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Teusner, Dana Nicole; Chrisopoulos, Sergio

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Australian dentist labour force 2003

Australian Research Centre for Population Oral Health, The University of Adelaide, South Australia.*

Introduction

This report presents results from the 2003 dentist labour force data collection and makes comparisons with data from previously published collections, 1994 and 2000. This report aims to identify labour force trends between 2000 and 2003, and examines the impact of those trends on the supply of dentist visits in Australia.

Methods

Data in this report came from the 2000 and 2003 national dental labour force data collections conducted by the Australian Institute of Health and Welfare's Dental Statistics and Research Unit (DSRU) with the assistance of the dental boards and the State and Territory health departments.¹

Data are routinely collected in all States and Territories on an annual basis in conjunction with registration renewal. However, in 2003 there was no collection in the Northern Territory. Consequently, results for the Northern Territory were based on data collected in 2002 and enumerated to 2003 registration numbers.

The questionnaire collected demographic characteristics and practice characteristics for the first three practice locations of each dentist. Practice characteristics included usual hours worked per week, which were summed across all reported practice locations to calculate average hours usually worked per week.

The number of practising dentists per State/Territory included those dentists working solely or mainly in the jurisdiction of registration. Those working mainly/only in another State/Territory or on leave for three months or longer were not included in the practising rate for that jurisdiction.

Full enumeration of dentists was calculated by weighting data to account for non-response. Non-respondents were assumed to have the same demographic and practice characteristics as respondents.

The estimated number of dental visits supplied was calculated by multiplying the age- and gender-specific mean visits supplied per annum by the number of practising dentists in those age and gender groups. Estimates of visits supplied per annum were drawn from the *Longitudinal Survey of Dental Practice Activity* (LSDPA), 2003–2004.²

Results

Response rates

In 2003, the overall response rate was 85 per cent. Response rates varied by State/Territory ranging from 57 per cent in the Northern Territory to 88 per cent in Victoria (Table 1). The 2003 response rate was slightly higher than the overall response rate for 2000 (81.3 per cent).

Numbers employed

There was a total of 11 404 dental registrations in 2003. Each State/Territory jurisdiction maintains its own registration listing and hence this number includes practitioners who are registered in more than one jurisdiction. The percentage of multiple registrations was estimated to be 4.2 per cent, while an additional 10.9 per cent of registered dentists were not participating in the labour force (on extended leave, overseas, not working, not working in dentistry, retired) (Table 2).

In 2003, there was an estimated 9678 practising dentists, representing an increase of 7.6 per cent from the year 2000 (8991 practising dentists). The rate of practising dentists per 100 000 population increased by 3.8 per cent, from 46.9 in 2000 to 48.7 in 2003.

Across jurisdictions, noticeable increases in the rate of practising dentists per population in percentage terms occurred in Tasmania (30.4 per cent), followed by the Australian Capital Territory (12.6 per cent), Queensland (9.1 per cent), the Northern Territory (7.2 per cent) and New South Wales (3.5 per cent). There were negligible changes in the remaining jurisdictions (Fig 1).

Demographic characteristics

Between 2000 and 2003, the number of practising female dentists increased by 23.7 per cent, from 2059 to 2546 female dentists. In 2003, female dentists comprised 26.3 per cent of the labour force, an increase from 22.9 per cent in 2000. This increase in the percentage of female practitioners occurred in all jurisdictions except the Northern Territory, where the percentage declined from 27.5 per cent in 2000 to 24.5 per cent in 2003 (Fig 2).

The average age of practising dentists remained relatively stable, increasing slightly from 44.4 years in 2000 to 44.6 years in 2003. In 2003, 12.6 per cent of practising dentists were aged between 20 and 29, 24.5 per cent between 30 and 39, 28.2 per cent between 40 and 49, 22.9 per cent between 50 and 59, and 11.7 per cent were 60 years or older (Fig 3)

*Prepared by Dana N Teusner and Sergio Chrisopoulos.

