

# Geographic distribution of the Australian dental labour force, 2003

DN Teusner, S Chrisopoulos, DS Brennan





# DENTAL STATISTICS AND RESEARCH SERIES Number 37

# Geographic distribution of the Australian dental labour force, 2003

#### **DN Teusner**

Research Officer
Australian Research Centre for Population Oral Health
The University of Adelaide

#### **S Chrisopoulos**

Research Associate
Australian Research Centre for Population Oral Health
The University of Adelaide

#### **DS Brennan**

Senior Research Fellow Australian Research Centre for Population Oral Health The University of Adelaide

2007

Cat. no. DEN 168

This work is copyright. Apart from any use as permitted under the *Copyright Act 1968*, no part may be reproduced without prior written permission from the Australian Institute of Health and Welfare. Requests and enquiries concerning reproduction and rights should be directed to the Head, Media and Communications Unit, Australian Institute of Health and Welfare, GPO Box 570, Canberra ACT 2601.

This is a publication in the Dental statistics and research series published by the Australian Institute of Health and Welfare. A complete list of the Institute's publications is available from Institute's website <a href="http://www.aihw.gov.au">http://www.aihw.gov.au</a>.

The Australian Institute of Health and Welfare's Dental Statistics and Research Unit is located within the Australian Research Centre for Population Oral Health at The University of Adelaide. A complete list of the Centre's publications, including the Dental Statistics and Research Series and other related publications is available from ARCPOH, School of Dentistry, The University of Adelaide, South Australia 5005, or via the ARCPOH website <a href="http://www.arcpoh.adelaide.edu.au">http://www.arcpoh.adelaide.edu.au</a>

ISSN 1321-0254

ISBN 978 1 74024 734 4

#### Suggested citation

Teusner DN, Chrisopoulos S & Brennan DS 2007. Geographic distribution of the Australian dental labour force, 2003. Cat. no. DEN 168. Dental statistics and research series no. 37. Canberra: AIHW.

Australian Institute of Health and Welfare

**Board Chair** 

Hon. Peter Collins, AM, QC

Director

Penny Allbon

Published by the Australian Institute of Health and Welfare Printed by

# **Contents**

Co	ntent	S	iii
Sy	mbols	s	v
Ac	know	ledgments	vi
Ma	ain fir	n <b>dings</b>	
		Dental prosthetists	
		Dental therapists	
		Dental hygienists	
1	Into	oduction	
1			
	1.1	Dentists	
	1.2	Allied oral health practitioners	
_	1.3	Geographic distribution	
2		lanatory notes	
	2.1	Methods and response rates	
		Dentists	
		Dental prosthetists	8
		Dental therapists	9
		Dental hygienists	9
	2.2	Labour force estimates	10
		Geographic classification	11
	2.3	Glossary	11
3	Den	ntist labour force	12
	3.1	Overall numbers	13
	3.2	Demographic characteristics	14
	3.3	Practice characteristics	16
	3.4	Dental specialists	19
	3.5	Distribution by geographic classification	20
		State and territory	20
		Remoteness Areas	26
		Dentists by statistical division	33
4	Den	ntal prosthetist labour force	34
	4.1	Overall numbers	35
	4.2	Demographic characteristics	36
	4.3	Practice characteristics	38

	4.4	Distr	ibution by geographic classification	41
		State	and territory	41
		Rem	oteness Areas	46
5	Den	tal the	rapist labour force	48
	5.1	Over	all numbers	49
	5.2	Dem	ographic characteristics	50
	5.3	Pract	tice characteristics	51
	5.4	Distr	ibution by geographic classification	56
		State	and territory	56
		Rem	oteness Areas	60
6	Den	tal hy	gienist labour force	62
	6.1	Over	all numbers	63
	6.2	Dem	ographic characteristics	64
	6.3	Pract	tice characteristics	65
	6.4	Distr	ribution by geographic classification	69
		State	and territory	69
		Rem	oteness Areas	72
7	Disc	cussion	n	74
8	Refe	erence	s	78
Ap	pend	ix <b>A D</b> A1	ata tables  Dentist tables	
		A2	Dental prosthetists	97
		A3	Dental therapists	99
		A4	Dental hygienists	101
Ap	pend	ix <b>B E</b> x B1	camples of labour force questionnaires, 2003  Dentist labour force questionnaire	
		B2	Dental prosthetist labour force questionnaire	
		B3	Dental therapist labour force questionnaire	
		В4	Dental hygienist labour force questionnaire	
Δn	nend		stimated resident population state and territories, 2003	
			ublications from the national dental labour force data collections	
P	Ponu		cles	
		New	sletters	112
		Rese	arch Reports	113
		Repo	orts	113
Lis	t of ta	bles		114
Lis	t of fi	gures		116

# **Abbreviations**

ABS Australian Bureau of Statistics

ADPA Australian Dental Prosthetist Association
ADTA Australian Dental Therapist Association
AIHW Australian Institute of Health and Welfare

ARCPOH Australian Research Centre for Population Oral Health

ASGC Australian Standard Geographical Classification

DEST Department of Education, Science and Training

DHAA Dental Hygienist Association of Australia

DSRU Dental Statistics and Research Unit

ERP Estimated resident population

FTE Full-time equivalent

# **Abbreviations of places**

ACT Australian Capital Territory

Aust Australia

NSW New South Wales
NT Northern Territory

Qld Queensland

SA South Australia

Tas Tasmania Vic Victoria

WA Western Australia

# **Symbols**

% percentage

zero or rounded to zero

n number

. . not applicable

n.a. not available

# **Acknowledgments**

The authors wish to acknowledge the following organisations for their assistance with distribution and collection of the labour force questionnaire:

- Australian Dental Therapist Association (ADTA)
- Dental Hygiene Association of Australia (DHAA)
- Australian Dental Prosthetist Association (ADPA)
- State/Territory Dental boards
- State and Territory Health Departments

The authors would also like to acknowledge the contribution made by ARCPOH staff Alison McLean and Lorna Lucas, proof reader Jo Mason, and the AIHW's Publications unit.

Finally, the research team wishes to acknowledge the support of the responding dentists allied dental practitioners.

# **Main findings**

#### **Dentists**

- The number of dentist registrations in Australia increased from 9,592 in 1993 to 11,404 in 2003, an 18.9% increase.
- The number of employed practising dentists increased from 7,618 in 1993 to 9,678 in 2003 a 27% increase, representing an increase in the practising rate from 43.1 to 48.7 dentists per 100,000 population.
- Between 2000 and 2003:
  - the percentage of employed dentists that were female increased from 22.9% to 26.3%
  - the average age was stable, increasing marginally from 44.4 to 44.6 years
  - the average hours worked was also stable, decreasing slightly from 39.3 to 38.7 hours per week.

#### • In 2003:

- the average age of dentists differed by sex, male dentists (46.9 years) being older on average than their female counterparts (38.1 years)
- the average hours usually worked per week also differed by sex, males dentists working a longer week on average (40.5 hours) than female dentists (33.8 hours)
- the majority (83.6%) of dentists worked in the private sector, with 44.3% of all employed dentists working in solo practice or solo practice with assistants
- dentists working in solo practice and tertiary education institutions were on average older (49.1 and 47.5 years respectively), and those working as assistants were younger (36.2 years) than the national average (44.6 years).

#### • Across jurisdictions:

- the practising rate ranged from 32.7 dentists per 100,000 in the Northern Territory to 66.8 per 100,000 in the Australian Capital Territory
- the average age ranged from 44.3 years in Queensland and the Australian Capital Territory to 46.9 years in Tasmania
- the percentage of employed dentists that were female ranged from 21.6% in the Northern territory to 31.3% in the Australian Capital Territory
- dentists in New South Wales worked on average the longest hours per week
   (40.1 hours) and dentists in South Australia worked the shortest (37.0 hours)
- Northern Territory and South Australia had the highest percentage of employed dentists working in the public sector (24.3% and 21.8% respectively) and Western Australia and the Australian Capital Territory had the lowest (10.5% and 9.3% respectively).

#### Across Remoteness Areas:

- over three-quarters (78.4%) of all employed dentists worked in 'Major City' areas
- dentists in 'Remote' areas were on average younger (41.8 years) and those in 'Outer Regional' areas were older (45.9 years) than the national average (44.6 years)
- females comprised 20.0% of employed dentists in 'Outer Regional' areas compared to 27.3% in 'Major City' areas
- the average working week was similar across Remoteness Areas, ranging from 38.0 hours in 'Remote' areas to 39.2 hours in 'Outer Regional' areas
- the percentage of dentists working in the public sector varied from 16.0% in 'Major City' areas to 20.7% in 'Outer Regional' areas.

# **Dental prosthetists**

#### • Between 2000 and 2003:

- the number of employed prosthetists remained relatively stable, increasing slightly from 872 in 2000 to 878 in 2003
- the practising rate decreased marginally, from 4.6 prosthetists per 100,000 population to 4.5 prosthetists in 2003.

#### • In 2003:

- there were 1,057 registered dental prosthetists, of whom 878 were practising in dental prosthetics
- most prosthetists were male (90.8%); the average age of employed prosthetists was 48.7 years and they worked on average 43.0 hours per week
- the majority (85.3%) of prosthetists were self-employed.

#### • Across jurisdictions:

- the practising rate ranged from 1.9 dentists per 100,000 population in South Australia to 10.4 dentists in Tasmania
- the average age of prosthetists ranged from 45.9 years in Western Australia to 52.7 years in the Australian Capital Territory.

#### Across Remoteness Areas:

- the practising rate ranged from 4.8 prosthetists per 100,000 in 'Inner Regional' areas to 1.2 prosthetists per 100,000 in 'Remote' areas
- prosthetists in 'Remote' areas were on average older (54.3 years) and worked shorter hours (40.3 hours) than the national averages of 48.7 years and 43.0 hours.

# **Dental therapists**

- Between 2000 and 2003:
  - the number of employed the rapists decreased by 5.7%, from 1,317 the rapists in 2000 to 1,242 in 2003
  - the practising rate decreased from 6.9 therapists per 100,000 population in 2000 to 6.3 therapists in 2003.

#### • In 2003:

- there were 1,560 registered dental therapists, of whom 1,242 were practising in dental therapy
- only 1.4% of therapists were male
- the average age of employed therapists was 40.3 years, and on average they worked 29.4 hours per week
- the majority (72.6%) of therapists worked in the school dental service, only 12.4% working in private sector practices.

#### Across jurisdictions:

- the practising rate ranged from 2.9 therapists per 100,000 population in New South Wales to 16.1 therapists per 100,000 in Western Australia
- the average hours usually worked ranged from 36.8 hours in the Northern Territory to 26.6 in Western Australia.

#### Across Remoteness Areas:

- the highest practising rate (8.5 therapists per 100,000) was in 'Outer Regional' areas and the lowest (5.5 therapists) in 'Major City' and 'Remote' areas
- therapists practising in 'Remote' areas were on average younger (31.4 years) and worked slightly longer hours (31.9) than therapists in more populated areas.

# **Dental hygienists**

- Between 2000 and 2003:
  - the number of employed hygienists increased by 38.7% from 416 in 2000 to 577 in 2003
  - the practising rate increased from 2.2 hygienists per 100,000 population to 2.9 in 2003.

#### • In 2003:

- there were 717 registered dental hygienists, of whom 577 were practising as dental hygienists
- most hygienists were female (77.1%), with an average age of 36.1 years, and worked on average 29.5 hours per week

Three-quarters (74.5%) of hygienists worked in private general practice, 17.0% worked in private specialist practice and only 7.4% worked in public sector practice types.

#### • Across jurisdictions:

- the practising rate ranged from 9.2 hygienists per 100,000 population in the Australian Capital Territory to 1.3 hygienists per 100,000 in Tasmania
- the average hours usually worked varied by state/territory, hygienists in South Australia working the shortest week (26.0 hours) and hygienists in the Northern Territory working the longest week (32.5 hours).

#### Across Remoteness Areas:

- the practising rate ranged from 1.1 hygienists per 100,000 population in 'Outer Regional' areas to 3.8 hygienists in 'Major City' areas
- hygienists in 'Major City' areas were on average younger (36.3 years) and worked longer hours (29.9 hours) than hygienists in less populated areas.

## 1 Introduction

This publication presents national labour force statistics for registered dentists, dental prosthetists, dental therapists and dental hygienists. The data collected is part of a national data set agreed by the Australian Health Minister's Advisory Council to facilitate appropriate health planning and administration.

The primary aim of this publication is to report the total numbers employed/practising and describe the demographic and practice characteristics of the dental labour force. The main features of each occupational group are described in separate sections; more detailed information is provided in comprehensive tables found in Appendix A. Data from the 2003 collection are compared with data from previous collections.

#### 1.1 Dentists

Dentists aim to improve the oral health of patients by providing a range of preventive, diagnostic and restorative dental services. In Australia, in terms of the numbers employed, dentists dominate the dental labour force. They are registered in all states and territories and work in both the private and public sectors. When working in a wider oral health team, they are responsible for the supervision of dental hygienists and dental therapists.

# 1.2 Allied oral health practitioners

A dental prosthetist is responsible for the construction and fitting of dentures and sporting mouthguards. Dental prosthetists maintain, repair and reline dentures either by direct consultation with a patient or by referral from a dentist. They work in the private and public sectors and can establish independent practice.

Dental therapists perform a restricted range of clinical services predominantly on school-age children. They may also be employed in non-clinical roles, promoting and educating the community on oral health, and the principles of preventive dentistry. The school dental therapist is a member of a dental team and works under the supervision of a dentist to provide appropriate dental care for patients. In 2003 dental therapists could only be employed in the public sector, with the exception of Western Australia and Victoria, where the employment of dental therapists in private practice was allowed.

A dental hygienist performs a restricted range of clinical services under direct supervision of a dentist, who is responsible for patient diagnosis and prescribes the treatment to be carried out by the hygienist. Dental hygienists work predominantly in the private sector.

In recent years there has been the emergence of a new university based qualification, the Bachelor of Oral Health (BOH). Graduates of this course can practice as either a dental hygienist or dental therapist or both. In 2003 the number of graduates of these courses were relatively small but numbers of dual-qualified hygienists/therapists are

expected to grow rapidly throughout the current decade. The work patterns of these dual-qualified allied dental professionals is currently unknown, and there was no early indication in the data presented in this report of whether BOH graduates will be evenly split across the two professions, practice in both simultaneously or favour movement into one area over the other.

In addition to the establishment of new BOH courses, there have been legislative changes expanding the scope of practice of dental therapists. Prior to 2000, dental therapists could work in the private sector only in Western Australia; however, at the time of publication (2007), dental therapists could work in the private sector in all states and territories except for New South Wales. Another recent legislative change, occurring in Victoria, increased the age limit of patients to whom therapists can provide services from 18 years to 25 years.

# 1.3 Geographic distribution

A key theme of this publication is the geographic distribution of the dental labour force; hence, there is a focus on describing the labour force and examining the trends across state/territory jurisdictions and regions defined by remoteness.

Problems associated with rural and remote health have been widely recognised, and the state of health in rural Australia remains poor and a health policy challenge (Humphreys et al. 2002). A range of health and health service differences has been identified by geographic location in Australia (AIHW 2005b). For example, life expectancies were highest in Major Cities and lowest in Very Remote areas. Overall, health professionals were less prevalent in regional and remote areas compared to Major Cities, including lower supplies of medical GPs and specialists, registered nurses, pharmacists, podiatrists, physiotherapists and occupational therapists. Distance has been proposed as a significant environmental factor influencing health in Australia, through the association of remoteness and distributional inequity in health services (Brownlea & Taylor 1984). Both currently and historically an imbalance in availability of general health services has been noted between urban and rural locations in Australia, with rural areas characterised by fewer facilities and a shortage of health personnel (Humphreys 1988).

