

# Profile of the physiotherapy profession in New South Wales (1975–2002)

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This was the first study known to the authors exploring workforce data from the New South Wales Physiotherapists Registration Board over several decades. Labour force statistics were examined from various data sources over the years 1975 to 2002. The results indicate that the demographics and working patterns of physiotherapists in New South Wales have remained remarkably stable over time. The workforce continues to grow, however the growth rate has decreased markedly with only a 2.3% increase from 2001 to 2002. The proportion of men within the profession is steadily increasing; in 1975 men accounted for 5.2% of physiotherapists, in 2000 23.5% of physiotherapists were male. While the male workforce increases, the female workforce is ageing. The modal age for female physiotherapists has steadily increased from 25–29 years in 1975 to 40–44 years in 2001. Importantly, in relation to attrition, the degree of workforce participation has not undergone significant change since 1987. Although labour force analysis has demonstrated that the workforce is in shortage, attrition does not appear to be the major contributor to this situation. The proportion of the profession who are inactive has remained relatively stable since 1987. More pertinent to the current shortage is the slowing of the growth rate of the profession while demand for physiotherapy services continues to rise. [Anderson G, Ellis E, Williams V and Gates C (2005) Profile of the physiotherapy profession in New South Wales (1975–2002). *Australian Journal of Physiotherapy* 51: 109–116]

Key words: Physiotherapy; Workforce; Labour Force; Manpower

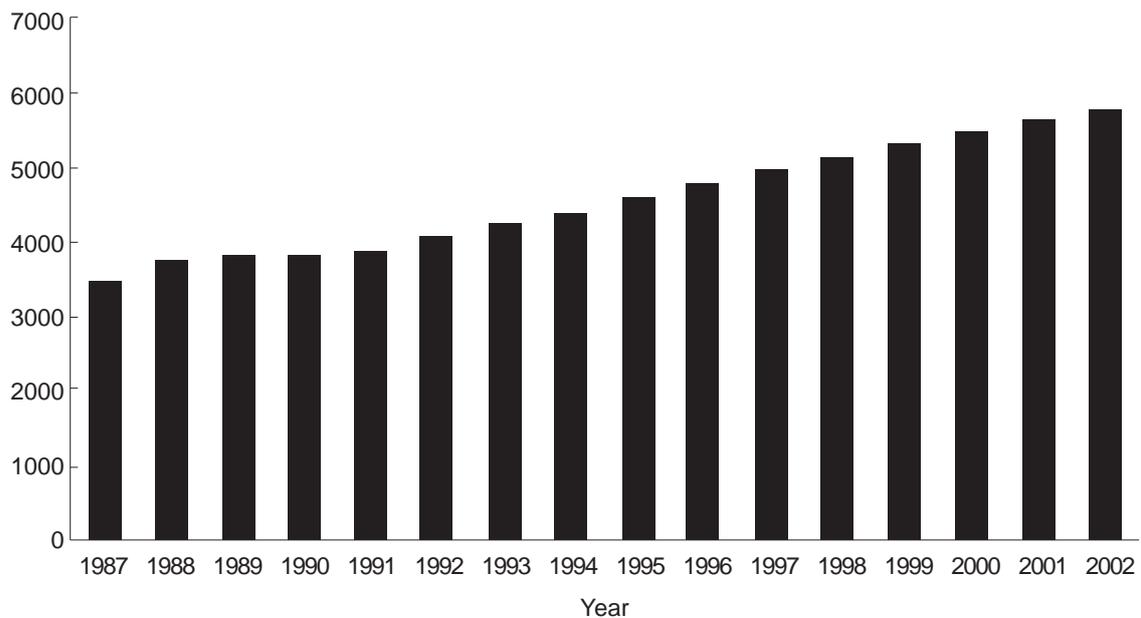
## Introduction

Physiotherapy is one of the largest groups of health professionals in New South Wales (NSW). Data is collected on the size and nature of this important professional group. Physiotherapists applying to renew their registration with the Physiotherapists Registration Board of NSW (NSW PRB) receive a survey with their registration renewal papers which solicits basic details about the applicants' professional lives and, in particular, their patterns of work. There is no requirement for the physiotherapists to return the survey, but response rates are generally upward of 85% and in 2001 the response rate was 91.9%. The high response rate suggests that this information is providing an accurate picture of the physiotherapy profession in NSW. The results of the surveys are collated and an annual report is published by the Workforce Unit, which summarises the previous year's survey results. This is known as the Physiotherapy Labourforce Annual Survey Summary Report. These reports define physiotherapy practice in NSW but as yet the annual reports have not been analysed regarding changes over time.