Table 1. Dentist labour force data collection response rate by State/Territory, 2003

	NSW	Vic	Qld	WA	SA	Tas	NT	ACT	Total
Total registered	4172	2568	2141	1086	915	175	93	254	11404
	Per cent								
Respondents	87.8	88.1	82.7	77.3	84.9	77.2	57.0	76.9	85.0
Non-respondents	12.2	11.9	17.3	22.7	15.1	22.8	43.0	23.1	15.0
Total	100	100	100	100	100	100	100	100	100

Note: There was no data collection in the Northern Territory in 2003. Results are based on data from the 2002 collection.

Table 2. Registered dentists by work status, gender and State/Territory, 2003

	NSW	Vic	Qld	SA	WA	Tas	NT	ACT	Australia	Total %
Male										
Practising in dentistry*	2494	1612	1365	617	728	117	51	148	7132	85.0
Mainly/only in another State	168	53	83	22	24	7	14	12	380	4.5
Not practising	457	141	153	38	65	6	6	12	877	10.5
Total	3119	1806	1601	677	817	130	71	172	8389	100.0
Female										
Practising in dentistry*	852	672	455	216	229	41	14	68	2546	84.5
Mainly/only in another State	33	14	22	11	8	1	6	8	102	3.4
Not practising	169	77	63	14	30	2	4	7	366	12.1
Total	1054	763	540	241	267	44	24	83	3014	100
Persons										
Practising in dentistry*	3346	2284	1820	833	957	158	65	216	9678	84.9
Mainly/only in another State	201	67	105	33	32	8	20	20	482	4.2
Not practising	626	218	216	52	95	8	10	19	1243	10.9
Total	4172	2568	2141	915	1086	175	93	254	11 404	100.0

Notes: (1) There was no data collection in the Northern Territory in 2003. Results are based on data from the 2002 collection. (2) Not all columns sum to totals due to rounding of weighted data. *Working mainly or solely in State/Territory of registration.

In 2003, both female and male practising dentists had a high percentage in the 40–49 year age group (28.5 and 27.6 per cent, respectively). However, a higher percentage of males were aged 50–59 (27.1 per cent) compared to females (11.2 per cent), while a higher percentage of females were aged 30–39 (35.2 per cent) compared to males (20.7 per cent) (Fig 4).

In 1994, the largest percentage of dentists were in the 30–39 year age group (30.7 per cent),³ and in 2000 and 2003 the largest percentage were in the 40–49 year age group (31.9 and 28.2 per cent, respectively). The increase in the percentage of practising dentists 50 years or older (from 28.6 per cent in 1994 to 31.9 per cent and 34.6 per cent in

2000 and 2003, respectively), also indicated the ageing of the labour force (Fig 3).

Practice characteristics

In 2003, the majority (82 per cent) of practising dentists worked in the private sector, 15.5 per cent worked in the public sector and 2.5 per cent worked in ‘other’ practice types (Table 3). The average hours usually worked per week in 2003 were 38.7 hours, a slight decrease from 39.3 hours per week in 2000. Female dentists worked fewer hours on average than their male counterparts. The average hours worked per week by female dentists was 33.8 and this had remained stable since 2000. For males the average was 40.5 hours, marginally less than the average in 2000, 41.1 hours.

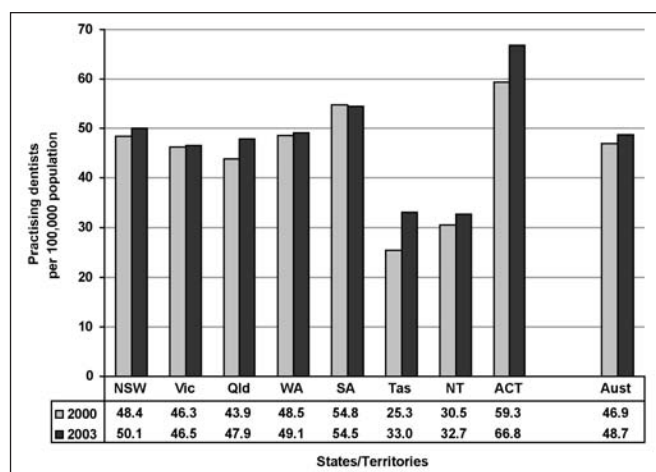


Fig 1. Practising dentists per 100 000 population by State/Territory, 2000 and 2003.