Consistent with general health, the uneven distribution of the dental labour force appears related to variations in oral health status and access to dental services across regions. For example, dentate adults from remote locations were found to be less likely to have made a dental visit in the previous 12 months and most likely to report that they usually visit for a dental problem than persons from rural or urban locations. There is also evidence of variations in service provision; for example, patients from remote locations recorded the lowest percentage receiving preventive services and the highest percentage receiving oral surgery (extraction) (Stewart et al 1998).

Hence, describing the geographic distribution of the dental labour force may assist in understanding variations in oral health status, access and service provision.

# 2 Explanatory notes

Each state and territory dental board conducts an annual renewal of dentist and allied dental practitioner registration. With some exceptions the labour force questionnaire was distributed in conjunction with registration renewal with the assistance of the dental boards and the state health departments. In 2003 some state/territory dental boards did not register some groups and hence the labour force survey was distributed via a direct mail out with the assistance of the relevant professional associations.

Examples of the 2003 dental labour force questionnaires are given in Appendix B.

Data were collected on demographic characteristics, practice status, practice characteristics at up to three locations and hours worked. Questions relating to practice activity asked practitioners to report on their 'usual practice activity' and did not define a specific time period. Not all questionnaires distributed were consistent with the national data set; differences in data items by state/territory are cited in the notes of the relevant tables.

The specific timing of data collection varied between the states/territories depending on timing of the registration renewal process conducted by the dental boards.

Not all groups were collected in all states/territories each year. Where possible, state/territory data from the previous or following year has been used to complete national data sets for a given year. When this has occurred, the age of practitioners were adjusted to be consistent with the year of the data reported. Consequently, some estimates may differ from previously published results.

As the scope of the labour force data collections includes all registered practitioners (population census) and is not a sample survey, standard errors and 95% confidence intervals do not apply.

# 2.1 Methods and response rates

#### **Dentists**

The scope of the data presented is all dental practitioners registered with the dental board in each state and territory of Australia. Some dental boards did not include all registered practitioners in the survey, as some practitioners registering for the first time were not forwarded a questionnaire. There was no collection in the Northern Territory in 2003; results presented are based on the 2002 data enumerated to the total number registered in 2003.

The response rate to the 2003 dentist labour force survey represented 85.1% of total dentist registrations in all states and territories, which was a marginal improvement on the response rate achieved in 2000 (81.3%). Response rates are estimates as some practitioners maintain registrations in more than one state or territory but only completed a questionnaire in one state/territory. The incidence of this occurrence is

unknown as currently it is not possible to cross-reference records across states and territories.

The method of data collection and the resulting response rates varied by state/territory and are summarised below (Table 1).

Table 1: Dentist data collection details by state/territory, 2003

State/ territory	Timing	Mail-out type	Reminder mail-out	Response rate (per cent)
NSW	July-Sept	Surveyed with registration renewal	No	87.8
Vic	Nov-Dec	Surveyed with registration renewal	No	88.1
Qld	Jun–Jul	Surveyed with registration renewal	No	82.7
WA	Nov-Dec	Direct mailed by DSRU AIHW	Yes	77.3
SA	Jul-Sept	Surveyed with registration renewal	No	84.9
Tas	Nov-Dec	Surveyed with registration renewal	No	73.7
ACT	Jun-Jul	Surveyed with registration renewal	No	76.9
NT (2002)	Nov-Dec	Surveyed with registration renewal	No	57.0

#### Notes

- 1. There was no Northern Territory collection in 2003; results were based on data from the 2002 collection.
- 2. Follow-up mail-out consisted of one reminder mailing of the survey questionnaire approximately 4 weeks after initial mail-out.

#### **Dental prosthetists**

The scope of the data presented is all dental prosthetists registered with the dental board in each state and territory of Australia. There was no collection in Western Australia in 2003; results presented are based on the 2002 data. Dental prosthetists were not permitted to practise in the Northern Territory.

The overall response rate to the dental prosthetist labour force survey was 66.1%, which was an improvement on the response rate achieved in 2000 (59.0%). The method of data collection and the resulting response rates varied by state/territory and are summarised below (Table 2).

Table 2: Dental prosthetist data collection details by state/territory, 2003

State/ territory	Timing	Mail-out type	Reminder mail-out	Response rate (per cent)
NSW	Nov-Dec	Direct mailed by NSW Health	Yes	59.9
Vic	Nov-Dec	Surveyed with registration renewal	No	71.6
Qld	Apr–Jul	Surveyed with registration renewal	No	65.0
WA (2002)	Nov-Dec	Direct mailed by AIHW DSRU	Yes	50.0
SA	Jun-Jul	Surveyed with registration renewal	No	77.1
Tas	Nov-Dec	Surveyed with registration renewal	No	88.7
ACT	Jun-Jul	Surveyed with registration renewal	No	38.9
NT	_	_	_	_

#### Notes

- 1. There was no Northern Territory collection because dental prosthetists were not permitted to practise in the Northern Territory.
- 2. There was no Western Australian collection in 2003; results were based on data from the 2002 collection.
- 3. Follow-up mail-out consisted of one reminder mailing of the survey questionnaire approximately 4 weeks after initial mail-out.

#### **Dental therapists**

In 2003 dental therapists were not registered in all states and territories. In those states with no formal registration, members of the Australian Dental Therapist Association (ADTA) or employees of public dental services were surveyed. The survey scope was estimated to be 86% of the Australian dental therapist labour force. Of those surveyed an overall response rate of 72.6% was achieved, which was the same response rate achieved in the 2000 collection. The method of data collection and the resulting response rates varied by state/territory and are summarised below (Table 3).

Table 3: Dental therapist data collection details by state/territory, 2003

State/ territory	Surveyed	Timing	Mail-out type	Reminder mail-out	Response rate (per cent)
NSW	ADTA members	Nov-Dec	Direct mailed	Yes	84.7
Vic	Registered therapists	Nov-Dec	Surveyed with registration renewal	No	84.3
Qld	ADTA members	Nov-Dec	Direct mailed	No	52.7
WA	Registered therapists	Nov-Dec	Direct mailed	Yes	75.1
SA	Registered therapists	Jun–Jul	Surveyed with registration renewal	No	89.1
Tas	Registered therapists	Nov-Dec	Surveyed with registration renewal	No	84.1
ACT	Therapists employed by ACT Dental Services	Nov-Dec	Direct mailed	Yes	80.6
NT (2002)	Registered therapists	Nov-Dec	Surveyed with registration renewal	No	63.2

#### Notes

- 1. There was no Northern Territory collection in 2003; results were based on data from the 2002 collection.
- 2. Follow-up mail-out consisted of one reminder mailing of survey questionnaire approximately 4 weeks after initial mail-out.
- 3. Registration of dental therapists/hygienists in New South Wales and Queensland commenced in 2005.
- 4. Response rates include respondents from dual-registered hygienists and therapists.

### **Dental hygienists**

In 2003 dental hygienists were not registered in all states and territories. In New South Wales and Queensland the survey was distributed to all members of the Dental Hygiene Association of Australia (DHAA). Estimation of survey scope is not possible as DHAA membership coverage is unknown. An overall response rate of 73.8% was achieved, which was very similar to the response rate was in achieved in the 2000 collection (73.9%). The method of data collection and the resulting response rates varied by state/territory and are summarised below (Table 4).

Table 4: Dental hygienist data collection details by state/territory, 2003

State/ territory	Surveyed	Timing	Mail-out type	Reminder mail-out	Response rate (per cent)
NSW	DHAA members	Nov-Dec	Direct mailed	Yes	66.7
Vic	Registered hygienists	Nov-Dec	Surveyed with registration renewal	No	85.4
Qld	DHAA members	Nov-Dec	Direct mailed	Yes	67.7
WA	Registered hygienists	Nov-Dec	Direct mailed	Yes	68.5
SA	Registered hygienists	Jun–Jul	Surveyed with registration renewal	No	81.5
Tas	Registered hygienists	Nov-Dec	Surveyed with registration renewal	No	66.7
ACT	Registered hygienists	Jun–Jul	Surveyed with registration renewal	No	71.1
NT (2002)	Registered hygienists	Nov-Dec	Surveyed with registration renewal	No	62.5

#### Notes

- 1. There was no Northern Territory collection in 2003; results were based on data from the 2002 collection.
- 2. Follow-up mail-out consisted of one reminder mailing of survey questionnaire approximately 4 weeks after initial mail-out.
- 3. Registration of dental therapists/hygienists in New South Wales and Queensland commenced in 2005.
- 4. Response rates include respondents from dual-registered hygienists and therapists

#### 2.2 Labour force estimates

The figures produced from the dental labour force survey are estimates. Not all practitioners responded to the survey and not all responding practitioners answered all questions. Survey data were weighted to the available registration information. For those groups not registered, data were weighted to other relevant information. For dental therapists data was weighted to the total number employed by public dental services, and for dental hygienists data was weighted to the total number listed with the Dental Hygiene Association of Australia (DHAA).

Additional estimation has been made for survey respondents who provided incomplete labour force information on the basis that survey non-respondents had the same characteristics as respondents.

Estimation of the number of employed dentists and allied dental practitioners in each state and territory included those employed solely or mainly within that state/territory. Practitioners who were employed solely or mainly in another state/territory or on leave for 3 months or longer were excluded from tables of employed dentists.

The estimation process may overestimate the numbers of practitioners if non-respondents are more likely to be those with multiple registrations, working overseas, no longer working as dentists or retired. The survey error will be greater in the Northern Territory, which had a higher proportion of dentists registered in other jurisdictions and a lower proportion of dentists employed solely in that territory.

The practising rate per 100,000 population was calculated by dividing the estimated number of employed practitioners by the population divided by 100,000; estimated resident population figures for 2003 are cited in Appendix C.

Practitioners were asked to report the hours usually worked per week, and total hours per week were calculated by summing hours worked at all reported practice locations.

Data for dental hygienists in Queensland and New South Wales were weighted to the total number of DHAA memberships in those states. Membership coverage is not known but it is less than 100%; hence, the resulting estimated numbers employed are likely to be underestimated.

Data for dental therapists in New South Wales, Queensland and the Australian Capital Territory were weighted to the total number employed in the public dental services. As a result of this weighting method, underestimation of the numbers is possible, as the public dental service was the primary employer of dental therapists in those states. However substantial underestimation is considered to be unlikely.

Rounding of estimates may result in rows and columns not adding up to totals in some tables.

#### Geographic classification

The Remoteness Area Structure of the Australian Standard Geographical Classification (ASGC), produced by the Australian Bureau of Statistics, has been used in these tables to present regional data for dental practitioners. It is based on the Accessibility/Remoteness Index of Australia (ARIA+), in which the remoteness index value of a point is based on the physical road distance to the nearest town or service in each of five population size classes based on the 2001 Census of Population and Housing. These classes are:

- Major Cities of Australia
- Inner Regional Australia
- Outer Regional Australia
- Remote Australia
- Very Remote Australia.

# 2.3 Glossary

Survey scope The percentage of members of a given labour force that were

Number of FTE practitioners per 100,000 estimated resident

sent a questionnaire

Practising rate Number of practitioners practising per 100,000 estimated

resident population

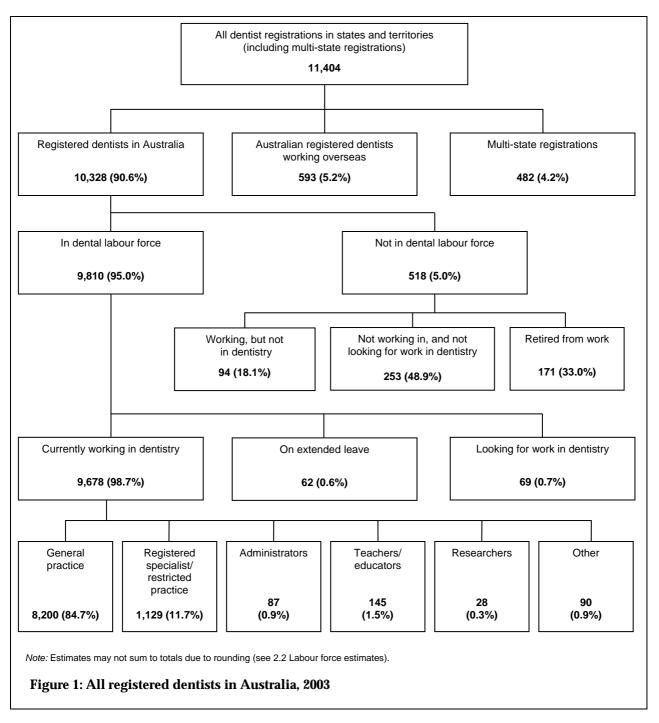
Full-time equivalent

population

(FTE) rate

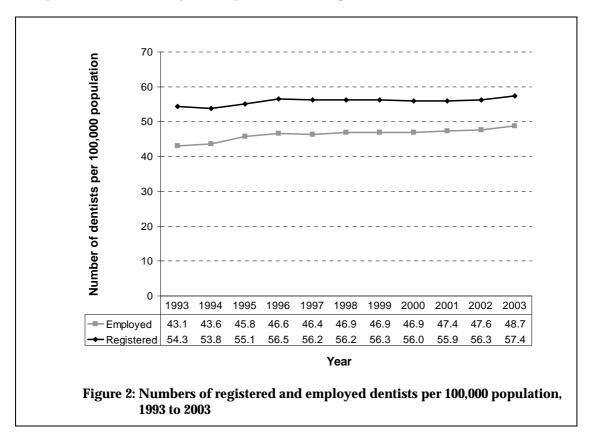
# 3 Dentist labour force

The estimates reported in this section relate to the dentist labour force. The data collection was conducted in all states and territories between June and December 2003. The exception to this was data from the Northern Territory, which was collected in late 2002 (see Table 1). Where possible, estimates from previous reports have been provided to highlight changes over time.



#### 3.1 Overall numbers

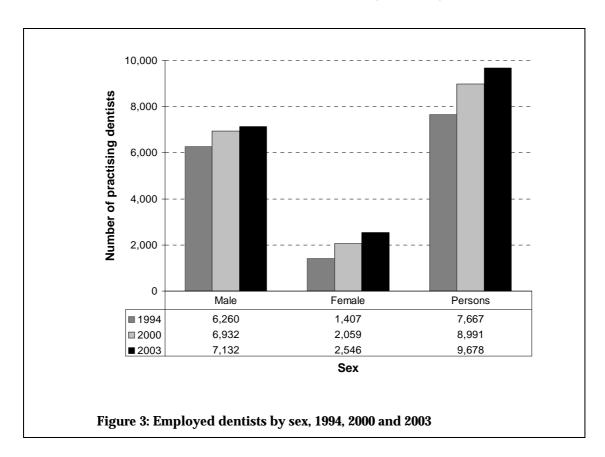
- Over the decade to 2003 the total number of dentist registrations increased from 9,592 in 1993 to 11,404 in 2003, an overall increase of 18.9%. Allowing for multiple registrations and those not employed in the labour force, the estimated number of employed practising dentists increased from 7,618 in 1993 to 9,678 in 2003, an overall increase of 27.0% over the 10-year period (Figure 1).
- The rate of dentists per 100,000 population provides a better estimate of the change in the supply of dentists because changes in the size of the population are taken into account. Using this rate the number of dentist registrations increased from 54.3 to 57.4 dentists per 100,000 population between 1993 and 2003, a 5.7% increase. In terms of employed practising dentists the practising rate increased from 43.1 to 48.7 dentists per 100,000 population, a 12.9% increase between 1993 and 2003 (Figure 2).
- Of the total registrations in 2003, an estimated 593 dentists were practising overseas, 482 were registered in more than one jurisdiction and a further 518 were no longer in the dental labour force (Figure 1, Table A.1).
- In 2003 the dentist labour force comprised 9,810 dentists, a 7.9% increase since 2000.
- Of those in the dentist labour force 9,678 were employed/practising in dentistry,
   62 were on extended leave and 69 were looking for work in dentistry.
- The majority of the employed dentists were working in clinical practice, comprising 8,200 general practitioners and 1,129 registered dental specialists/restricted practice practitioners (Figure 1).



