Dietitians in New South Wales: workforce trends 1984-2000

ROSLYN MEYER, RACHELLE GILROY AND PETER WILLIAMS

At the time of the study, Roslyn Meyer and Rachelle Gilroy were MSc Students at the University of Wollongong. Peter Williams is a Senior Lecturer in Nutrition and Dietetics at the University of Wollongong.

Abstract

Complete surveys of the dietetic workforce in NSW were conducted in 1984 and 1991 and have now been updated with a new survey in 2000. In the nine years since 1991, the total active workforce grew by 48%. Although there were significant improvements in the ratios of hospital dietitians per 100 acute beds (from 0.88 to1.08) and dietitians per million population (from 69.7 to 96.5), the supply of dietitians does not yet reach recommended levels, especially in rural areas. Other trends were significant increases in the proportion of dietitians employed outside hospitals (to 38% in 2000) and in non-clinical work (50% in 2000), and declines in the number of technical support staff for dietitians.

The need for updated dietetic workforce data

No comprehensive statistics about the Australian dietetic workforce are collected on a regular basis. National surveys have been conducted sporadically in the past, but these have usually been based on incomplete population samples (Commonwealth Department of Health 1980; Dietitians Association of Australia 1986; Scott and Binns 1988). One report has analysed some data on allied health professionals from the 1991 national census (Smith and Crowley 1995). The Dietitians Association of Australia (DAA) publishes annual membership statistics that give a picture of the hours of work and main areas of employment, but these data do not include dietitians who are not members of DAA, nor do they provide information on the age and sex structure of the workforce, salary levels or the numbers of technical support staff.

New South Wales (NSW) has the largest number of dietitians of any State in Australia, with 36% of DAA members in 2000. In 1984 and 1991, comprehensive surveys of the dietetic workforce in NSW were conducted by DAA (NSW Branch) and the results have been published (Williams 1993). Since then, two new training courses for dietitians have started in NSW (at Wollongong University in 1990 and Newcastle University in 1991) and there have been continuing changes in the roles of dietitians and their support staff over the past decade. Furthermore, during the 1990s all hospital-based staff have been subject to reduced funding and organisational restructuring (Duckett 2000). In order to update the results of the previous surveys, a new survey was conducted in 2000 and this paper presents the results. The aim of the study was to provide a profile of dietitians in NSW in 2000 and to analyse the trends in the dietetic workforce over the past 16 years.

Methods

In July 2000 a questionnaire on dietetic staffing was sent to the dietitian-in-charge in every hospital in NSW with 50 beds or more, plus any smaller hospitals or nursing homes where dietitians were known to be employed (a total of 389). Details of hospitals were obtained from the 6th edition of the Australian Hospitals Directory (ATA Professional Services 2000). Non-responders were sent reminder letters and outstanding returns were followed up by telephone calls. Completed questionnaires were returned from 120 hospitals, including all

hospitals reported in the 1984 and 1991 surveys. Those not responding were mostly small public or private hospitals where dietitians were not expected to be employed, so it can be assumed that these results are close to a complete census of hospital dietitians employed in NSW. Details of hospital bed numbers and the population in each Area Health Service were obtained from the NSW Department of Health.

Survey forms were also sent to dietitians employed in private practice, food industry positions, non-government organisations, community health and public health units, and research and tertiary education institutions. Information on these non-hospital positions was obtained from various sources including DAA membership records, the NSW Yellow Pages, and DAA Special Interest Groups directories. The NSW Department of Health supplied a list of community health, health promotion and public health units for each Area Health Service in NSW. A total of 223 survey forms were sent to non-hospital establishments thought to employ dietitians. 105 replies were received, a response rate of 47%.

The questionnaire was based on that used in the previous two surveys and was designed to collect the following information as at 30 June 2000: name and location of workplace, name and number of dietitians employed, hours worked per week, number of years since qualification as a dietitian, salary range (optional), percentage of time spent in nine major work areas, and number of technical assistants available to support the work of the dietitians. Copies of the survey are available from the third author.