Note: There was no data collection in the Northern Territory in 2003. Results are based on data from the 2002 collection.

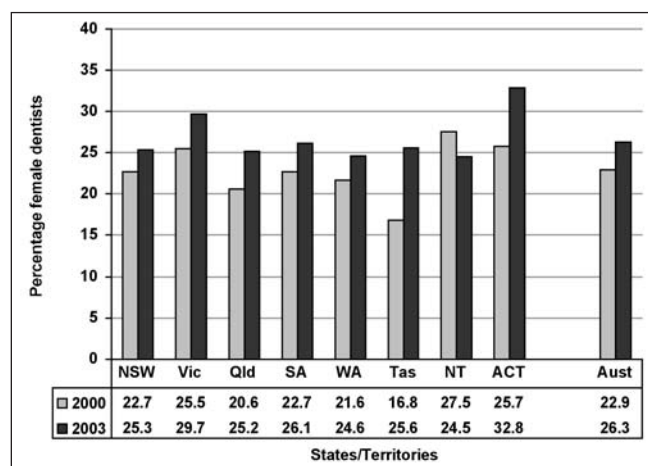


Fig 2. Percentage female practising dentists by State/Territory, 2000 and 2003.

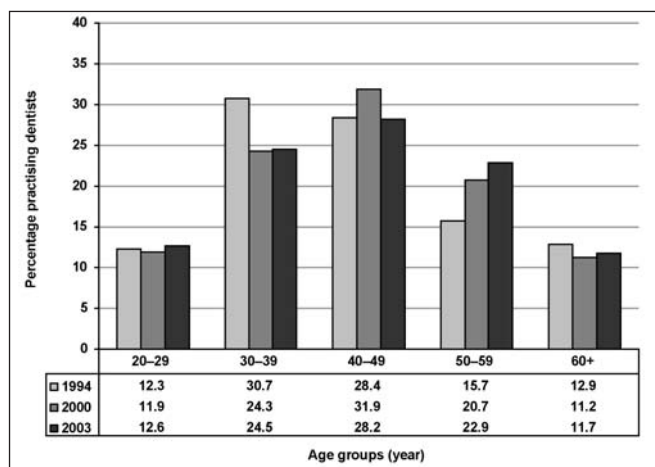


Fig 3. Percentage practising dentists by age group 1994, 2000 and 2003.

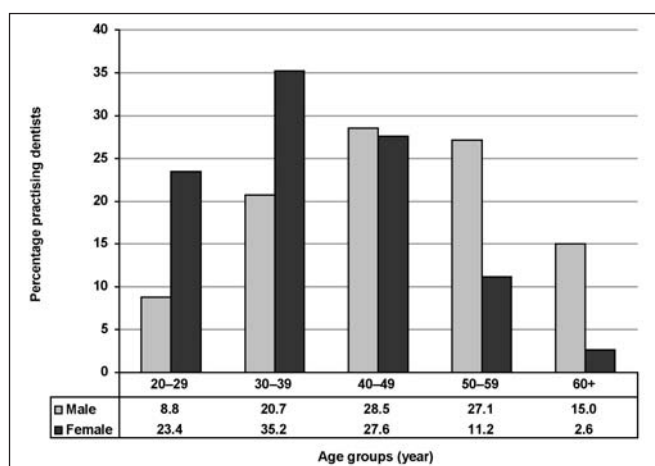


Fig 4. Percentage practising dentists by gender and age group, 2003.