This study therefore aimed to generate a profile of the physiotherapy profession in NSW and to examine changes that occurred within the profession from 1975 to 2001, particularly changes in those factors that might reflect on professional attrition.

## Method

To ensure a complete representation of the physiotherapy profession, several data sources were used in the analysis. Firstly, copies of the Physiotherapy Labourforce Annual Survey Summary Reports from 1987 to 2001 were obtained from the NSW PRB. Information about the number of new registrants and total number of registered physiotherapists in NSW was provided by the NSW PRB from the annual reports for the years 1987 to 2002 inclusive. The results of a survey of Australian physiotherapists conducted by the Department of Labour and Immigration in 1975 were also included in this research. The Australian Bureau of Statistics, in the census data, collects information related to persons employed in health-related fields. These data are published in a document titled Census of Population and Housing—Characteristics of Persons Employed in Health Occupations, Australia. Copies of these reports from 1986, 1991, and 1996 were used in the analysis. Finally, each of the states and territories has its own Physiotherapists Registration Board which collects data from its members. The information from all state and territory registration boards was collected and compared in 1993 and 1998 by the Australian Institute of Health and Welfare to provide information about physiotherapy in Australia (Australian Institute of Health and Welfare 1995 and 2000). The final two data sources allowed a nationwide comparison of the physiotherapy profession over time.



**Figure 1.** Total number of registered physiotherapists.

Important factors related to attrition were extracted from existing literature and used to determine the appropriate data fields for further analysis. A total of eight areas were considered to be pertinent; sector of work, modal age, number of part-time physiotherapists, number of inactive physiotherapists, total number of physiotherapists, number of physiotherapists with postgraduate qualifications, type of work and location of work.

The content of the Physiotherapy Labour Force surveys has changed over the span of these reports, hence not all variables could be examined from 1975 to 2001, despite attempts to find this information through the NSW PRB. The relevant data fields were taken from the Labour Force Reports. The location of work was classified as either rural or metropolitan based on respondents' postal codes. The data were considered both as proportions of respondents and as absolute figures. Some variables were further analysed to examine the effect of gender. The data were then examined to identify trends concerning growth and change within the variables of interest.

The absolute number of physiotherapists cited in the Labour Force Surveys is the number returning the surveys. This number differs from the number of physiotherapists registered in that year or the number of respondents to each question. In particular, the 1998 absolute data were affected by a low response rate (80.5%). The proportion of respondents is the absolute number divided by the number of respondents to the question. This allows for more reliable comparisons to be made between years. When examining these results note that some data points were not available for each year. The 2001 data set was adversely effected by approximately 10% of respondents not reporting their age or gender, therefore some comparisons have been made using 2000 data.