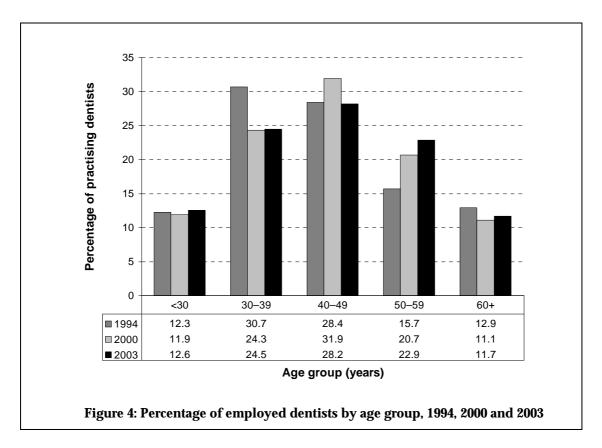
# 3.2 Demographic characteristics

This section presents demographic characteristics of employed dentists for the years 1994, 2000 and 2003. These characteristics include number, age, sex and hours worked per week.

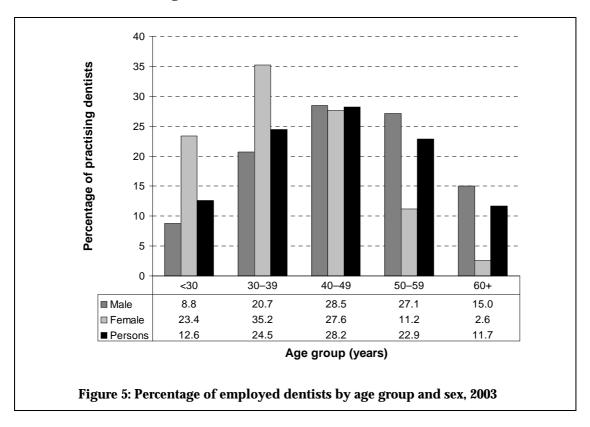
- The number of employed dentists increased from 7,667 in 1994 to 9,678 in 2003, a 26.2% increase over the 9-year period (Figure 3).
- The percentage of female employed dentists increased from 18.4% in 1994 to 22.9% in 2000, and continued to increase to 26.3% in 2003. The number of females almost doubled between 1994 and 2003, increasing by 80.9%, from 1,407 in 1994 to 2,546 in 2003. This compares to a 13.9% increase in the number of males during the same period, from 6,260 in 1994 to 7,132 in 2003.
- The increase in the percentage of employed female dentists parallels the increase in female dentistry graduates; in the last decade the percentage of female graduates has increased from 36.1% in 1993 to 47.8% in 2003 (Table A.2).



- Between 2000 and 2003 the average age of employed dentists remained relatively stable, increasing marginally from 44.4 years in 2000 to 44.6 years in 2003.
- The increase in the percentage of dentists aged 50 years and over seen between 1994 and 2000 (from 28.6% to 31.8%) continued to 2003, increasing to 34.6%. Combined with a decrease in the percentage of dentists aged less than 40 years (from 47.1% in 1994 to 43.0% in 2003), the observed pattern of an ageing dentist labour force continued (Figure 4).



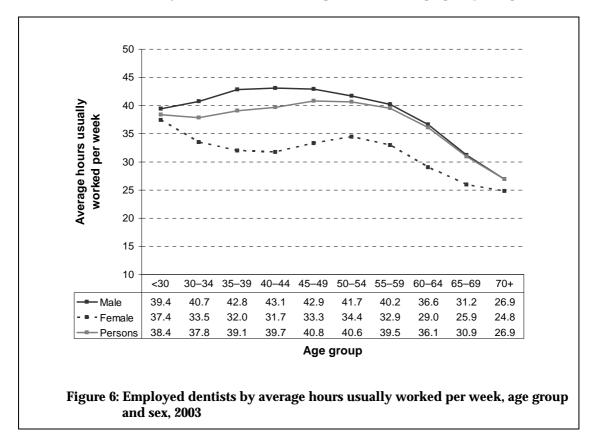
• Female dentists tended to be younger than their male colleagues. In 2003 over half (58.6%) of all females were aged less than 40 years compared to less than one-third (29.4%) for males (Figure 5) (Table A.3).



#### 3.3 Practice characteristics

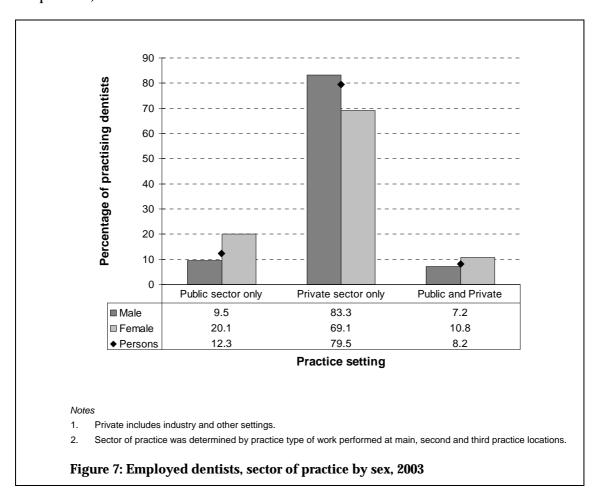
This section presents data on the practice types and sectors of employed dentists and practice characteristics, including hours usually worked, by age and sex.

- The average working week of employed dentists remained relatively steady between 2000 and 2003. In 2003 dentists worked on average 38.7 hours per week, compared to 39.3 hours in 2000.
- In 2003, 87.3% of total hours worked were dedicated to direct patient care (33.8 hours per week) (Table A.5).
- Males worked on average 6.7 hours more per week than their female colleagues (Figure 13). This disparity in weekly hours was apparent across all age groups with the exception of the under 30 years and 70 and over years age groups, where the difference was 2.0 and 2.1 hours respectively (Figure 6).
- Across age groups the average hours worked per week was approximately 38 hours in the younger dentists, peaking at around 41 hours for those aged between 40 and 55 years and then declining across older age groups (Figure 6).

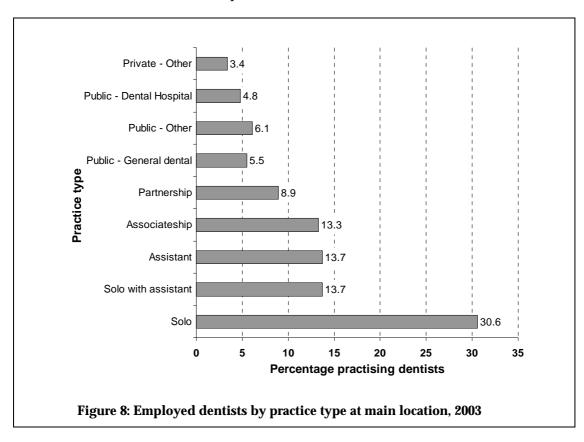


- In 2003 the majority (83.6%) of employed dentists worked in the private practice setting (includes industry and other settings) (Table A.5).
- Female dentists comprised just under one-quarter (23.3%) of dentists in private practice compared to just under half (41.6%) in public practice (Table A.5).

- Age and hours worked varied by practice type and patterns differed by sex. Male dentists in private practice tended to be older (47.0 years) and work longer hours (40.9) than their male colleagues in public practice settings (46.2 years and 37.2 hours respectively) (Table A.5).
- In contrast there was little difference in the average age of female dentists across settings (38.1 years in private and 38.4 years in public settings) and, conversely to male dentists, female dentists worked slightly longer hours in public settings (35.3 hours) than in private settings (33.2 hours). These differences were also reflected in the proportion of dentists working part-time. Under half of females in private practice (44.1%) worked part-time compared with less than one-third in public settings (30.8%). This compares to 19.1% for males in private settings and 25.6% in public settings (Table A.5).
- In 2003 three-quarters (74.4%) of all employed dentists reported working at one location only; one-fifth (19.4%) worked in two locations and the rest (6.3%) reported working in three or more locations.
- Of all employed dentists, 79.0% practised solely in the private sector and 13.0% practiced solely in the public sector, with the remaining 8.1% working in both sectors (Figure 7). This, however, does not take into account the provision of services to public patients by the private sector (i.e. public sector voucher schemes which reimburse private sector dentists for providing dental care to public patients).

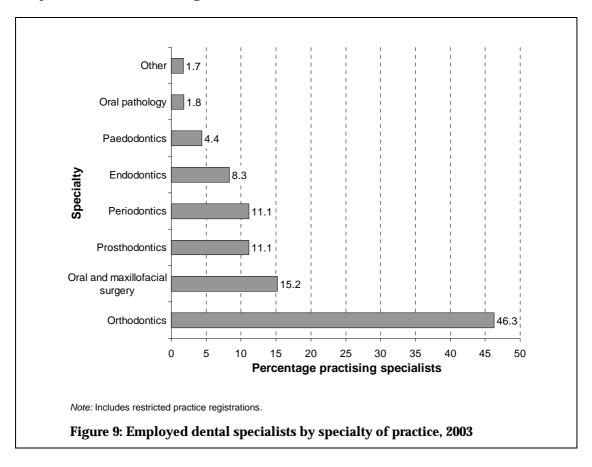


- In terms of their main practice 44.3% of employed dentists worked in a solo practice or solo practice with assistant, 22.2% worked in associateships or partnerships, 13.7% worked as assistants, 4.3% worked in other private settings, and the remaining 15.5% were employed in public settings (Figure 8).
- Dentists working in solo practice and in tertiary education institutions tended to be older than those in other settings. Dentists working in solo practice were on average 49.1 years of age, and in tertiary education institutions 47.5 years. In contrast dentists working as assistants in the private sector were on average 36.2 years of age (Table A.4).
- Employed male dentists predominantly worked in solo practice or solo practice with assistant (50.8%), in an associateship (14.9%) or in the public sector (13.0%). In contrast, a lower percentage of female dentists tended to work either in solo practice or solo practice with assistant (25.9%), with higher percentages working as an assistant (25.8%) or in the public sector (26.0%) (Table A.9).



# 3.4 Dental specialists

- Between 2000 and 2003 the number of employed dental specialists increased by 9.6% from 1,030 in 2000 to 1,129 in 2003 (Table A.6).
- In 2003 dental specialists comprised 11.7% of all employed dentists, a similar percentage as in 2000 (11.5%) (Table A.6).
- Compared to all employed dentists, dental specialists were on average older (48.3 years compared to 44.6 years for all dentists), had a higher percentage of males (83.1% compared to 74.7%) and worked longer hours (40.8 hours compared to 38.7 hours per week) (Table A.7, Table A.8).
- Nearly half of all dental specialists worked in the area of orthodontics (46.3%) followed by oral and maxillofacial surgery (15.2%), prosthodontics (11.1%) and periodontics (11.1%) (Figure 9).



# 3.5 Distribution by geographic classification

## State and territory

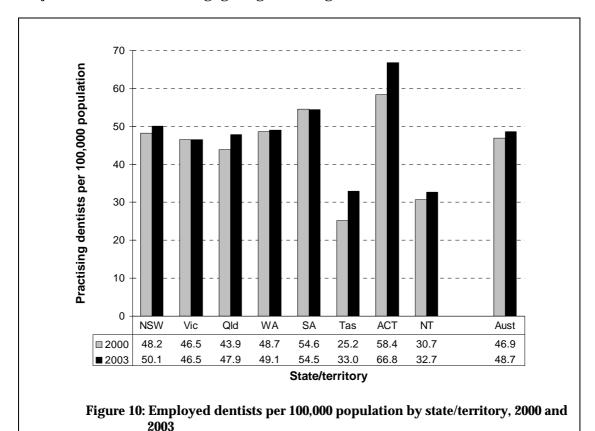
This section presents characteristics of dentists across jurisdictions. These include the number of dentists, their age and sex distribution and the total hours worked per week.

• The number of employed dentists increased from 8,991 in 2000 to 9,678 in 2003, a 7.6% increase. All jurisdictions recorded an increase, ranging from 1.5% in South Australia to 31.9% in Tasmania (Table 5).

Table 5: Employed dentists by state/territory, 2000 and 2003

Year	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
2000	3,126	2,204	1,564	913	821	119	184	60	8,991
2003	3,346	2,284	1,821	957	833	157	216	65	9,678

• The practising rate increased from 46.9 to 48.7 dentists per 100,000 population between 2000 and 2003. Increases in the practising rate occurred across most jurisdictions, with the Australian Capital Territory recording the largest increase (from 58.4 to 66.8 dentists per 100,000), followed by Tasmania (from 25.2 to 33.0) and Queensland (from 43.9 to 47.9). Victoria and South Australia were the only jurisdictions to record negligible growth (Figure 10).



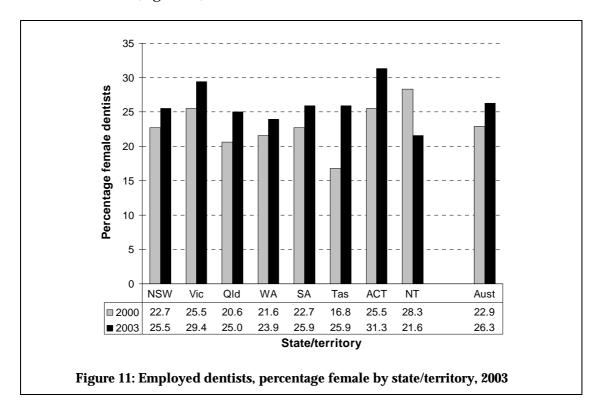
- While the practising rate increased across most jurisdictions, the number of full-time equivalent (FTE) dentists per 100,000 population, based on a 37.5-hour working week, decreased in Victoria, Western Australia and South Australia (Table 6).
- Across jurisdictions the FTE practising rate ranged from 34.4 FTE per 100,000 population in Northern Territory to 67.0 FTE per 100,000 population in the Australian Capital Territory (Table 6).