Responses from the surveys were cross-checked with DAA membership records. Dietitians who were members of DAA and who were advertising in NSW Yellow Pages, but who did not respond to the survey (n=38), were counted as private practice dietitians in this survey, but details of their hours of work, years of practice and types of work could not be included in the analysis. Other DAA members who were not counted in the survey were recorded as Unknown Employment Status. This group would include dietitians who had recently become unemployed, who were no longer working in dietetics, or those in private practice who do not advertise in the Yellow Pages.

Results and discussion

Numbers

The numbers of dietitians in NSW in 1984, 1991 and 2000 are compared in Table 1. The study aimed to obtain a response from all qualified dietitians in NSW, but some who were not members of DAA and were working outside the hospital system or unemployed may have been omitted. However the extent of underreporting is likely to be small. The 1991 survey reported a total of 468 dietitians, which agreed closely with the 477 people in NSW recording their occupation as dietitian in the 1991 national census (personal communication, Australian Institute of Health and Welfare), and that higher figure would have included some people without recognised tertiary qualifications in dietetics.

The active workforce of dietitians in NSW grew by 198 positions (48%) in the nine years to June 2000, or approximately 22 positions per annum. If the 79 DAA members of unknown employment status are also included, the increase was 277 positions (67%), or a rate of 30 positions per annum. This represents a growth rate of 6% per annum, similar to the growth rate of 7% for the profession in the USA during the 1990s (Shih 1999). This growth rate is higher than that of the medical workforce, which was 4% per annum from 1981-1995 (Dent and Goulston 1999) and significantly greater than the average national labour force growth rates of 1.4% per annum from 1991 to 2000 (Australian Bureau of Statistics 1999). However, 83% of the new positions were part-time rather than full-time. This may be meeting the needs of a largely female profession, many of whom seek part-time work to allow them to combine professional and family lives for a period of their careers. Alternatively, it may be a response to budget constraints in the marketplace.

Figure 1 shows the number of dietitians employed in full-time and part-time positions in NSW from 1960 to 2000, based on data about the active workforce from this survey and that published previously (Williams 1993). There appears to have been a faster rate of growth in the active workforce since 1984, which may have been caused by the creation of the two new NSW training schools in the 1990s. Over the same period, the proportion of unemployed and retired dietitians remained relatively constant and quite low. The rate of 8.4% unemployed

is similar to the rate in 1991. In their 1984 national survey, Scott and Binns found 8.3% of dietitians were temporarily out of the active workforce but planning to return in the future (Scott and Binns 1989). This stable rate of unemployment is somewhat surprising given that the higher number of dietitians now graduating in NSW (approximately 80 per annum) is notably greater than the number of positions being added to the workforce. Perhaps many of these new graduates are moving to other States or leaving the profession. In their analysis of the 1991 census data, Smith and Crowley (1995) reported that 24% of those with qualifications as a dietitian were employed in a profession other than dietetics and that this pattern was similar for many allied health professions.

A significant number of dietitians were found not to be members of DAA in 2000 (12% of the workforce, excluding the inactive workforce), very similar to the proportion found in 1991. A slightly higher proportion of non-members was found amongst hospital dietitians than those in non-hospital positions, but not significantly so. This finding reinforces the need for regular surveys, rather than relying solely on DAA statistics, to monitor dietetic workforce trends.

Areas of employment

The majority of NSW dietitians remain employed in hospitals but there has been a continuing increase in the proportion employed in other sectors, from 20% in 1984, to 29% in 1991 and 38% in 2000 (Table 2). The largest areas of growth in the past nine years have been in private practice and industry positions. However, despite the reduction in the proportion of dietitians employed in hospitals, the largest increase in the number of new positions was still in hospitals, where there were nearly 30% more positions in 2000 than in 1991.