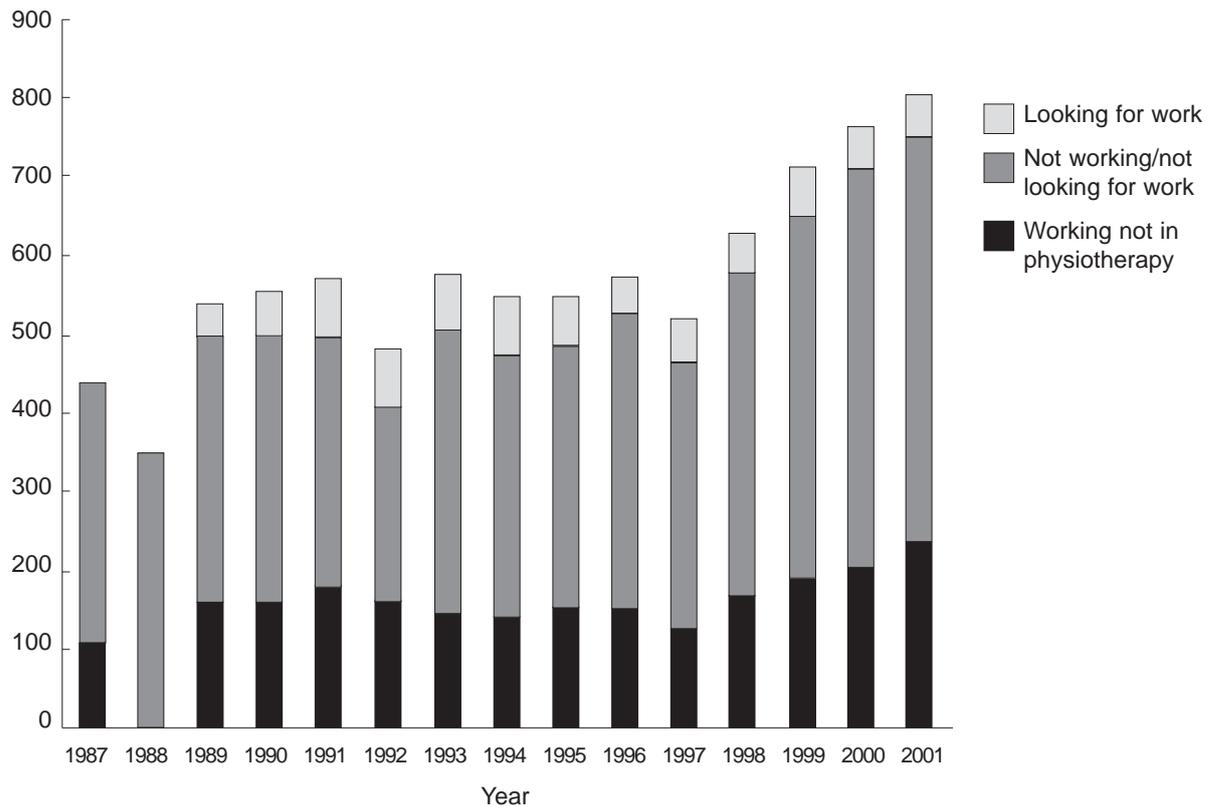
**Table 1.** Absolute numbers and proportions of respondents who have qualifications in fields other than physiotherapy.

Year	Number of respondents	Proportion of all respondents (%)
1990	273	11.6
1994	441	16.0
1998	532	20.4
1999	669	19.6
2000	700	20.2
2001	718	19.9

## Results

**Number of physiotherapists** The number of registered physiotherapists in NSW has risen dramatically over the past 27 years. From 1975 to 1987 the number of physiotherapists increased over fivefold. Since then, while the profession has continued to grow, the rate of growth has decreased considerably (Figure 1). The number of registered physiotherapists grew by only 17% from June 1997 to June 2002. The number of new registration applications received by the NSW PRB decreased sharply (by over 30%) from June 2001 to June 2002. This is probably because a record number of new registrants were recorded in 2001. However, the ratio of new registrants to the total number of registered physiotherapists has remained relatively stable over the past 15 years at approximately 6%, with the exception of 2001 when they accounted for 10% of physiotherapists.

Women account for the dominant proportion of



**Figure 2.** Absolute number of inactive physiotherapists.

physiotherapists, but this dominance is far less overwhelming than 25 years ago. In 1975 women accounted for 94.8% of registered physiotherapists in NSW; in the year 2000 this figure had decreased substantially to 76.5%. This change in predominance is further evidenced by the increasing percentage of new male registrants. In 1995, men accounted for 19% of new registrants while in 2000, 34% of new registrants were male. The rate of growth in numbers of male physiotherapists has been 4.5 times higher than the rate of growth for female physiotherapists since 1975.

**Modal age of physiotherapists** The modal age group is the age group to which most respondents belong. The modal age for female physiotherapists has steadily increased since 1975, when the modal age was 25–29 years. From 1996 to 2001 the female modal age has been 40–44 years. Although the modal age has increased, the proportion of respondents in the age range has decreased indicating a more even spread among the age groups. The modal age for male physiotherapists has followed a different path. In 1975 the modal age for male physiotherapists was 50–54, with 17.6% of physiotherapists in this age group. However three other age groups, 30–34, 45–49 and 55–59, individually held 14.7% of male physiotherapists. With the exception of 1995 and 1996, when the modal age for male physiotherapists was 25–29, the male modal age has remained at 30–34 since 1990.