Table 6: Full-time equivalent dentists by state/territory, 2000 and 2003

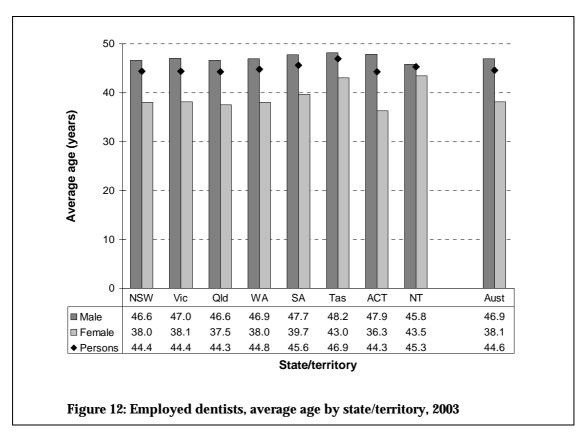
	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
2000	52.1	47.1	46.5	51.2	54.7	26.0	60.8	31.1	49.2
2003	53.5	46.4	49.6	49.3	53.8	34.8	67.0	34.4	50.3

Note: FTE is calculated by multiplying the number of employed by the average hours worked divided by 37.5 hours.

• Between 2000 and 2003 the percentage of employed female dentists increased from 22.9% in 2000 to 26.3% in 2003. Across jurisdictions, the increase in the percentage of female dentists ranged from 2.3 percentage points in Western Australia to 9.1 percentage points in Tasmania. The only jurisdiction to record a decrease was the Northern Territory, decreasing by 6.7 percentage points, from 28.3% in 2000 to 21.6% in 2003 (Figure 11).



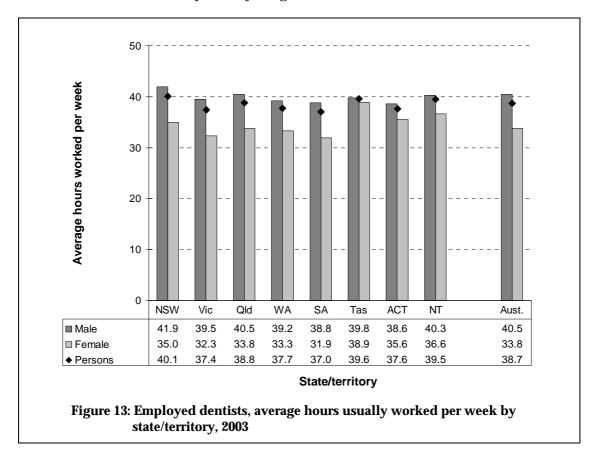
- In 2003 employed dentists in Tasmania had the oldest average age (46.9 years), followed by South Australia (45.6 years) and the Northern Territory (45.3 years). Dentists in the remaining jurisdictions had average ages close to the overall mean (between 44.3 and 44.8 years) (Figure 12).
- At the national level employed male dentists were on average 8.8 years older than their female counterparts. This pattern was seen across most jurisdictions with the exception of the Northern Territory, where males were older than females by only 2.3 years, and in the Australian Capital Territory, where the age difference between males and females was greater (males were on average 11.6 years older) (Figure 12).



#### **Practice characteristics**

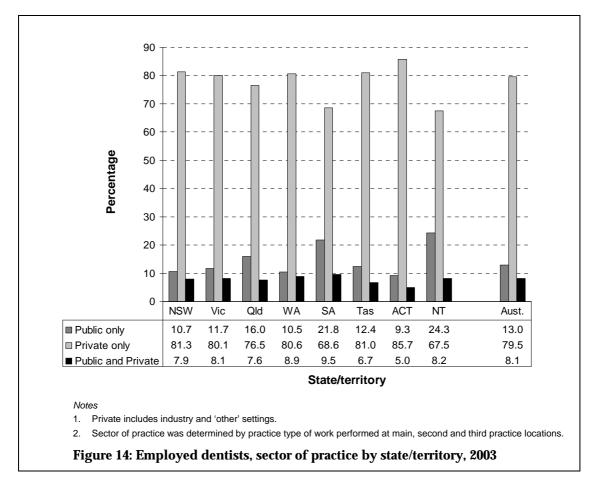
- There was only slight variation in hours usually worked per week by jurisdiction. Employed dentists worked on average 38.7 hours per week in 2003, ranging from 37.0 hours in South Australia to 40.1 hours in New South Wales (Figure 13).
- The proportion of hours dedicated to direct patient care varied little by jurisdiction. Overall 87.3% of total hours were dedicated to direct patient care, ranging from 85.3% in the Northern Territory to 89.6% in the Australian Capital Territory (Table A.8).

• In 2003 male dentists worked longer hours than females (40.5 hours and 33.8 hours respectively). Males in New South Wales worked the longest hours (41.9 hours per week) while those in the Australian Capital Territory and South Australia worked the shortest (38.6 and 38.8 hours respectively). In contrast, females in Tasmania and the Northern Territory worked on average the longest hours (38.9 and 36.6 hours respectively) while those in South Australia and Victoria worked the shortest (32.0 and 32.2 hours respectively) (Figure 13).



• The majority of employed dentists (82.0%) worked in the private sector in their main practice. Northern Territory, South Australia and Queensland had the highest proportion of dentists working in the public sector (27.0%, 26.0% and 20.2% respectively), while New South Wales and the Australian Capital Territory had the lowest rates (13.6% and 11.4% respectively) (Table A.9).

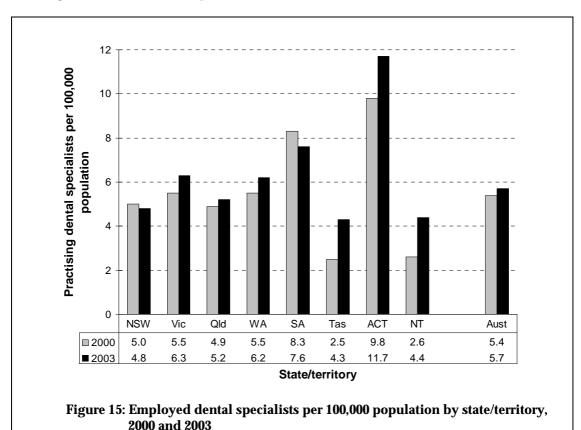
• Taking into account work performed in their main, second or third locations, the proportion of dentists working solely in private practice ranged from 67.5% in the Northern Territory to 85.7% in the Australian Capital Territory. Only a small proportion was likely to work in both sectors, with dentists in the Australian Capital Territory the least likely to do so (5.0%) (Figure 14).



- Dentists employed in the private sector worked on average longer hours per week than those in the public sector (39.2 and 36.4 hours, respectively). This occurred across most jurisdictions, with the greatest discrepancy occurring in the Australian Capital Territory (8.5 hours) and Tasmania (5.8 hours). In contrast, dentists in the Northern Territory and Western Australia worked similar hours across sectors (Table A.10).
- There was little variation in the percentage working in the area of general clinical practice (84.7%) by jurisdiction, with the percentage ranging from 78.5% in South Australia to 86.9% in New South Wales. (Table A.6).

#### **Dental specialists**

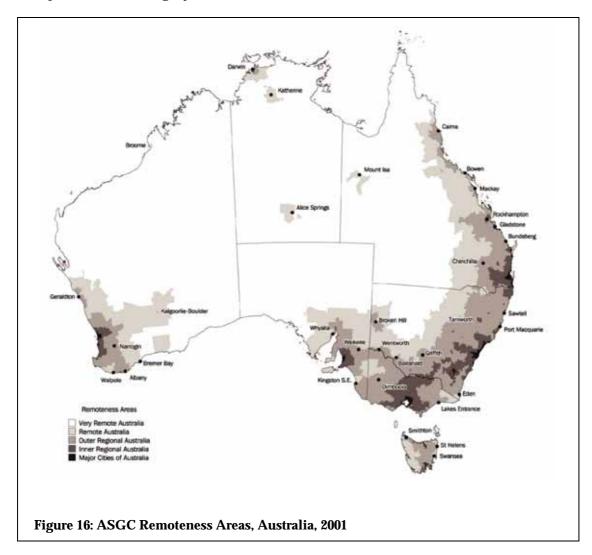
- Between 2000 and 2003 the dental specialist practising rate was relatively stable at a
  national level, increasing slightly from 5.4 to 5.7 dental specialists per 100,000
  population. With the exception of New South Wales and South Australia the
  remaining jurisdictions recorded an increase in the dental specialist practising rate
  (Figure 15).
- Across jurisdictions the percentage of female dental specialists varied from 22.9% in South Australia and 22.1% in Victoria to 6.9% in the Australian Capital Territory. The Northern Territory was the only jurisdiction not to record any female dental specialists (Table A.6).
- Dental specialists in the Australian Capital Territory were on average younger (44.9 years) and those in South Australia were older (50.8 years) than the national average for all dental specialists (Table A.7).
- In addition to being older than the national average, dental specialists in South Australia worked the shortest week on average (36.9 hours per week) compared to those in other jurisdictions. Dental specialists in Tasmania worked on average the longest week (46.6 hours per week) (Table A.8).



#### **Remoteness Areas**

This section presents information on employed dentists by Remoteness Areas as defined by the Australian Standard Geographic Classification (ASGC) of Remoteness (Figure 16). (For further information about this classification see ABS 2006.)

Due to small numbers the categories of 'Remote' and 'Very Remote' regions have been collapsed into the category of 'Remote'.

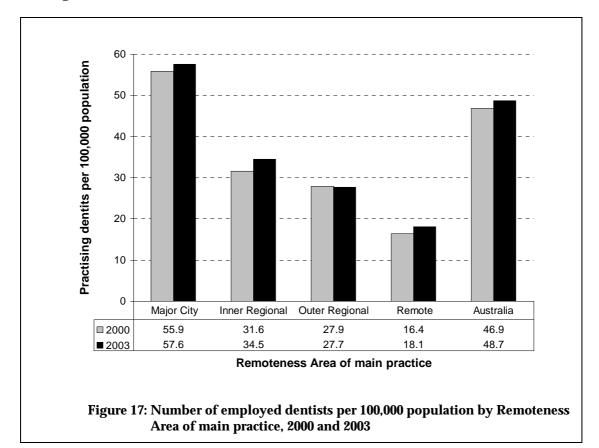


- Between 2000 and 2003 the number of employed dentists increased across all Remoteness Areas, with the largest percentage increase occurring in 'Inner Regional' areas, increasing by 14.2%. In contrast, the number of dentists in 'Outer Regional' areas increased by 1.3%, well below the national increase of 7.6% (Table 7).
- In 2003 over three-quarters (78.4%) of all employed dentists worked in 'Major City' areas in their main practice.

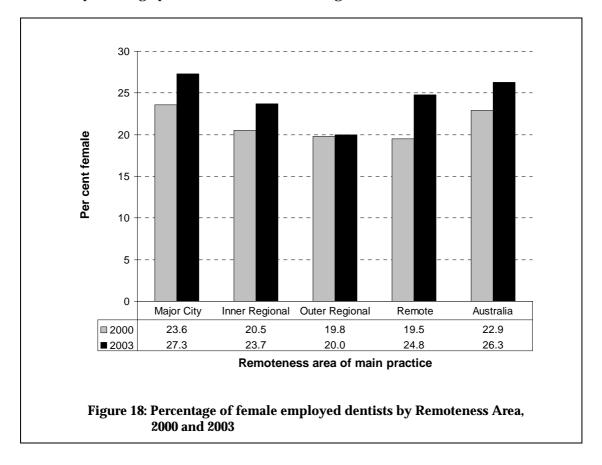
Table 7: Employed dentists by Remoteness Area of main practice, 2000 and 2003

Year	Major City	Inner Regional	Outer Regional	Remote	Australia
		N	Number		
2000	7,097	1,255	557	82	8,991
2003	7,588	1,435	564	91	9,678
		F	Per cent		
2000	78.9	14.0	6.2	0.9	100.0
2003	78.4	14.8	5.8	0.9	100.0

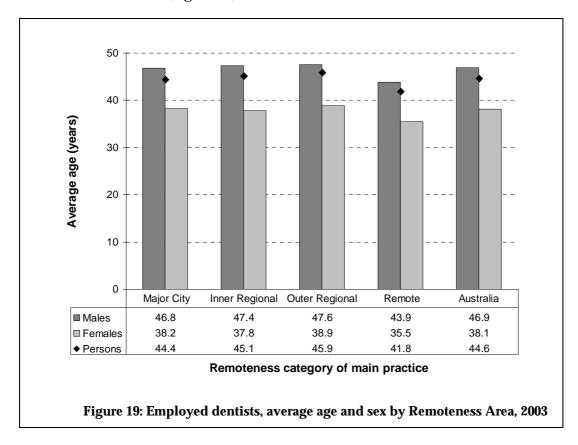
- The practising rate highlights the uneven distribution of dentists towards larger centres with 'Major City' areas having a rate of 57.6 dentists per 100,000 population compared to 18.1 in 'Remote' areas (Figure 17).
- Between 2000 and 2003 the practising rate increased across all Remoteness Areas with the exception of 'Outer Regional', where the rate remained relatively stable (decreasing marginally from 27.9 to 27.7 dentists per 100,000 population) (Figure 17).



• The percentage of female dentists increased across all Remoteness Areas between 2000 and 2003 ranging from less than 1 percentage point in 'Outer Regional' areas to 5.3 percentage points in 'Remote' areas (Figure 18).

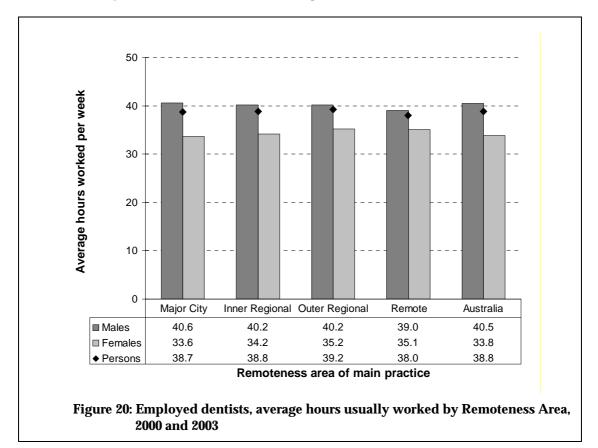


• Compared to the 2003 national average of 44.6 years, dentists employed in 'Remote' areas were on average younger, with an average age of 41.8 years, and those in 'Outer Regional' areas were older (45.9 years). This trend held for both males and females (Figure 19).



#### **Practice characteristics**

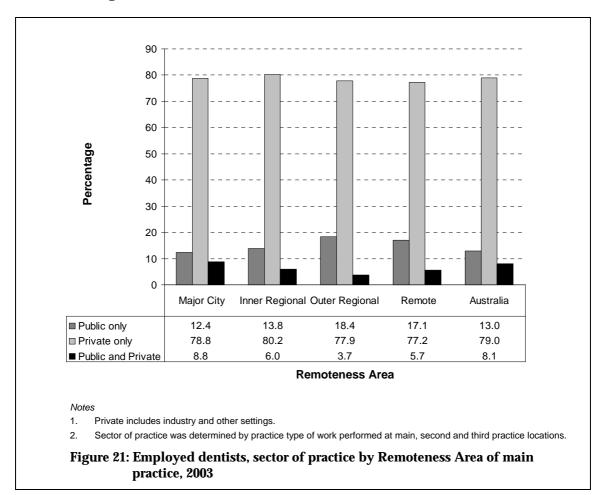
- There was little variability in the hours worked per week across Remoteness Areas. Dentists in 'Outer Regional' areas worked on average the longest week (39.2 hours) while those in 'Remote' areas worked the shortest (38.0 hours). This compares to a national average of 38.7 hours per week (Figure 20).
- Males worked on average 40.5 hours per week ranging, from 39.0 hours in 'Remote' areas to 40.6 hours in 'Major City' areas. In contrast females worked on average 33.8 hours per week ranging, from 33.6 hours per week in 'Major City' areas to 35.1 hours per week in 'Remote' areas (Figure 20).