Average hours per week also varied by age group. Dentists aged 45–49 years on average worked the longest week (40.9 hours) and those 70 years or older worked the shortest week (Fig 5).

Specialist labour force

In the period 2000–2003, the number of dental specialists had grown by 9.8 per cent, from 1030 specialists in 2000 to 1131 in 2003. The growth in the number of specialists per 100 000 population was slight, increasing from 5.4 specialists per 100 000 population in 2000 to 5.7 in 2003 (Table 4). In 2003, specialists represented 11.7 per cent of all practising dentists, a slight increase from 11.5 per cent in 2000. Specialists were predominantly male (83.1 per cent) and were older than the general dentist labour force (48.3 years, compared with 44.6 years for all dentists) (Table 4).

Table 3. Practising dentists by sector of main practice and State/Territory, 2003

	NSW	Vic	Qld	SA	WA	Tas	NT	ACT	Australia	Per cent
	Numbers of dentists									
Private sector	2826	1917	1404	603	817	134	47	191	7940	82.0
Public sector	364	351	368	216	137	22	18	25	1500	15.5
Other	155	16	49	14	3	1	—	—	239	2.5
Total	3346	2284	1821	833	957	157	65	216	9678	100.0

Note: There was no data collection in the Northern Territory in 2003. Results are based on data from the 2002 collection.

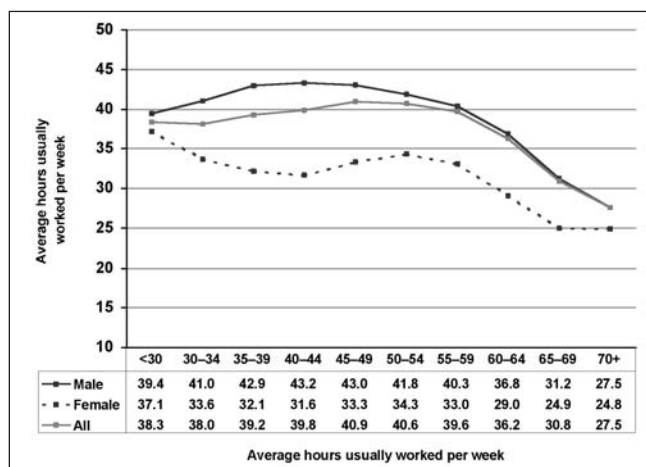


Fig 5. Average hours usually worked per week by age group and gender, 2003.

*Excludes respondents who did not provide hours worked per week.

Estimated dentist capacity to supply visits

The capacity of the dentist labour force to supply visits was estimated by multiplying the number of practising dentists by gender and age group by the corresponding mean dentist visits supplied per annum as reported by the LSDPA, 2003–2004.² The same mean visits supplied per annum (2003–2004) were used to estimate supply in 2000 and 2003. Consequently, the estimates vary from those previously published.⁴ The estimated capacity to supply visits per annum varied by gender and age group with the largest mean number of visits supplied by males in the 50–59 year age group and the lowest by females in the 30–39 year age group. The estimated capacity to supply dentist visits in 2000 was 24.8 million, increasing to 26.5 million in 2003. The growth in capacity was slightly less than the overall growth in dentists (6.8 per cent compared with the 7.6 per cent increase in the number of practitioners). The capacity to supply dentist visits per capita also increased in the same period from 1.297 visits per capita in 2000 to 1.333 in 2003, representing a 2.8 per cent increase (Table 5).

Discussion

Some caution should be taken when assessing the changes in numbers practising at the State/Territory level. There were some changes in data collection methods and subsequent estimation methods in some jurisdictions during the period 2000–2003. Nevertheless, there was substantial disparity in the growth experienced between the States and Territories. It is difficult to generalize about reasons for substantial growth in the dentist labour force in some States/Territories and no growth or decreases in other States/Territories. Analysis of the recruitment and wastage from the individual

Table 4. Practising dentists in specialist/restricted practice by State/Territory, 2003

	NSW	Vic	Qld	SA	WA	Tas	NT	ACT	Australia
Practising dental specialists	322	307	198	115	122	20	9	38	1131
Practising rate per 100 000 population	4.8	6.3	5.2	7.6	6.2	4.3	4.4	11.7	5.7
Percentage female	14.5	22.1	12.8	23.5	14.9	13.3	0.0	6.9	16.9
Average age	48.4	46.9	48.3	50.8	50.1	49.5	47.4	44.9	48.3

Note: There was no data collection in the Northern Territory in 2003. Results are based on data from the 2002 collection.