**Inactive physiotherapists** The main area of professional inactivity is those physiotherapists who are employed in a field other than physiotherapy. There is no clear trend in these figures. In 2001, 4.8% of respondents were working in a field

other than physiotherapy, with this figure peaking in 1991 at 5%. In terms of absolute numbers in 2001 there were 238 registered physiotherapists working in areas other than physiotherapy, 513 registered physiotherapists neither working nor looking for work and 52 registered physiotherapists seeking work in the physiotherapy profession (Figure 2).

**Work location** The percentage of respondents working in metropolitan areas has remained fairly constant at approximately 80% over the past 15 years. The percentage of respondents working in metropolitan areas peaked at 83.5% in 2001. While proportionally fewer physiotherapists are working in rural areas, the absolute number has continued to rise.

**Postgraduate qualifications** In 1975, only 5.4% of respondents had postgraduate qualifications in physiotherapy. The proportion of respondents with extra physiotherapy qualifications has increased considerably over the past 25 years. In 2001, 23.1% of respondents held at least one postgraduate qualification in physiotherapy. In 1998, 34% of male respondents held a postgraduate qualification compared with only 23.2% of females. This gap has since shrunk and in 2001, 541 (21.8%) female respondents and 220 (28.8%) male respondents held postgraduate physiotherapy qualifications.

Respondents also held qualifications in fields other than physiotherapy (Table 1). In 1990, 11.6% of respondents held these qualifications, by 2000 this figure had almost doubled to 20.2%. Since 1998 the proportion of physiotherapists with

**Table 2.** Absolute numbers of respondents in each sector of work.

Year	Own practice	Salaried private	Salaried public	Total salaried	% Own Practice
1987	627	NA	NA	1438	28.4
1988	649	NA	NA	1656	26.1
1989	667	496	1157	1653	27.3
1990	656	502	1107	1609	28.1
1991	698	560	1168	1728	27.8
1992	740	611	1155	1766	28.3
1993	748	360	1246	1606	28.6
1994	793	NA	NA	1638	28.7
1995	809	NA	NA	1716	30.5
1996	914	NA	NA	1827	31.8
1997	930	NA	NA	1771	32.9
1998	821	540	904	1444	32.9
1999	946	681	1249	1930	29.4
2000	975	721	1275	1996	29.4
2001	1014	742	1231	1973	29.6

NA, not available.

qualifications in fields other than physiotherapy has oscillated between 19% and 21%, however the absolute number of physiotherapists with these qualifications has continued to rise.

**Type of work** Over the past 15 years the proportion of physiotherapists working primarily as clinicians has remained stable in the 90–95% range (Figure 3). This figure rose from 91% in 1987 to 93.1% in 2001. There has also been stability in the proportion of physiotherapists working as managers (2.5%), educators (2%) and researchers (0.5%). The proportion of respondents reporting their second job as a clinician has oscillated around 70% since 1993 (Figure 4).

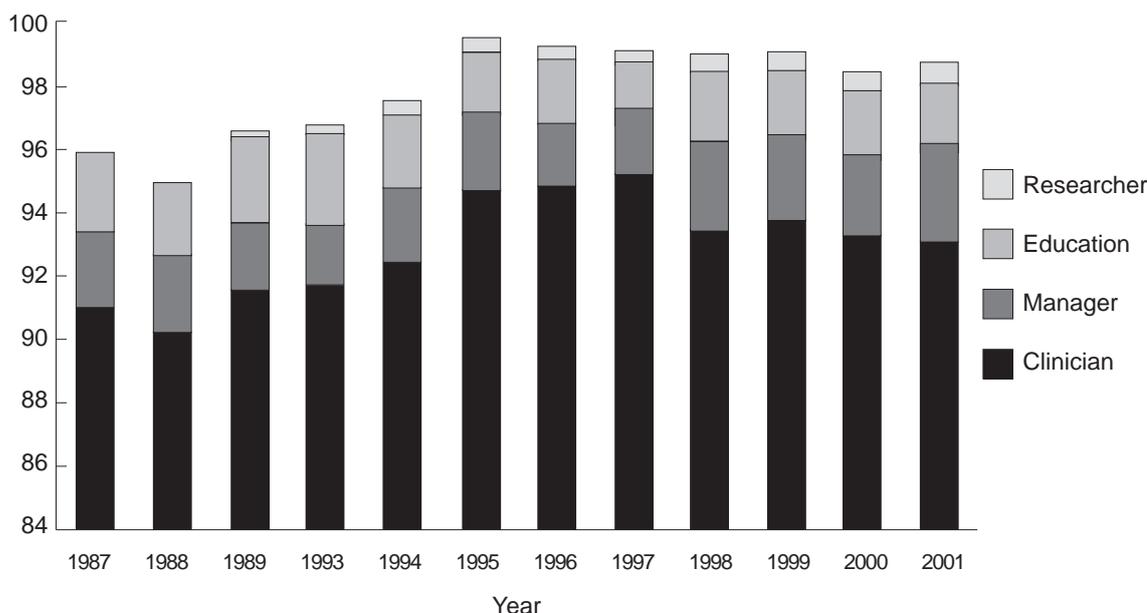
**Sector of work** The percentage of respondents working in their own practices has changed minimally since 1987 (28.4%) (Table 2). In 2001, 29.6% of respondents reported working in their own practices. Half of all male respondents (50.1%) reported working in their own practice compared to less than one-quarter (23.5%) of female respondents in 2001. Of the respondents working in salaried positions, the majority are employed in the public sector; in 2001, 36% of physiotherapists were employed in public salaried positions compared to 21.7% employed in private salaried positions. The percentage of respondents working in the private sector has steadily increased since 1989 (48%). In 2001, 58.6% of respondents reported working in the private sector, an increase of 1.7% from 2000.