- The percentage of employed dentists working in the private sector was higher in 'Major City' areas (84.0%) and lowest in 'Outer Regional' areas (79.3%) (Table A.12).
- The percentage of all employed dentists working in solo practice varied by Remoteness Area, ranging from 30.2% in 'Major City' areas to 39.9% in 'Remote' areas. Conversely, the percentages working as assistants or solos with assistants were lower in 'Remote' areas, ranging from 13.7% in 'Major City' areas to 5.5% in 'Remote' areas for assistants and 13.7% to 6.2% for solos with assistants (Table A.12).
- Within the public sector, employed dentists working in dental hospitals in 'Remote' areas tended to be on average younger (23.0 years), and those working in tertiary education institutions in both 'Inner' and 'Outer Regional' areas tended to be older

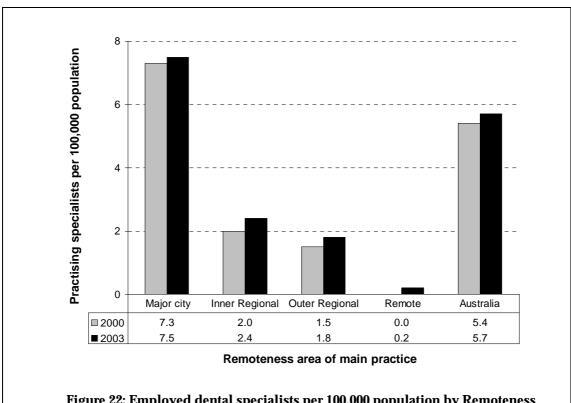
(49.9 years) than the national average for all public sector dentists (42.9 years) (Table A.14).

- For the private sector, dentists working in solo practice in 'Outer Regional' areas were on average older (51.4 years), and those working as assistants in 'Inner Regional' areas were younger (36.1 years) than the national average for all private sector dentists (44.9 years) (Table A.14).
- The majority of dentists were in general clinical practice (84.7%) and worked on average 38.6 hours per week. Across Remoteness Areas the percentage ranged from 82.8% in 'Major City' areas to 97.3% in 'Remote' areas, while the hours worked remained relatively stable, with hours worked in 'Outer Regional' areas (38.9 hours) slightly higher than in 'Remote' areas (38.3 hours) (Table A.15, Table A.16).
- Dentists employed in 'Major City' areas were more likely to work in both the public and private sectors (8.9%) compared to those working in 'Outer Regional' areas (3.9%) (Figure 21).
- Across Remoteness Areas the percentage of dentists working in the public sector was lowest in 'Major City' areas (12.4%) and highest in 'Outer Regional' areas (18.4%) (Figure 21).



### **Dental specialists**

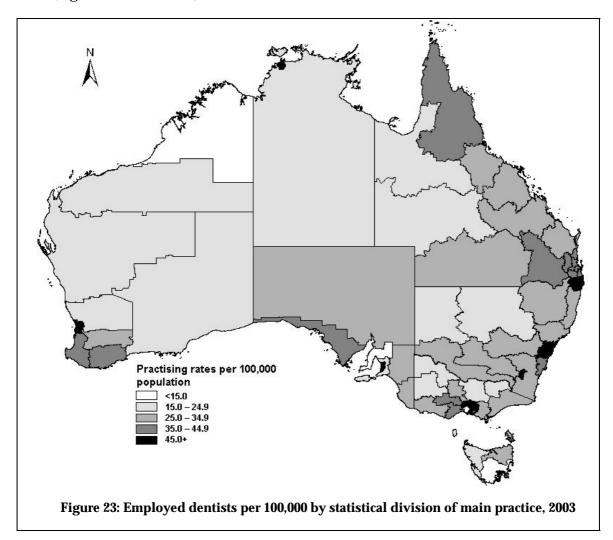
- In 2003, 87.8% of registered dental specialists worked in 'Major City' areas compared to 78.4% of all dentists (Table A.16).
- Taking into account the population, the practising rate was relatively stable at the national level between 2000 and 2003, increasing slightly from 5.4 to 5.7 dental specialists per 100,000 population. Across Remoteness Areas the practising rate ranged from 0.2 dental specialists per 100,000 in 'Remote' areas to 7.5 dental specialists per 100,000 population in 'Major City' areas (Figure 22).
- Dental specialists were predominantly male, representing 83.1% of all dental specialists at the national level and ranging from 82.0% in 'Major City' areas to 100% in 'Remote' areas (Table A.16).
- Registered dental specialists tended to be older than general practice dentists by at least 4 years across all Remoteness Areas. Average ages for dental specialists ranged from 48.1 years in 'Major City' areas to 67.1 years in 'Remote' areas (Table A.16).



- Across regions dental specialists employed in 'Outer Regional' areas worked longer weeks on average than dental specialists in other regions (43.8 hours per week compared to 40.8 hours nationally) and to dentists in other areas of practice (Table A.15).
- In terms of hours dedicated to direct patient care specialists worked on average 34.0 hours per week, ranging from 13.0 hours in 'Remote' areas to 35.7 hours in 'Inner Regional' areas (Table A.15).

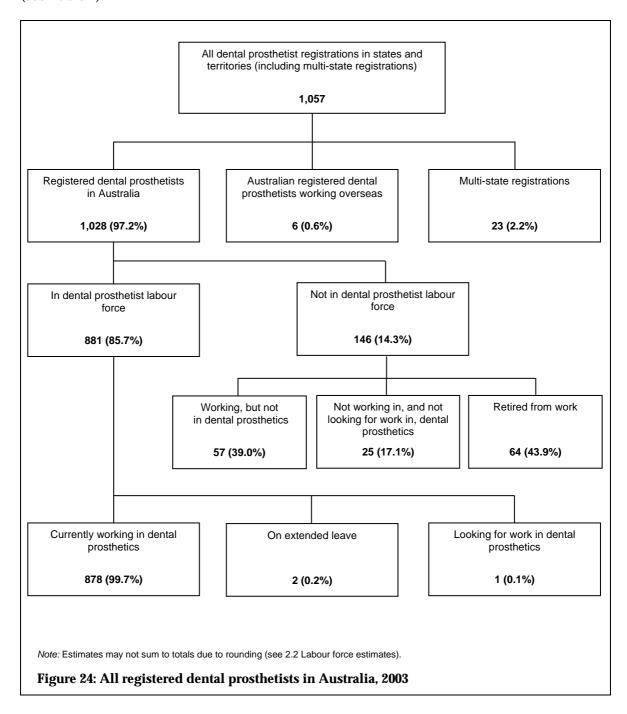
### **Dentists by statistical division**

 Based on statistical divisions, (as defined by the Australian Standard Geographic Classification—see ABS, 2006), the highest rates of dentists generally occurred in areas of greater population density. For example, with the exception of the Richmond-Tweed Division in New South Wales, the rates of employed dentists only exceeded 45.0 dentists per 100,000 population in capital cities (Figure 23, Table A.18).



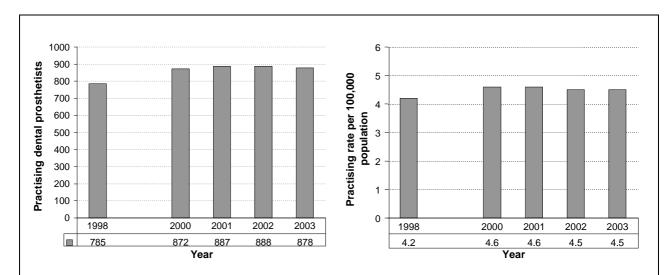
# 4 Dental prosthetist labour force

The estimates reported in this section relate to the dental prosthetist labour force. The data collection was conducted in all states and territories with the exception of the Northern Territory, where dental prosthetists were not permitted to practise (see Table 2).



## 4.1 Overall numbers

- In 2003 there were 1,057 registered dental prosthetists, of whom an estimated 881 were in the dental prosthetist labour force. Of those in the labour force, 878 were employed in dental prosthetics (Figure 24).
- Of the 146 registered prosthetists not in the labour force, 25 (17.1%) were not working, 57 (39.0%) were working but not as a prosthetist and 64 (43.9%) were retired (Table A.20).
- There was an increase of 11.1% in the number of employed dental prosthetists between the years 1998 and 2000, from 785 prosthetists to 872, but since the year 2000 there has been negligible change (Figure 25).
- The practising rate per 100,000 population has remained relatively stable in the years since the first collection in 1998. In 1998 there were 4.2 prosthetists per 100,000 population, increasing to 4.6 in 2000 and then decreasing slightly to 4.5 in 2002 (Figure 25).



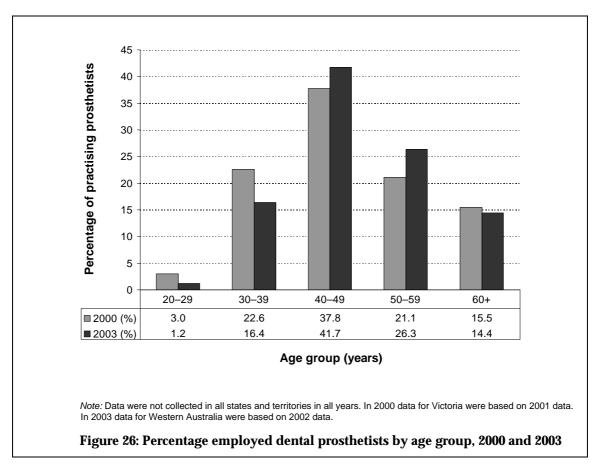
Note: Data were not collected in all states and territories in all years. In 2000 data for Victoria were based on 2001 data. In 2001 data for Queensland were based on 2000 data. In 2003 data for Western Australia were based on 2002 data.

Figure 25: Employed dental prosthetists and practising rate per 100,000 population by year, 1998 and 2000 to 2003

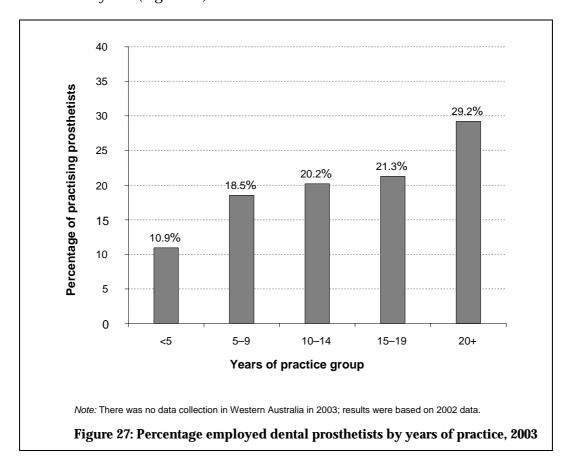
# 4.2 Demographic characteristics

This section presents demographic characteristics on employed dental prosthetists in 2003 with some comparisons to data from previous data collections.

- In 2003 female prosthetists comprised 9.2% of the employed labour force, a marginal increase from 8.6% in 2000 (Table A.21).
- The average age of prosthetists in 2003 was 48.7 years, a slight increase from 2000 (47.5 years). Female prosthetists were on average younger then their male counterparts (42.8 years and 49.2 years respectively) (Table A.21).
- In 2003 the largest proportion of prosthetists was in the 40–49 years age group (41.7%). Since 2000 there has been a slight shift towards an older age distribution, as indicated by a decrease in the percentages of prosthetists in the two youngest age groups and an increase in the percentages in the 40–49 and 50–59 age groups (Figure 26).



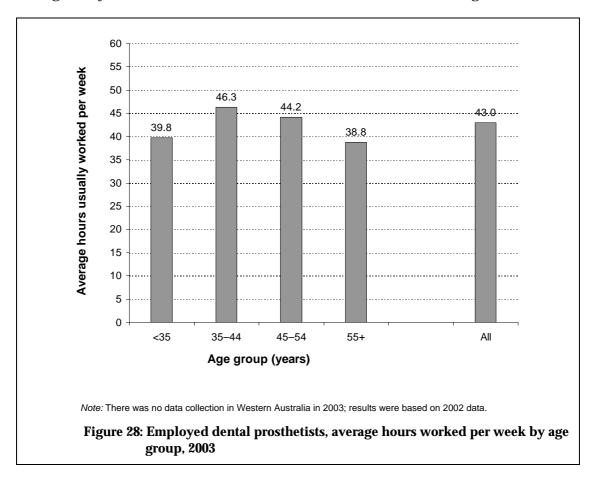
• In 2003 the majority of employed prosthetists (70.7%) had been practising in prosthetics for at least 10 years, with nearly one-third (29.2%) practising longer than 20 years (Figure 27).



## 4.3 Practice characteristics

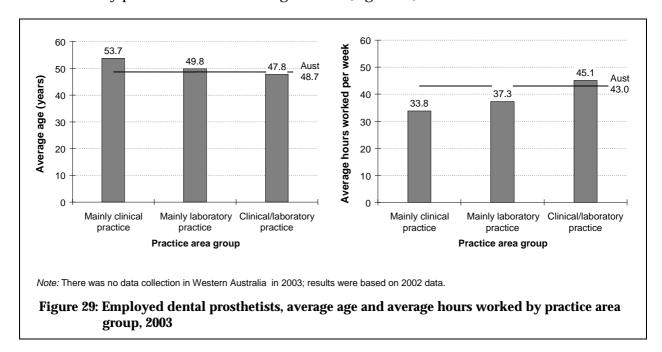
This section presents data on the practice characteristics of employed dental prosthetists including hours worked and practice type.

- The majority (85.3%) of employed prosthetists were self-employed. Only 6.4% worked in a public sector clinic or laboratory, 4.3% were employed in private practices and 2.2% were employed in private laboratories. Very small percentages worked in an educational institution (1.2%) or 'other' practice type (0.7%) (Table A.22).
- In 2003 nearly three-quarters (72.5%) of prosthetists reported working at one location only, one-fifth (20.0%) worked at two locations and 7.5% worked at three or more.
- In 2003 prosthetists worked on average 43.0 hours per week, a negligible change since 2000 (42.6 hours per week). Nearly one-fifth of prosthetists (19.8%) worked part-time (less than 35 hours per week) (Table A.23).
- Average hours usually worked per week varied across age groups. Prosthetists aged 35–44 years worked on average the longest week (46.3 hours) while those aged 55 years and older worked the shortest week (38.8 hours) (Figure 28).



 Hours dedicated to various areas of practice were totalled for all practice locations reported and used to categorise practitioners into practice area groups. Prosthetists who dedicated 90% or more of hours worked to clinical practice were categorised as working 'mainly in clinical practice'. Those who worked less than 10% clinical hours were categorised as working 'mainly in laboratory practice' and the remaining prosthetists were categorised as 'clinical and laboratory practice'. Over three-quarters (77.4%) worked in 'clinical and laboratory practice', while the percentages in the 'mainly laboratory 'and 'mainly clinical 'groups were similar (11.4% and 11.2% respectively).

- On average those in 'mainly clinical practice' were older than the national average (53.7 years) and those in 'clinical and laboratory practice' were younger (47.8 years) (Figure 29).
- Hours usually worked per week varied by practice area group; those in 'mainly clinical practice' worked the shortest week (33.8 hours) and those in 'clinical and laboratory practice' worked the longest week (Figure 29).