The place of employment does not necessarily indicate the type of role performed. Table 3 identifies the percentage of time that dietitians identified that they spent on a range of different types of work. Half of the total dietetic workforce time is spent on non-clinical work, a finding similar to the 46% reported by Hughes in his national survey of the Australian rural dietetic workforce in 1996 (Hughes 1998). These changing patterns of employment need to be considered by DAA when considering competency standards for entry-level dietitians and by universities responsible for preparing new graduates for the workplace.

There has been considerable debate recently about the delineation of the roles of public health and community nutrition in Australia (Ash et al. 1997; Hughes and Somerset 1997; Mackerras 1998). In this survey we did not attempt to give definitions of these categories of practice but allowed dietitians to self-identify their roles. There could therefore have been different interpretation of these terms by respondents. There were 44 dietitians in NSW who reported spending more than 10% of their time on public health and a further 85 who spend at least 10% of their time on community dietetics. Together these add to a workforce of 42.4 full time equivalent positions.

Workforce structure

The age structure of the NSW workforce continues to change, with an increasing proportion of more experienced practitioners in the workforce. In 2000, 30% of dietitians had qualified more than 15 years ago, compared to only 15% in 1991. There was no significant difference in the profile of experience between those employed in hospital or non-hospital positions. The greatest percentage increase was in the group with 16-20 years of experience. In part this may be a cohort effect from the sudden increase in the numbers of dietitians trained per year in NSW after 1968, when the Sydney University course started. It is likely therefore that the age profile of the profession will continue to change until 2005, when those first university-trained dietitians reach retiring age.

Some caution is needed in comparing data from the early surveys. In 1984 and 1991 the questionnaire asked for "years of experience"; in the 2000 survey this was changed to "years since qualification" for greater clarity. Dietitians who had broken periods of employment may therefore have reported lower values in the earlier surveys.

The proportion of males in the active NSW workforce has declined from 8.1% in 1984, to 7% in 1991 and 6.7% in 2000, similar to the proportion nationally amongst DAA members (6%) and that reported in 1984 (Scott and Binns 1988). The proportion of males employed in non-hospital positions (7.8%) is slightly higher than in hospitals (6.1%). This makes dietetics one of the most female-dominated of all the health professions. Females make up 72.5% of the total health workforce, but even other traditionally female professions now have higher proportions of males: 8% of registered nurses and 18% of physiotherapists are males (Duckett 2000). Without a more active program of recruitment of males to enter the profession, it seems unlikely that this proportion will change (Williams 2000).

Table 5 sets out the annual salary ranges for dietitians. Among both the hospital and non-hospital dietitians, the greatest proportion of dietitians earned amounts in the range of $40-60,000 per annum. By comparison, the average ordinary earnings in Australia in May 2000 were $40,800 (Australian Bureau of Statistics 2001). Care should be taken in comparing the data from hospital and non-hospital dietitians. While 93% of hospital dietitians answered this optional question, only 58% of non-hospital dietitians did so.

Staffing ratios

Table 6 presents the ratios of the number of dietitians and their technical support staff to acute bed numbers and population in urban and rural areas of NSW. For this analysis, urban health areas were defined, as in the previous surveys, as those in the greater Sydney metropolitan region and those centred on Gosford, Newcastle and Wollongong (see footnote to table 6 for details), and conforms with definitions used elsewhere (Harris and Harris 1998).

Over the whole State there have been continuing improvements in the staffing ratios both in hospital and community settings over the sixteen years since 1984. In urban hospitals the ratio of dietitians per 100 beds rose from 1.00 in 1991 to 1.23 in 2000 (although the ratio varied between health areas from 0.83 to 1.91). There were also improvements in rural hospitals, from 0.56 dietitians per 100 beds in 1991 to 0.67 in 2000 (varying from 0.45 to 0.87). Several reports have suggested provisional dietetic staffing ratios of 1.0-1.5 dietitians per 100 beds (Architectural Design and Research Group 1979; Somers and Mulroney 1983; Sax 1985). In a survey of dietetic staffing in Australian hospitals in 1985, NSW dietitians estimated that there was a need for 1.45 dietitians per 100 beds for optimal services (Boyce and Jackway 1985). Thus, despite the continuing improvements, staffing levels are still not adequate.