**Part time work** For the purposes of this study, part-time work is considered to be working less than 30 hours per week. In 1975, 26.8% of respondents reported working part-time; this figure increased to 39.4% in 2000 (Figure 5). Women accounted for 93.2% of the physiotherapists working part-time in 2000 but only 58.7% of full-time physiotherapists. In 2000, 6.8% of male physiotherapists were employed part-time.

## Discussion

This is the first study known to the authors providing in-depth analysis of the workforce data from the physiotherapy profession in Australia over an extended time period. The results indicate that the demographics and working patterns of physiotherapists in NSW have remained remarkably stable over the past 15 years. A major change has been that the proportion of male physiotherapists has steadily increased, as has the proportion of physiotherapists with postgraduate qualifications.

The physiotherapy labour force in NSW experienced substantial growth from 1975 to 1988. The growth rate has since declined dramatically. The explosive growth rate may have been the product of a wider recognition of physiotherapy within the community and an increase in opportunities for physiotherapists, including physiotherapists being primary care practitioners and an increased number of graduating physiotherapists. The growth of the physiotherapy labour force in NSW from 1981 to 1991 was 46%. The highest growth rates over this period were in Western Australia (67.4%), Northern Territory (66.7%) and Queensland (65.6%) (Australian Institute of Health and Welfare 1995). Although NSW experienced a slower growth rate than many other Australian states, more physiotherapists live in NSW than any other area in Australia. The number of new registrants, including new graduates, overseas physiotherapists and interstate physiotherapists, is an indication of the future of the profession. The number of new registrants increased by 69% from 1987 to 1995, but increased by only 1% from 1995 to 2002. There was a sharp increase in new registrants in 2000 and 2001, probably as a result of overseas and interstate physiotherapists registering in NSW in preparation for the Sydney Olympic Games. Notwithstanding these variations, the number of new