• Prosthetists were asked to estimate the number of dentures completed or repaired in the past week by denture type (full/partial). Dentures completed/repaired were totalled for all practice locations worked. It was estimated that on average dental prosthetists completed 5.5 full dentures and 4.0 partial dentures, and repaired 2.7 full dentures and 2.4 partial dentures, per week (Table A.24).

- The completion of full dentures comprised more than one-third (37.6%) of all denture services, followed by completion of partial dentures (27.5%), repair of full dentures (18.2%) and repair of partial dentures (16.8%) (Figure 30).
- The percentage of completed/repaired dentures by denture type varied by practice setting. For those working in a laboratory only, completion of partial dentures was half of all dentures completed, compared to prosthetists working in other settings, where the completion of partial dentures was approximately one-quarter of dentures completed (Figure 30). This variation by practice setting can in part be explained by jurisdictional differences in scope of practice; in some states/territories working with partial denture patients is outside the legal scope of practice of clinical prosthetists (Table A.24).

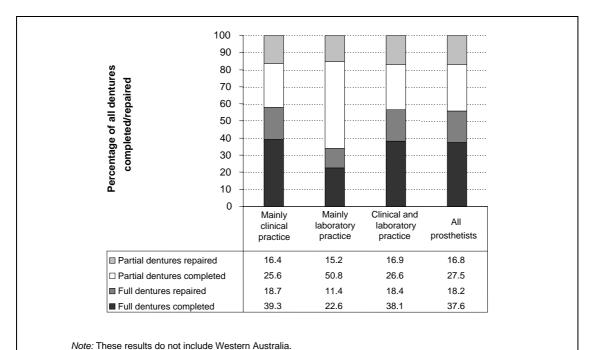
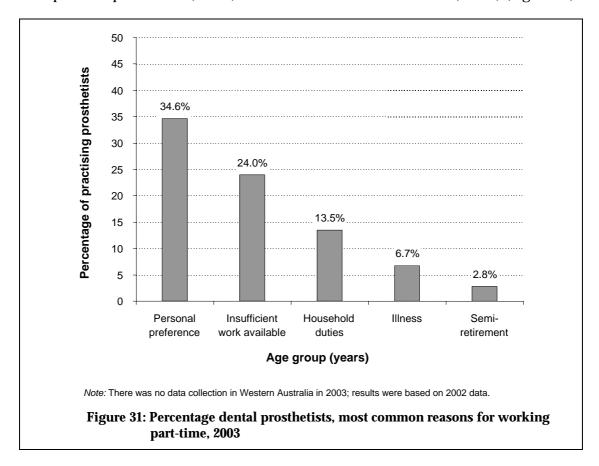


Figure 30: Percentage full and partial denture services by main practice setting of dental prosthetist, 2003

• Prosthetists working part-time (less than 35 hours per week) were asked to indicate their major reasons for doing so. The most common reasons given were 'personal preference' (34.6%) and 'insufficient work available' (24.0%) (Figure 31).



# 4.4 Distribution by geographic classification

# State and territory

This section presents characteristics of dental prosthetists across jurisdictions. These include the number of prosthetists, their age distribution and the total hours worked per week.

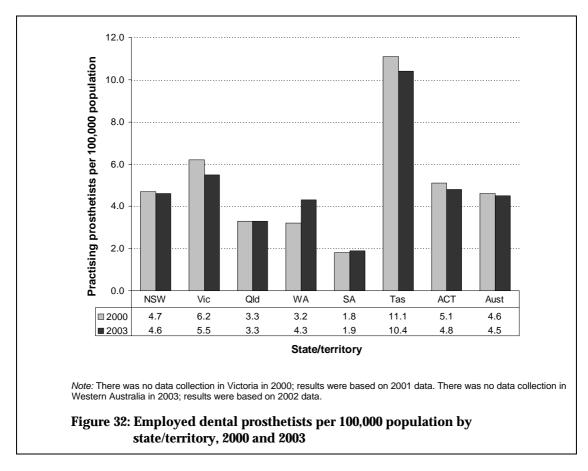
• The number of employed dental prosthetists increased only marginally from 872 in 2000 to 878 in 2003. The numbers employed increased in Western Australia and Queensland and decreased in Victoria. There was only marginal change in all other jurisdictions (Table 8).

Table 8: Employed dental prosthetists by state/territory, 2000 and 2003

Year	NSW	Vic	Qld	WA	SA	Tas	ACT	Total
2000	305	297	117	60	27	52	16	872
2003	308	268	125	84	29	50	15	878

*Note:* There was no data collection in Victoria in 2000; results were based on 2001 data. There was no data collection in Western Australia in 2003; results were based on 2002 data. Prosthetists are not permitted to practise in the Northern Territory.

- In 2003 the distribution of dental prosthetists varied widely by state/territory. Tasmania had the highest practising rate of prosthetists per 100,000 population (10.4), which was more than double the rate for Australia (4.5) and more than five times the lowest rate (1.9), in South Australia (Figure 32).
- Since 2000 the practising rate per 100,000 population had increased slightly in Western Australia (from 3.2 to 4.3) and decreased slightly in Victoria (from 6.5 to 5.5), Tasmania (from 11.1 to 10.4) and the Australian Capital Territory (5.1 to 4.8). Very little change was observed in the remaining states/territories (Figure 32).

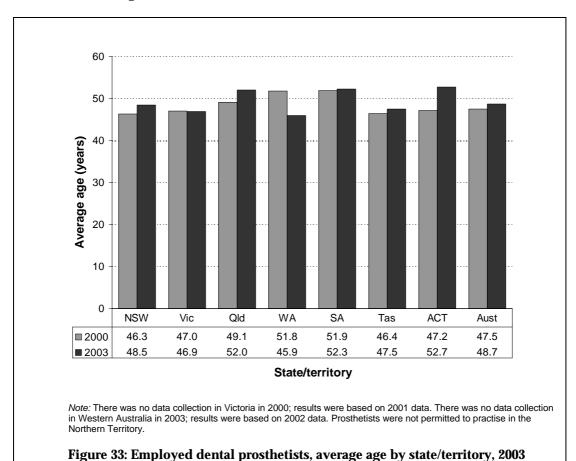


- Overall, there were 5.1 FTE prosthetists per 100,000 population in 2003; this was higher than the practising rate of 4.6 prosthetists per 100,000. For each jurisdiction the FTE rate per 100,000 population was higher than the jurisdiction's practising rate (Table 9).
- Between 2000 and 2003, with the exceptions of Queensland and Western Australia, the number of FTE prosthetists per 100,000 population declined in all jurisdictions (Table 9).

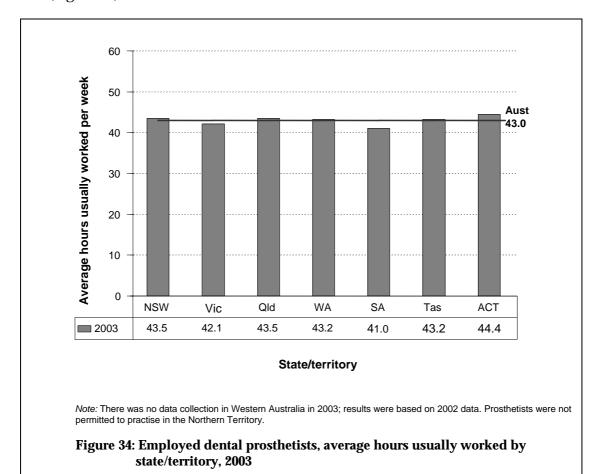
Table 9: Full-time equivalent dental prosthetists per 100,000 population by state/territory, 2000 and 2003

Year	NSW	Vic	Qld	WA	SA	Tas	ACT	Total
2000	5.6	6.8	3.6	3.7	2.1	12.4	6.1	5.2
2003	5.3	6.1	3.8	5.0	2.0	12.0	5.7	5.1

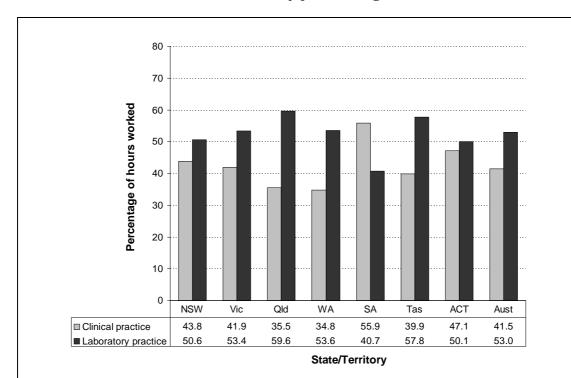
- There was no data collection in Victoria in 2000; results were based on 2001 data. There was no data collection in Western Australia in 2003; results were based on 2002 data.
- 2. Prosthetists were not permitted to practise in the Northern Territory.
- 3. FTE is calculated by multiplying the number of employed by the average hours worked divided by 37.5 hours.
- In 2003 there was only slight variation of the average age of prosthetists by state/territory. Western Australia had the lowest average age (45.9 years) and the Australian Capital Territory had the highest average age (52.7 years) (Figure 33).
- Since 2000 the average age of dental prosthetists had increased in all state/territories except Victoria and Western Australia, where the average age had decreased (Figure 33).



- In 2003 there was some variation by state/territory in terms of the percentage of female prosthetists. Tasmania had the highest percentage (18.2%) of female prosthetists, followed by Western Australia (12.8%), New South Wales (11.0%), Victoria (7.8%) and Queensland (5.2%). The remaining states/territories had no female prosthetists (Table A.21).
- There was little variation across states/territories in average hours usually worked per week. Prosthetists in the Australian Capital territory had the longest working week (44.4 hours) and those in South Australia had the shortest (41.0 hours) (Figure 34).



- Hours dedicated to various areas of practice were totalled for all locations reported. Overall, just over half (53.0%) of all hours worked were dedicated to laboratory practice, 41.5% of hours were dedicated to clinical practice and only small percentages were dedicated to administration/management (2.5%), teaching/education (1.7%), research (0.2%) and other areas (0.3%).
- There was some variation among states/territories in the percentage of hours dedicated to clinical practice and laboratory practice. In all states/territories except South Australia, the percentage of hours dedicated to laboratory practice was greater than the percentage dedicated to clinical hours. In South Australia this trend was reversed, with 55.9% of all hours dedicated to clinical practice and 40.7% of hours dedicated to laboratory practice (Figure 35).



- 1. There was no data collection in Western Australia in 2003; results were based on 2002 data.
- 2. Hours worked by area of practice were totalled across all reported practice locations.
- The small percentages of hours worked not cited in this figure were dedicated to either administration, teaching/education or other areas of practice.
- 4. Prosthetists were not permitted to practise in the Northern Territory.

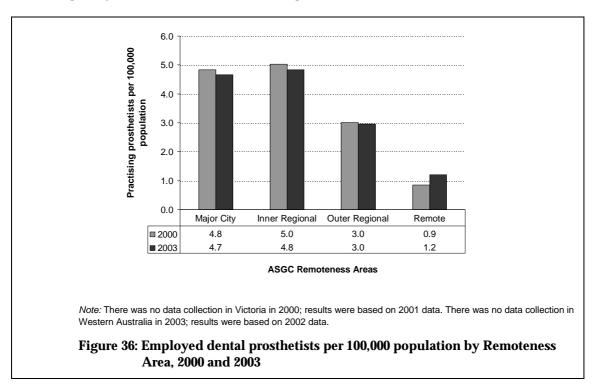
Figure 35: Employed dental prosthetists, percentage hours worked by area of practice and state/territory, 2003

### **Remoteness Areas**

This section presents information on employed dental prosthetists by Remoteness Areas as defined by the Australian Standard Geographic Classification of Remoteness (Figure 16). (For further information about this classification see ABS 2006.)

Due to small cell sizes the categories of 'Remote' and 'Very Remote' regions have been collapsed into the category of 'Remote'.

• Employed prosthetists were distributed unevenly in proportion to the population across regions defined by remoteness. The highest practising rate per 100,000 population was in 'Inner Regional' areas (4.8), which was 4 times higher than 'Remote' areas (1.2). Practising rates by Remoteness Area had only changed marginally since the 2000 collection (Figure 36).



- The average ages of employed prosthetists were similar across Remoteness Areas with the exception of the 'Remote' area, which had an average age (54.3 years) markedly higher than the other areas (Figure 37).
- There was slight variation in hours usually worked per week by Remoteness Areas. Prosthetists in 'Inner Regional' areas on average had the longest working week (44.6 hours) and those in 'Remote' areas had the shortest (40.3 hours) (Figure 37).

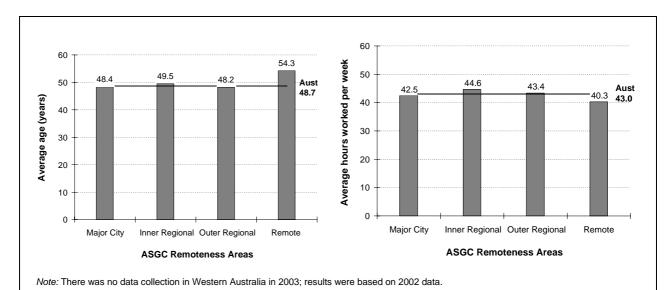
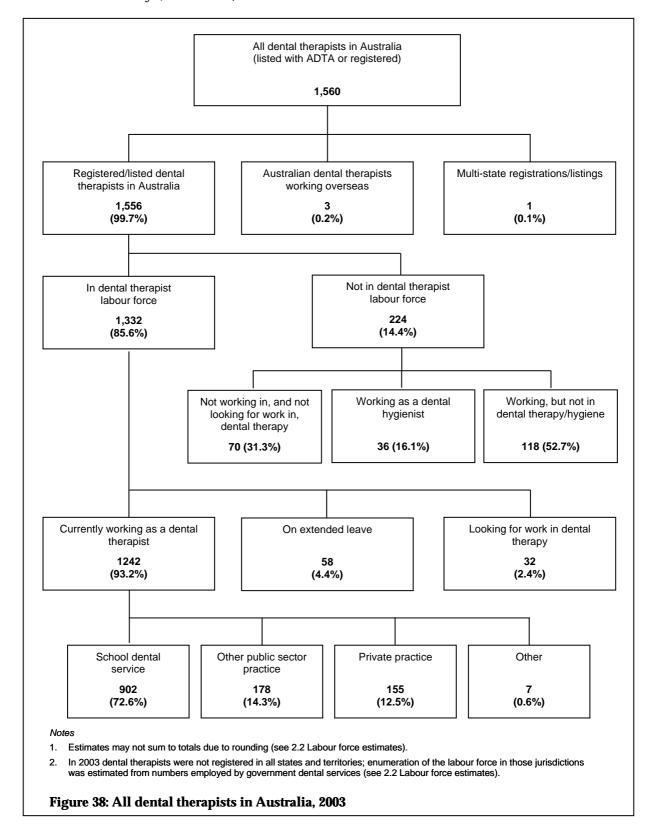


Figure 37: Employed dental prosthetists, average age and average hours worked per week by Remoteness Area, 2003

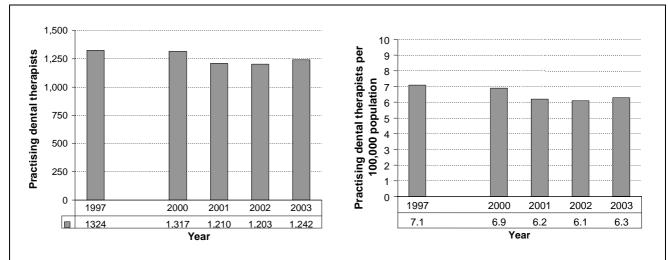
# 5 Dental therapist labour force

The estimates reported in this section relate to the dental therapist labour force. In 2003 the data collection was conducted in all states and territories with the exception of the Northern Territory (see Table 3).