In contrast to the dietetic staffing ratios, the ratios of diet technicians appear to have declined since 1991. A recent survey has suggested that the role of diet aides and supervisors has merged in the last 10 years (Riddiford et al. 2000) and in this survey the results for the two were combined. According to comments from managers of larger public hospitals, the major reason for this decline has been the introduction of computerised dietary management packages over the past decade. This has resulted in increased automation of many of the menu processing tasks traditionally handled by diet aides. In some hospitals, dietitians have also been experimenting with systems that eliminate menu selection in advance, further reducing the need for diet aides (Barrington et al. 1999; Kokkinakos and Ravens 1999). At the same time as the introduction of these systems, in a number of hospitals diet technician positions were moved from the dietetic to the food services department.

The proportion of community and public health dietitians per head of population has increased by 30% since 1991 and the combined ratio of hospital and community dietitians per head of population has increased by 18%. Considering the total active workforce, the ratio of dietitians in NSW per million population has continued to rise from 50.8 in 1984, to 69.7 in 1991 and 96.5 in 2000. This is still short of the target of 140 set by the Better Health Commission (Better Health Commission 1986).

In all comparisons, the rural regions of NSW had poorer dietetic services than the urban areas. This reflects the situation found in many other allied health professions (Morris and Palmer 1994). The ratio of hospital and community dietitians to population in rural regions was only 74% of that in urban areas, although this was an improvement from 66% in 1991.

The availability of technical support staff was even worse, with less than one third the ratio of staff to beds in rural areas compared to urban. Part of the reason for this disparity may be the disinclination of dietitians to seek work in rural areas. This has been recognised by the Department of Health and recommendations have been made to encourage and support rural allied health practice (Gadiel and Ridoutt 1994).

Conclusions

The findings of this survey provide the following profile of the typical NSW dietitian in 2000: a female who graduated between 6-10 years ago, working full-time as a clinical dietitian in an urban hospital. She is a member of DAA and has 0.8 diet technicians to assist her.

Between 1991 and 2000 there was a substantial improvement in the ratio of dietitians to population in NSW, but the workforce numbers are still short of recommended levels. Rural regions remain especially poorly resourced.

Finally, the results suggest the profession in NSW is continuing a significant move away from hospital-based practice. 50% of the work of dietitians is now in non-clinical areas.

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Table 1. NSW Dietetic workforce at 30 June 1984, 1991 and 2000.

		1984		1991		2000	
		Number	%	Number	%	Number	%
Active workforce							
Members of DAA							
	Hospital					325	42.5
	Non-hospital					203	26.5
	Total	*187*	*59.7*	*365*	*78.0*	*528*	*69.0*
Non-members of DAA							
	Hospital					54	7.1
	Non-hospital					29	3.8
	Total	*71*	*22.7*	*48*	*10.2*	*83*	*10.9*
Total Active workforce		258	82.4	413	88.2	611	79.9
Unknown employment status (a)							
	Full time members DAA					32	4.2
	Part-time members DAA					47	6.1
	Total	*18*	*5.8*	*0*	*0*	*79*	*10.3*
Inactive workforce (b)							
Unemployed		-	-	41	8.8	64	8.4
Retired		-	-	14	3.0	11	1.4
Total inactive workforce		*37*	*11.8*	*55*	*11.8*	*75*	*9.8*
Total Dietetic Workforce		313	100	468	100	765	100

(a) Financial members of DAA not recorded in the survey

(b) Unemployed and retired categories were not separated in the 1984 survey

Table 2. Where dietitians were employed

	1984		1991		2000	
	Number	%	Number	%	Number	%
Hospitals	207	80.2	294	71.2	379	62.0
Private practice (a)	16	6.2	34	8.2	82 (b)	13.4
Industry (c)	6	2.3	15	3.6	40	6.6
Community/Public Health	10	3.9	29	7.0	32	5.2
Education and Research	16	6.2	16	3.9	32	5.2
Ambulatory Care (d)	-	-	14	3.4	29	4.8
Non-government organisations (e)	0	0	7	1.7	14	2.3
Health Department	3	1.2	4	1.0	3	0.5
Total	258	100	413	100	611	100

(a) Only dietitians solely in private practice; excludes those working in other paid positions who also do some private practice work.