**Figure 3.** Proportion of respondents in each category for main job type.

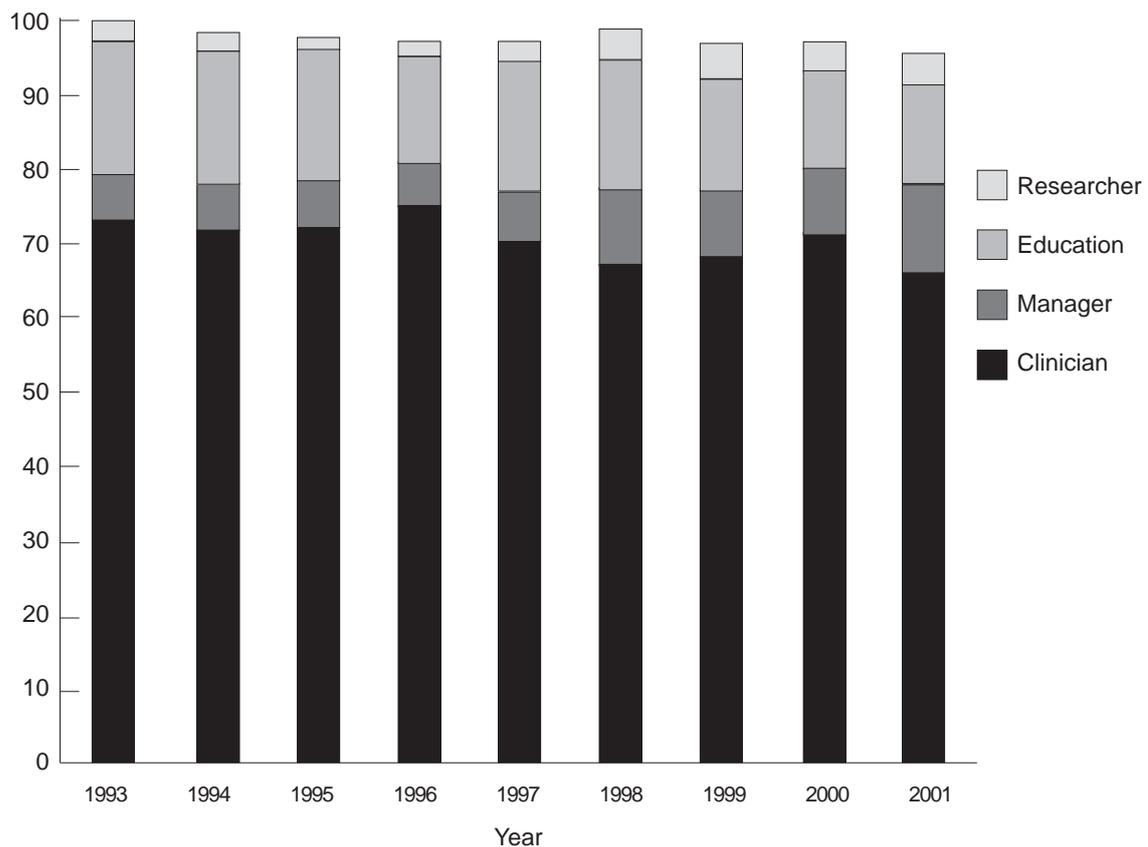
registrants has remained relatively stable since 1995, despite an increase in the number of tertiary places available in physiotherapy programmes. Between 1996 and 1999 the number of students completing undergraduate physiotherapy degrees in Australia has increased approximately 20% from 529 to 636 (Australian Institute of Health and Welfare 2000).

Physiotherapy was traditionally considered a female profession. This perception has since changed and, while physiotherapy remains female-dominated in numbers, it is to a far lesser extent. In 1975, 95% of physiotherapists in NSW were female, by 1988 this figure had decreased to 88.5% and currently women account for 76.5% of NSW physiotherapists. Similar findings have been reported in the Canadian province of Manitoba, where in 1980 women accounted for 84.3% of registered physiotherapists, decreasing to 81.6% by 1996 (Loveridge et al 1998). In the 1991 census, the Australian Capital Territory had the largest proportion of female physiotherapists (88.9%) while Victoria had the lowest proportion (75%). The increased proportion of male physiotherapists is most obvious in the gender statistics for the new registrants. Women accounted for 81% of new registrants in 1995, however, in 2000 only 66% of new registrants were female.

The modal age of physiotherapists has been a statistic of great interest as it tends to reflect the professional life expectancy of physiotherapists. Although the proportion of men within the profession continues to rise it appears that male physiotherapists are not remaining within the profession in large enough numbers to increase the modal age of male physiotherapists. Conversely, a core of female physiotherapists have remained within, or returned to, the profession over a longer period of time to gradually increase the modal age range of female physiotherapists. The Australian Institute of Health and Welfare determined the

national average age of physiotherapists to be 38.6 years (1998), with the average age for nurses slightly higher at 41.6 years (Australian Institute of Health and Welfare 2001). An ageing profession can have negative implications for the provision of physiotherapy services, with the average hours worked per week decreasing with age, especially for women.

