size unadjusted for non response.
  - 2 The number of renewals includes renewals and technical restorations
  - 3 The total number of new registrants and restorations in each year are shown below the table.

The method of estimating workforce size from the 1999 Medical Workforce Survey has been applied in the above table. When applied to the data, this results in an estimated 5,280 working renewals, 115 working new registrants, and 13 working registrants in other categories, with a total estimated workforce size of 5,408 pharmacists, an increase of 193 or 3.7% from the estimated 5,215 pharmacists working in 2001. However, the estimate was lower than for 2000.

## Estimating Full-Time Equivalent Workforce (FTE)

The numbers of hours worked by pharmacists on average per week for all jobs together (see Table 3.11) can be converted to full-time equivalents (FTEs) which becomes a measure of the productive workforce. This is shown in Table 3.14, where the total hours worked by pharmacists in each age and hours worked group are divided by 35 to calculate the FTE workforce. Thirty five hours is used as the measure of full time work based on workforce definitions developed by the Australian Bureau of Statistics.

A ratio of FTEs to the total headcount workforce can then be calculated, to determine the relative productivity of the workforce.

Table 3.14 has not been adjusted to the estimated size of the workforce accounting for non response, and therefore shows an FTE workforce of 4,485.8 pharmacists compared to a headcount of 4,219 pharmacists (see Table 3.11). Therefore the FTE ratio is 1.063, indicating that pharmacists are 6.3% more productive on average than the workforce equivalent (based on 35 hours per week). The FTE ratio of 1.063 applied to the estimated workforce size of 5,408 headcount calculated above results in an estimated FTE workforce of 5,748.7 pharmacists, an increase of 137.4 FTE from the estimated workforce of 5,611.3 FTE pharmacists in 2001.