## 5.1 Overall numbers

- In 2003 there were 1,560 registered dental therapists, of whom an estimated 1,332 were in the labour force. Of those in the labour force, 1,242 were practising as a dental therapist (Figure 38).
- Of the 224 registered therapists not in the labour force, 118 (52.7%) were working but not in dental therapy/hygiene, 36 (16.1%) were working but not as a dental therapist and 70 (31.3%) were no longer working (Figure 38).
- The number of employed dental therapists declined by 9.1% between 1997 and 2002, from 1,324 to 1,203 therapists. In 2003 this trend seems to have reversed, with a slight increase in the numbers employed to 1,242 therapists (Figure 39).
- The practising rate per 100,000 population has remained relatively stable in the years since the first collection in 1997. In 1997 there were 7.1 therapists per 100,000 population, decreasing to 6.1 in 2002 and then increasing slightly to 6.3 in 2003 (Figure 39).
- In 2003 the FTE rate per 100,000 population (4.9, based on 37.5 hours per week) was lower than the practising rate (6.3) (Table A.25).



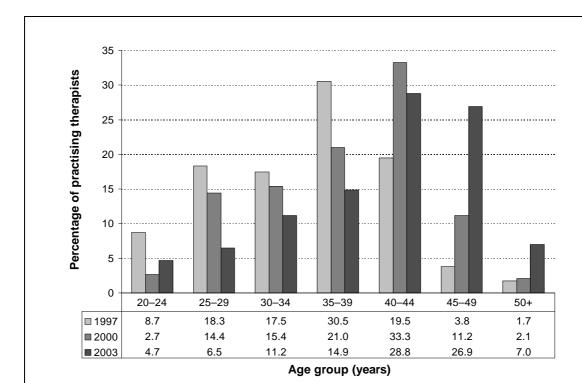
- 1. Data were not collected in all states and territories in all years. Results for Victoria in 2000 were based on 2001 data. Results for the Northern Territory in 2003 were based on 2002 data.
- 2. Results for 2000 differ from previously published estimates; the current estimate includes an additional 43 oral health therapists, who in previous publications had been reported separately

Figure 39: Employed dental therapists and practising rate per 100,000 population, 1997 to 2003

# 5.2 Demographic characteristics

This section presents demographic characteristics of employed dental therapists in 2003 with some comparisons to data from previous data collections.

- In 2003 only 1.4% of the employed dental therapists were male.
- The average age of employed therapists in 2003 was 40.3 years. The largest percentage of therapists was in the 40–44 years age group (28.8%), just over one-quarter (26.9%) was in the 45–49 years age group and 11.2% were less than 30 years of age (Figure 40).
- Since 1997 there has been a shift towards an older age distribution, as indicated by increases in the percentages of therapists in the two oldest age groups, 45–49 years and 50 years or older (Figure 40).



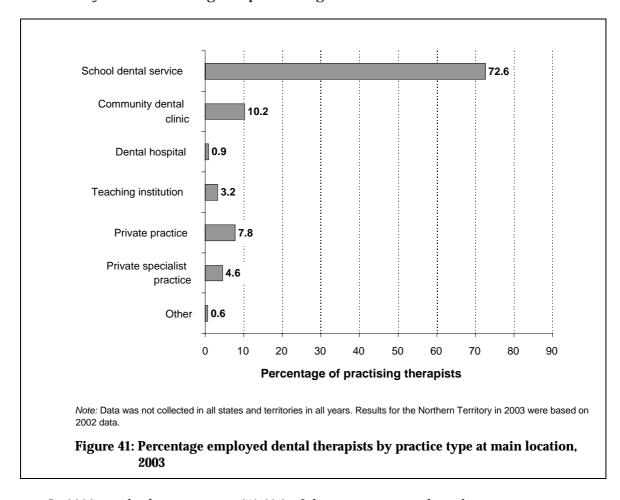
- Data were not collected in all states and territories in all years. Results for Victoria in 2000 were based on 2001 data. Results for the Northern Territory in 2003 were based on 2002 data.
- Results for 2000 differ from previously published estimates; the current estimate includes an additional 43 oral health therapists, who in previous publications had been reported separately.

Figure 40: Percentage employed dental therapists by age group, 1997, 2000 and 2003

## 5.3 Practice characteristics

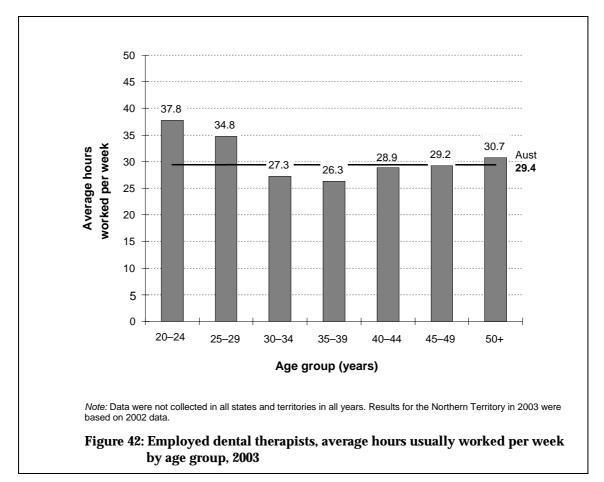
This section presents data on the practice characteristics of employed dental therapists including hours worked and practice type.

• The majority (72.6%) of employed dental therapists were employed in the school dental service, 10.2% worked in community dental service clinics and small percentages were employed in dental hospitals (0.9%) or teaching institutions (3.2%). Overall, 13.0% of therapists worked in the private sector (Figure 41). There were only marginal changes in the distribution across practice types since 2000; however; the percentage working in the private sector is expected to grow in future years due to changes in practice regulations.

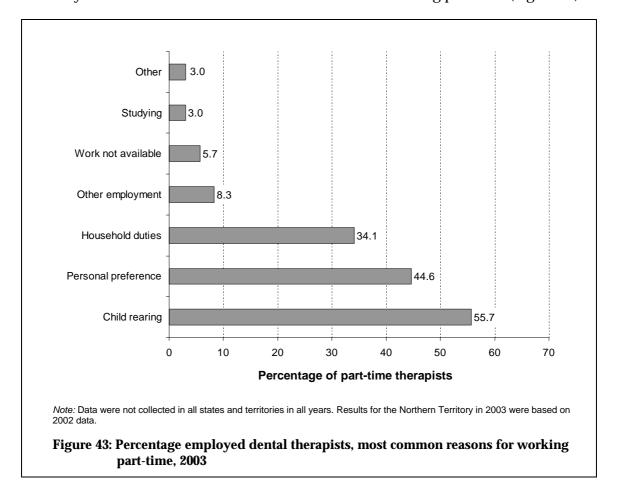


- In 2003 nearly three-quarters (73.0%) of therapists reported working at one location only, nearly one-fifth (19.0%) worked at two locations and 8.0% worked at three or more.
- Of those therapists employed in more than one practice location, more than two-thirds (68.2%) worked solely in the public sector, 9.8% worked solely in the private sector and approximately one-fifth (21.6%) worked in both public and private sector settings.

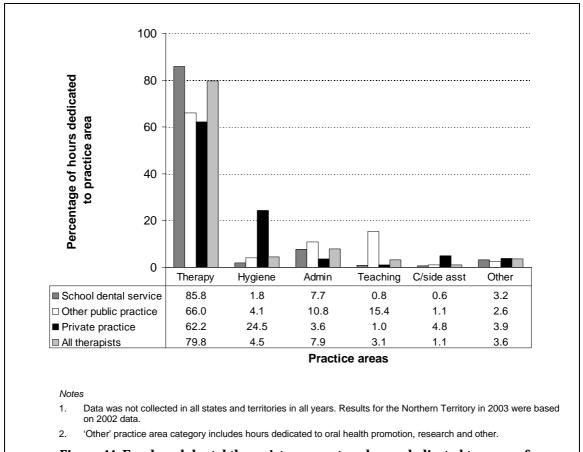
- There was little variation in average age by practice type. School dental service therapists had an average age of 40.7 years, while those employed in other public practice types and private practice types were slightly younger (39.0 and 39.5 years respectively). Those in 'other' types of employment had a slightly higher average age (42.7 years).
- Total hours usually worked per week were summed across all reported practice locations. The largest percentage (43.3%) of therapists worked for 30–39 hours per week, followed by those working 20–29 hours per week (Table A.28).
- The average hours usually worked per week were 29.4, and the average hours varied among age groups. Therapists in the 20–24 years age group had the highest average (37.8 hours per week) and the 30–34 and 35–39 years age groups had the lowest averages (27.3 and 26.3 hours respectively) (Figure 42).



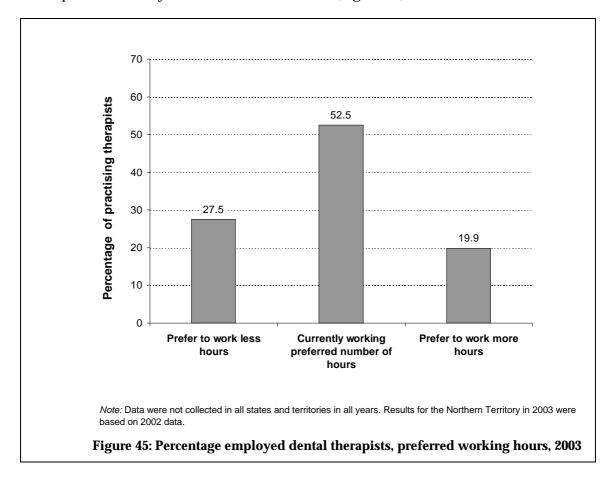
• More than half (56.3%) of therapists worked part-time (less than 35 hours per week) (Table A.28). Therapists working part-time were asked to indicate their major reasons for doing so. The most common reasons given were 'child rearing' (55.7%) and 'personal preference' (44.6%), followed by 'household duties' (34.1%). Only 5.7% cited 'work not available' as a reason for working part-time (Figure 43).



- Hours dedicated to various areas of practice were totalled for all practice locations reported. The majority of hours worked (79.8%) were dedicated to dental therapy clinical practice, 7.9% to administration/management and 4.5% to hygiene practice. Only small percentages were dedicated to teaching (3.1%), chair-side assistance (1.1%) and 'other' areas of practice (3.6%) (Figure 44).
- There was some variation in the percentage of hours dedicated to different areas of practice by practice type. Therapists working in private practice dedicated nearly one-quarter of hours worked to hygiene practice (24.5%), which was substantially higher than the percentage for all therapists (4.5%). Private practice therapists also dedicated a higher percentage of hours to chair-side assistance and less to administration than public sector therapists (Figure 44).



• Therapists were asked to cite their preferred working hours per week. Just over half (52.6%) reported that they were currently working their preferred hours, just over one-quarter (27.6%) would prefer to work less hours and one-fifth (19.7%) reported that they would like to work more (Figure 45).



• Although therapists may report that they would prefer to work less or more hours, whether they actually would choose to do so given the opportunity is unknown. Nevertheless, the difference between hours worked and hours preferred, for those preferring to work more hours, was quantified as a broad measure of the potential latent labour force. The difference between hours worked and hours preferred was converted to FTE therapists based on a 37.5-hour week; the latent labour force was estimated to be 41.6 therapists, which only amounted to 4.3% of the 2003 FTE labour force (974.0 FTE therapists).

# 5.4 Distribution by geographic classification

## State and territory

This section presents characteristics of dental therapists across jurisdictions. These include the number of therapists and selected demographic and practice characteristics.

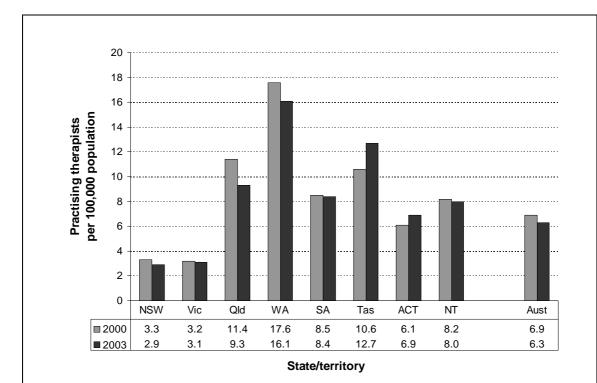
• The number of employed dental therapists decreased from 1,317 in 2000 to 1,242 in 2003. The numbers employed increased slightly in Tasmania (from 50 to 61) and the Australian Capital Territory (19 to 22), and decreased in Queensland (from 405 to 354), New South Wales (from 216 to 195) and Western Australia (from 331 to 314). There was no change in the remaining jurisdictions (Table 10).

Table 10: Employed dental therapists by state/territory, 2000 and 2003

Year	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
2000	216	153	405	331	128	50	19	16	1,317
2003	195	153	354	314	128	61	22	16	1,242

- Data were not collected in all states and territories in all years. Results for Victoria in 2000 were based on 2001 data. Results for the Northern Territory in 2003 were based on 2002 data.
- Results for 2000 differ from previously published estimates; the current estimate includes an additional 43 oral health therapists, who in previous publications had been reported separately.
- 3. Not all columns sum to total as data have been weighted and rounded to whole numbers.

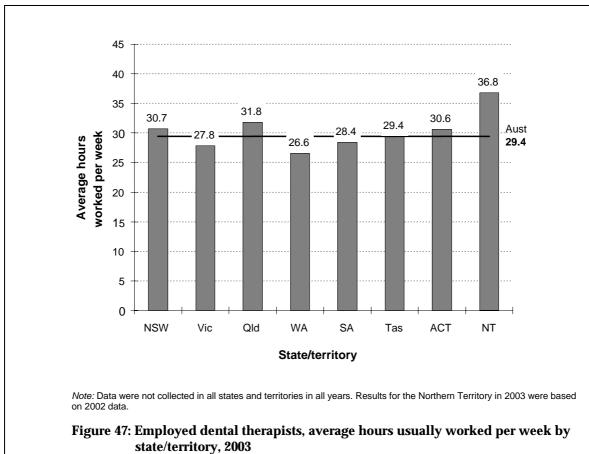
- In 2003 the distribution of dental therapists relative to the population varied widely by state/territory. Western Australia had the highest practising rate of therapists per 100,000 population (16.1), which was more than double the rate for Australia (6.3) and more than five times the lowest rate of 2.9 therapists per 100,000 population in New South Wales (Figure 46).
- Since 2000, with the exception of Tasmania and the Australian Capital Territory, the practising rate per 100,000 population had decreased slightly in all jurisdictions (Figure 46).