Physiotherapy is a diverse field with many opportunities outside of pure clinical work. Despite the variety of types of work available, the majority of physiotherapists have remained within clinical settings in their main jobs. In the 1991 census, over 90% of physiotherapists in all Australian states stated that their main type of work was as clinicians. Surprisingly, the percentage of physiotherapists identifying themselves as clinicians in their main job has increased since 1988. Similar trends have been shown in Canada, with between 86% and 88% of registered physiotherapists in Manitoba reporting being employed in direct patient care in their main physiotherapy position (Loveridge et al 1998). The NSW figures are based on self-reporting and hence may be affected by the individual respondents' perceptions of their professional identity. The percentage of physiotherapists working as clinicians in their second job has declined, while proportionally more physiotherapists work as managers in their second job. In the public health system, physiotherapists working in managerial positions receive higher monetary rewards than clinicians, this may explain the increase in the proportion of physiotherapists working in managerial positions. While physiotherapists are taking second jobs in a wide range of fields it seems that they choose to identify themselves primarily as clinicians. There has been a decline in the proportion of physiotherapists working in education in both the main and second jobs figures. This is surprising, as more physiotherapy schools have opened in NSW during this time and the existing courses have expanded. This may in part be explained by the reduction in university funding and the



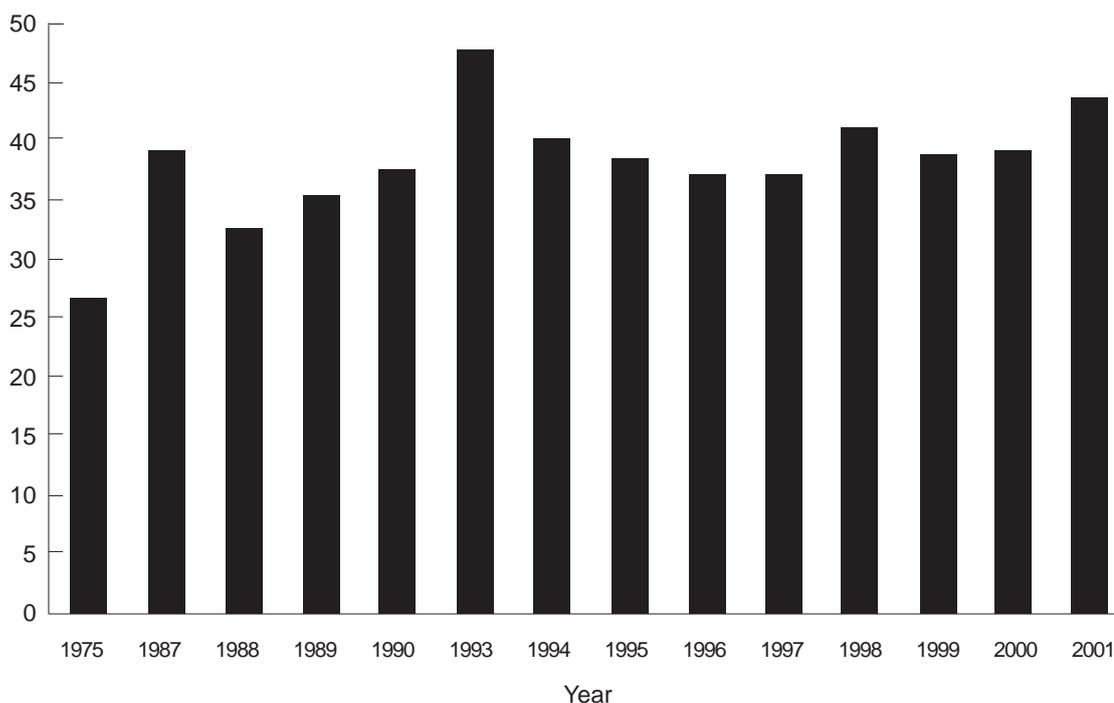
**Figure 4.** Proportion of respondents in each category for second job type.

significant reduction of absolute numbers of teaching staff during the early 1990s. It should be noted, however, that the absolute figures do show an overall increase in the number of physiotherapists identifying themselves as educators in either their primary or secondary position.

Physiotherapists overwhelmingly worked in public settings in 1975, with only 30.2% of physiotherapists employed in the private sector. Since then there has been a steady increase in the proportion of physiotherapists working in the private sector and in 1987 there were equal numbers of physiotherapists in each sector. Since then private sector growth has continued, so that in 2001, 58.6% of physiotherapists worked in the private sector. This growth has been predominantly in private practice, with 75% of the respondents in the private sector in 2001, working in a private practice. Private practice has also become more prevalent in Manitoba, where in 1990, 23% of registered physiotherapists worked in private practice, by 1996 this figure had increased to 31% (Loveridge et al 1998). The growth of private practice may confirm the findings of Gelmon and Williams (1983) who suggested that physiotherapists working in private practice are more satisfied with their work. The decrease in the proportion of physiotherapists working in the public health system may be related to the pay or career structure of the public health system. At present there is increasing pressure within the public health system to decrease expenditure and the sequalae is often a decrease in the number of allied health positions available.