(b) Includes 38 DAA members who were advertising as dietitians in the Yellow Pages, but who did not return survey forms.

(c) Industry positions include dietitians working in companies producing and selling food or nutritional supplements and public relations and marketing agencies.

(d) Ambulatory care positions are those providing clinical services to non-inpatients, whose staff are separate from hospital dietetic department establishments. For example, diabetes services, AIDS clinics, food allergy clinics. Not recorded separately in 1984.

(e) Includes National Heart Foundation, Diabetes Australia, health management funds.

Table 3. Major areas of work for dietitians (percentage of time)

	Hospital Dietitians			Non-hospital dietitians	All dietitians
	1984	1991	2000	2000	2000
Clinical	67	73	71	10	50
Community (a)	12	12	8	10	9
Administration	9	9	11	10	11
Food service	4	3	5	0	3
Education	6	1	2	20	8
Research	2	2	2	10	5
Public health (a)	-	-	1	30	11
Marketing	-	-	0	10	3
Total	100	100	100	100	100

(a) Community and public health were not separated in 1984 and 1991 surveys
(b) Not recorded in 1984 or 1991.

Table 4. Age structure of the dietetic workforce in NSW, June 2000

Years since qualification	Non-hospital		Hospital		All		All	All
	Number 2000	% 2000	Number 2000	% 2000	Number 2000	% 2000	% 1991	% 1984
0-5	59	30	108	36	167	33	43	50
6-10	49	25	68	22	117	23	27	24
11-15	26	13	42	14	68	14	15	10
16-20	33	17	41	14	74	15	7	7
21-25	19	10	24	8	43	9	4	5
26+	10	5	20	7	30	6	4	4
Total (a)	196	100	303	100	499	100	100	100

(a) Not all respondents answered this question

Table 5. Annual salary ranges of NSW hospital and non-hospital dietitians in 2000

	Hospital		Non-hospital	
	Number (a)	%	Number (a)	%
< $40,000	64	21	38	34
$40,000-59,999	229	76	52	47
$60,000-79,999	10	3	17	15
$80,000+	0	0	4	4

(a) Not all respondents answered this question

Table 6. Ratio of dietetic staff (FTE)(a) to beds and population in NSW

	1984 Total	1991 Total	2000 Total	2000 Urban (b)	2000 Rural (b)
Hospital dietitians per 100 acute beds(c)	0.51	0.88	1.08	1.23	0.67
Community dietitians(d) per 100,000 population	0.16	0.70	0.91	0.93	0.82
Hospital and community dietitians per 100,000 population	3.50	4.90	5.76	6.12	4.50
Diet technicians(e) per 100 acute beds	0.76	1.23	0.84	1.02	0.35

(a) Full time equivalent (FTE) - 38 hours/week in 1991 and 2000, 40 hours/week in 1984.

(b) Urban includes the following Health Areas: Northern, Central, South Eastern, Western and South Western Sydney, Wentworth, Central Coast, Hunter and Illawarra. Rural includes the Northern Rivers, New England, Mid North Coast, Macquarie, Far West, Mid Western, Greater Murray and Southern Health Areas.

(c) Excludes long-stay and nursing home beds.

(d) Includes public health and ambulatory care dietitians; excludes those in private practice.

(e) Diet supervisors and diet aides

Figure 1. The active dietetic workforce in NSW from 1960-2000.