State/Territory registers would be required, and this in turn is dependent on the capacity to cross-reference registers, which is currently not possible.

Examination of the demographic changes in the period 2000–2003 show a continuation of trends observed in the 1990s. The percentage of female practising dentists continues to increase and a slight ageing of the labour force was also observed. The slight decrease in the average hours worked per week during the period 2000 and 2003 may in part be attributed to the increased percentage of female dentists as they work substantially less hours per week than male dentists. However, the average hours for male dentists also declined slightly in the same period.

The growth in the specialist labour force kept pace with population growth during the period 2000–2003. There was a slight increase in the practising rate of specialists per 100 000, from 5.4 specialists per 100 000 population in 2000 to 5.7 in 2003. As the average age of specialists (48.3 years) is higher in comparison to the entire dentist labour force (44.6 years) growth in the specialist labour force in the current decade will have to be larger than that observed between 2000 and 2003 in order to keep pace with the potentially higher attrition rate due to retirement, in comparison to the entire dentist labour force.

During the period 2000–2003, the dentist labour force grew by 7.6 per cent but the growth in capacity to supply was slightly less at 6.8 per cent. As the same mean number of visits supplied per annum by gender and age group were used for the estimation of capacity to supply in both 2000 and 2003, the lower growth in the capacity to supply can only be attributed to the demographic shifts in the labour force in that period (increasing percentage of female dentists and the ageing of the labour force). The lower growth in capacity to supply may be slight in percentage terms, however 0.8 per cent dental visits equates to approximately 75 dentists (based on the 2003–2004 average supply of 2783 visits per dentist).

It should be noted that the actual number of visits supplied per annum has not been stable and was declining throughout the 1990s.⁵ It is unlikely that the mean number of visits supplied per annum were similar in the two times examined, 2000 and 2003. If supply of visits had continued to decline in the early 2000s, as was observed in the previous decade, then estimates of visits supplied for 2000 would most likely be understated. Consequently, the growth in capacity to supply visits between 2000 and 2003 would have actually been less than estimated in this report.

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Address for correspondence:

Australian Research Centre for Population Oral Health
 AIHW Dental Statistical Research Unit
 School of Dentistry
 Faculty of Health Sciences
 The University of Adelaide
 Adelaide, South Australia 5005
 Phone: +61 8 8303 5027
 Email: dana.teusner@adelaide.edu.au

Table 5. Mean number of dentist visits supplied per annum, 2003-04 and estimated capacity to supply dental visits by gender and age group, 2000 and 2003

Age groups	Mean number of visits supplied per annum				Estimated visits supplied ('000s)			
	2003-04		2000		2003			Total
	Male	Female	Male	Female	Total	Male	Female	
20–29	2601	2537	1615.2	1144.2	2759.4	1630.8	1509.5	3140.3
30–39	2780	2158	3961.5	1640.1	5601.6	4094.9	1933.6	6028.5
40–49	3081	2377	6960.0	1450.0	8409.9	6251.3	1668.7	7920.0
50–59	3454	2082	5775.1	393.5	6168.6	6680.0	592.5	7272.6
60+	1861	2520	1777.3	123.5	1900.7	1988.7	168.8	2157.5
Total	20089.0	4751.2	24840.3	20645.8	5873.1	26518.9
Visits supplied per capita					1.297	1.334		

Source: Mean visits supplied per annum, LSDPA 2003-04, AIHW DSRU, 2006.