Two-fifths of the NSW physiotherapy labour force are employed part-time in their main jobs. This is an interesting statistic which has not changed markedly since 1975 and is similar in all Australian states. In contrast part-time work grew 428% between 1978 and 1996 in Manitoba (Loveridge et al 1998). The Australian Bureau of Statistics (1996) reports that part-time work is more prevalent in the health workforce (35%) than in the total Australian workforce (27%). The proportion of physiotherapists in Australia working part-time (44.9%) is approximately equal to the proportion of registered nurses working part-time (44.7%). Part-time work is more prevalent for occupational therapists (54.2%) and speech pathologists (51.8%) than for physiotherapists or social workers (32.6%) (Australian Institute of Health and Welfare 2000). In 2000, 93.2% of the physiotherapists who worked part-time in their main jobs were female. Half of all employed female physiotherapists worked part-time in their main jobs in 2000, compared with only 12.5% of employed male physiotherapists. The higher proportion of female physiotherapists working part-time may be explained by a combination of two factors. Firstly, female physiotherapists may be using part-time employment as a way of combining raising a family and practising physiotherapy and secondly, females account for a large proportion of the physiotherapists nearing retirement who may no longer wish to work full-time.

In NSW, the majority of registered physiotherapists work in the metropolitan areas. This figure has remained relatively stable since 1987 at approximately 83%. The distribution of physiotherapists in metropolitan areas was similar in all



**Figure 5.** Proportion of respondents working part-time.

Australian states varying from 79.6% in Queensland to 86.8% in South Australia. In 1991 the number of physiotherapists per 100,000 population was calculated by the Australian Bureau of Statistics, the highest concentration of physiotherapists was in the Sydney region (47.2) and the lowest concentration was in the rural North Western region of NSW (20.1). The average number of physiotherapists per 100,000 in the population in metropolitan NSW was 43.8 and in rural NSW was 26.6. While the Sydney region continues to have the highest number of physiotherapists per 100,000 population and the North Western region continues to have the lowest, the gap between metropolitan NSW and rural NSW has shrunk (Australian Bureau of Statistics 2003). In 2001 there were 54.7 physiotherapists per 100,000 population in metropolitan NSW and 46.2 physiotherapists per 100,000 in rural NSW (Australian Bureau of Statistics 2003).

The proportion of physiotherapists with postgraduate qualifications in physiotherapy has risen dramatically since 1975. There have been numerous changes over this time that may have contributed to the fourfold increase. The training for physiotherapists has changed considerably with physiotherapy now being a four-year bachelor degree. Entry into undergraduate physiotherapy courses is available to only the most academically able of school leavers. It is probable that the people who meet these entry requirements will become bored without the challenge of further education. Other contributing factors are the increased number of postgraduate physiotherapy courses and the availability of a postgraduate loans scheme to fund further education.

The trends of professional inactivity are important to chart when interpreting attrition. The percentage of physiotherapists employed in fields other than physiotherapy

has oscillated between 3% and 5% since 1975. In 1975, NSW physiotherapists had the highest levels of inactivity in Australia with 32% of registered physiotherapists not working and 5% employed in other occupations (Department of Labour and Immigration 1975). There have been no identifiable trends in this statistic. This suggests that if any initiatives have been undertaken to reduce the rate of attrition from physiotherapy, none has been effective.

## Conclusion

The profile of the physiotherapy profession in Australia, and in particular in NSW, appears to have undergone little significant change over the past 15 years. The most significant change has been the number of male physiotherapists within the profession. However, there is evidence that while more men are graduating from physiotherapy, insufficient numbers are remaining within the profession to influence the male modal age. As workforce shortages emerge as a leading issue for the profession, it is imperative that all data sources are used so that we can best manage the future of the profession. The wealth of information stored in these survey reports should be made more readily available to the profession for data analysis, in a computerised database, so that further statistical examination can be undertaken. Many organisations would benefit from an in-depth analysis of this data, in order to prepare physiotherapists and educational institutes for the future demands of the profession.

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