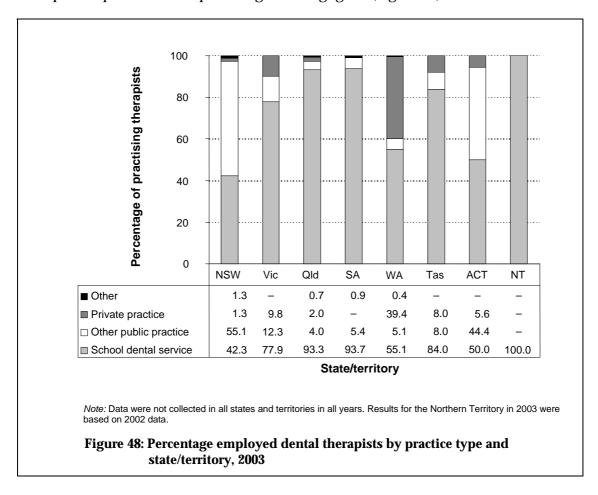
- Data were not collected in all states and territories in all years. Results for Victoria in 2000 were based on 2001 data. Results for the Northern Territory in 2003 were based on 2002 data.
- 2. Results for 2000 differ from previously published estimates; the current estimate includes an additional 43 oral health therapists, who in previous publications had been reported separately.

Figure 46: Employed dental therapists per 100,000 population by state/territory, 2000 and 2003

- In 2003 there was little variation in average age from the overall mean (40.3 years) by jurisdiction. The Northern Territory had the highest average age (42.6 years), followed by the Australian Capital Territory (42.2 years), Tasmania (41.9 years) and Western Australia (41.3 years). Queensland and South Australia both had an average age (40.2 years) very similar to the overall average, while New South Wales and Victoria had average ages slightly lower than the overall average (39.4 and 38.4 respectively) (Table A.26).
- There was slight variation of average hours usually worked per week by jurisdiction. Therapists in the Northern Territory on average worked the longest week (36.8 hours) and those in Western Australia worked the shortest (26.6 hours) (Figure 47).



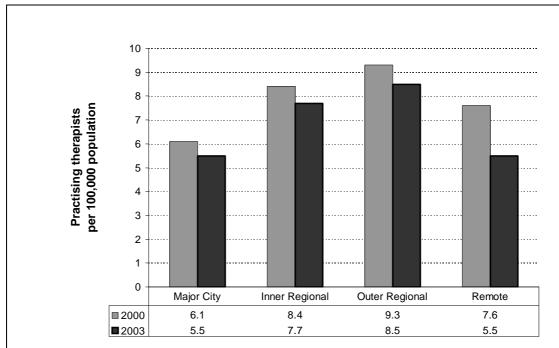
• The percentage of therapists employed in private clinical practice varied by jurisdiction. In Western Australia more than one-third of therapists (39.4%) reported working in the private sector as their main practice, followed by Victoria (9.8%), Tasmania (8.0%) and the Australian Capital Territory (5.6%). In the remaining jurisdictions either there were no therapists reporting working in private practice or the percentage was negligible (Figure 48).



### **Remoteness Areas**

This section presents information on employed dental therapists by Remoteness Areas as defined by the Australian Standard Geographic Classification of Remoteness (Figure 16). (For further information about this classification see ABS 2006). Due to small cell sizes the categories of 'Remote' and 'Very Remote' regions have been collapsed into the category of 'Remote'.

• Dental therapists were distributed relatively evenly across regions defined by remoteness. In 2003 the highest rate of employed therapists per 100,000 population was in 'Outer Regional' areas (8.5) and the lowest rate was in 'Major City' and 'Remote' areas (5.5). Since 2000 practising rates had declined in all areas (Figure 49).

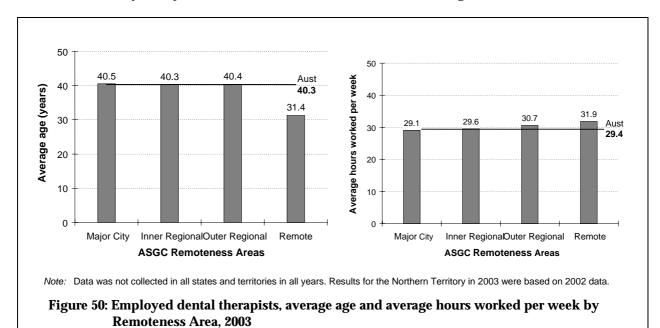


### **ASGC Remoteness Areas**

- Data were not collected in all states and territories in all years. Results for Victoria in 2000 were based on 2001 data. Results for the Northern Territory in 2003 were based on 2002 data.
- Results for 2000 differ from previously published estimates; the current estimate includes an additional 43 oral health therapists, who in previous publications had been reported separately.

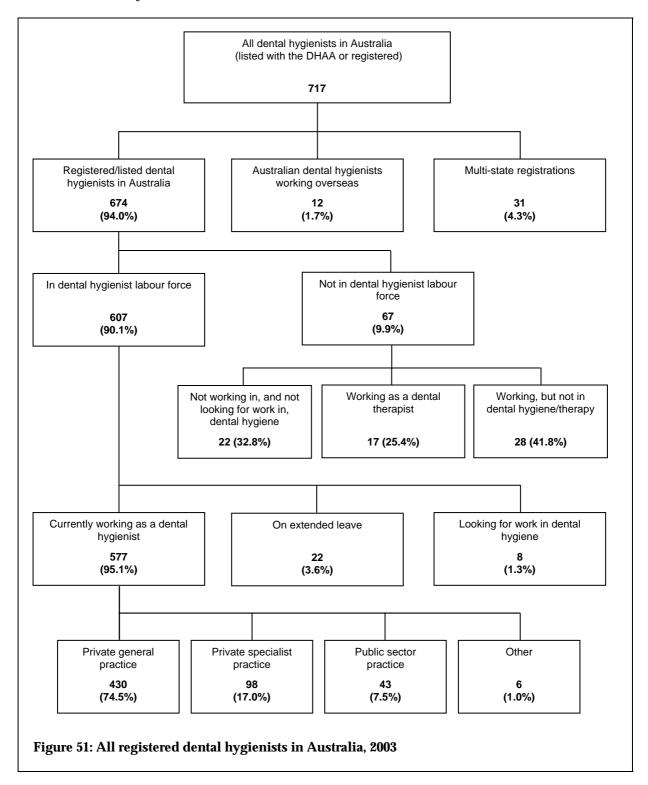
Figure 49: Employed dental therapists per 100,000 by Remoteness Area of main practice location, 2000 and 2003

- The average ages of employed therapists across Remoteness Areas were similar to the overall average with the exception of 'Remote' areas, which had an average age (31.4 years) markedly lower than the other areas (Figure 50).
- There was little variation in hours usually worked per week by Remoteness Area. Therapists in 'Remote' areas on average worked the longest week (31.9 hours) and those in 'Major City' areas worked the shortest (29.1 hours) (Figure 50).



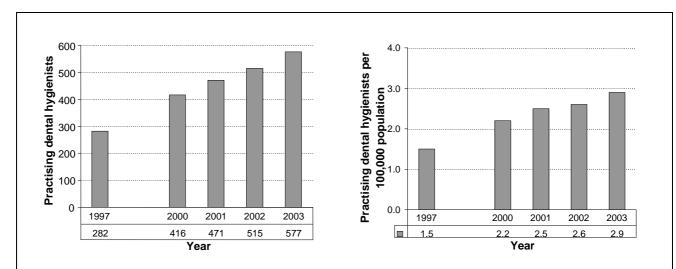
# 6 Dental hygienist labour force

The estimates reported in this section relate to the dental hygienist labour force. In 2003 the data collection was conducted in all states and territories with the exception of the Northern Territory (see Table 4).



## 6.1 Overall numbers

- In 2003 there were 717 registered dental hygienists, of whom an estimated 607 were in the labour force. Of those in the labour force, 577 were employed as a dental hygienist (Figure 51).
- Of the 67 registered hygienists not in the labour force, 22 (32.8%) were not working, 17 (25.4%) were working as a dental therapist and 28 (41.8%) were working but not in the dental service industry (Figure 51).
- The number of employed dental hygienists has more than doubled since the 1997 collection, from 282 to 577 hygienists in 2003 (Figure 52).
- The practising rate per 100,000 population has nearly doubled since the first collection in 1997. In 1997 there were 1.5 hygienists per 100,000 population, increasing to 2.9 in 2003 (Figure 52).
- In 2003 the FTE rate per 100,000 population, based on 37.5 hours per week, was 2.3 hygienists, which was less than the practising rate (2.9) (Table A.29).



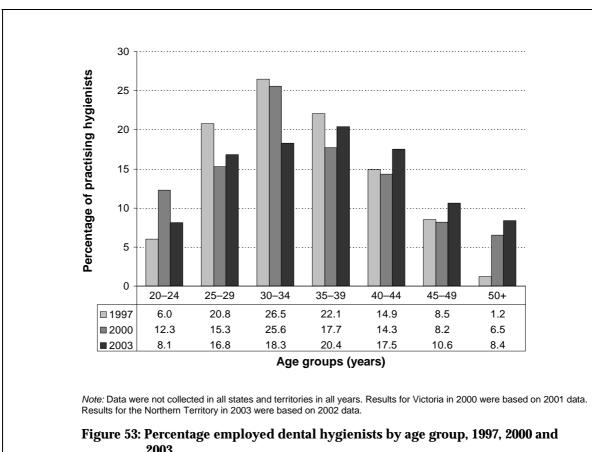
Note:Data was not collected in all states and territories in all years. Results for Victoria in 2000 are based on 2001 data. Results for the Northern Territory in 2003 were based on 2002 data

Figure 52: Employed dental hygienists and practising rate per 100,000 population, 1997 to 2003

# 6.2 Demographic characteristics

This section presents demographic characteristics of employed dental hygienists in 2003 with some comparisons to data from previous data collections.

- In 2003 only 2.9% of employed dental hygienists were male.
- The average age of employed hygienists in 2003 was 36.1 years, which was a slight increase from the average age in 2000 (34.9 years).
- Approximately one-fifth of hygienists were in the 35–39 years age group (20.3%), and less than one-fifth were in the 30-34 and 40-44 years age groups (18.3% and 17.5% respectively) (Figure 53).
- Since 1997 there has been a shift from a younger age distribution to a normal distribution, with increases in the percentages of hygienists in three of the oldest age groups, 40–44 years, 45–49 years and the 50 years or older (Figure 53).

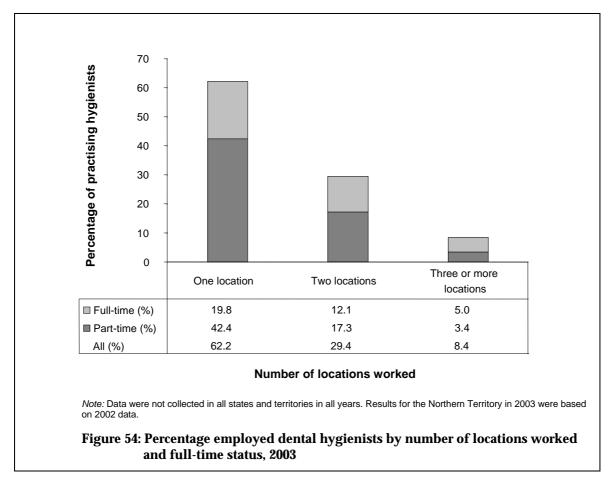


2003

## 6.3 Practice characteristics

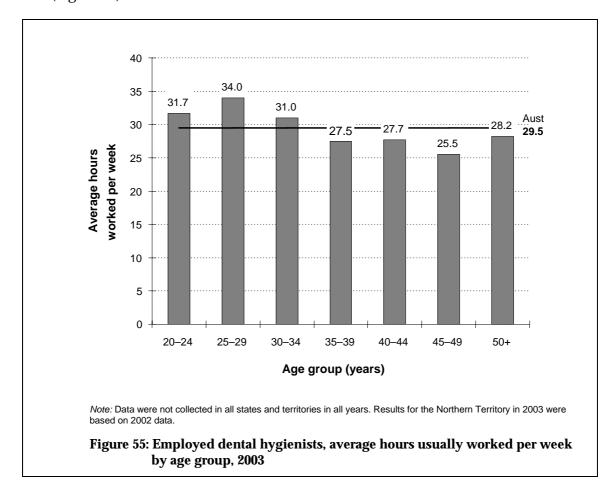
This section presents data on the practice characteristics of employed dental hygienists including hours worked and practice type.

- In 2003 three-quarters (74.5%) of employed dental hygienists were employed in general private practice, 17.0% worked in private specialist practice, 7.4% worked in public sector practice types and a small percentage (1.0%) worked in health fund clinics (Table A.31).
- Nearly two-thirds (62.2%) of hygienists reported working at one practice location only, nearly one-third (29.4%) worked at two, and 8.4% worked at three or more locations (Figure 54).

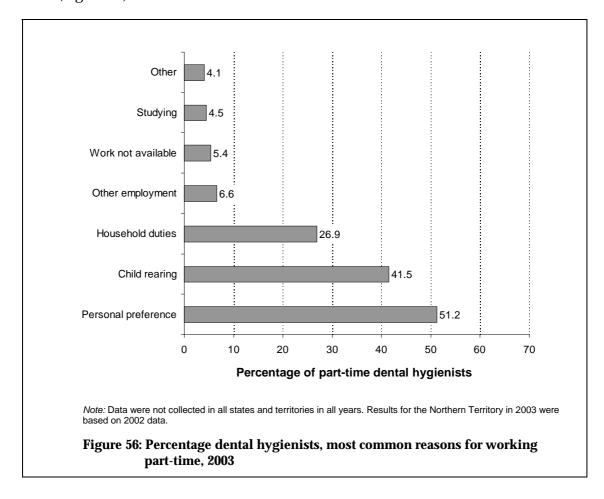


- Those employed in more than one location were asked to indicate their major reasons for working in multiple locations. More than half cited 'variety 'as a major reason and more than one-third (39.0%) cited 'personal preference'. Reasons associated with conditions of employment were not as frequently cited. Just over one-quarter (28.8%) reported that the desired number of working hours was not available at one location and approximately one-fifth (21.4%) cited that their employer operated several practice locations.
- Total hours usually worked per week were summed across all reported practice locations. The largest percentage (41.8%) of hygienists worked for 30–39 hours per week, followed by those working 20–29 hours per week (24.4%) (Table A.32).

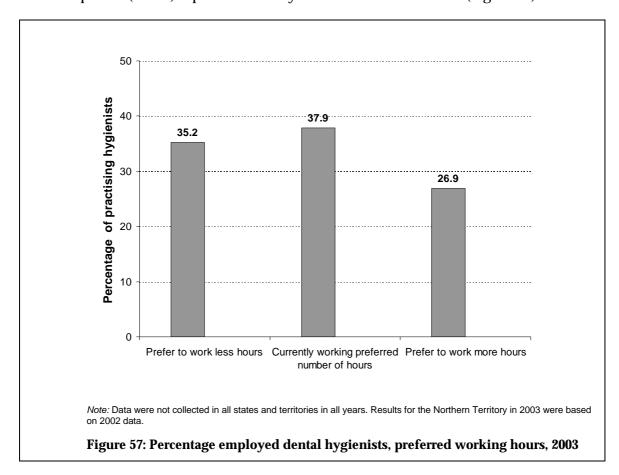
- In 2003, on average hygienists worked 29.5 hours per week, which was similar to the 2000 average (29.6 hours).
- Average hours usually worked per week varied by age group. Hygienists 20–34 years of age worked the longest week, ranging form 31.0 hours to 34.0 hours, and hygienists 35 years or older had averages lower than the overall average (Figure 55).



• More than half (63.0%) of hygienists worked part-time (less than 35 hours per week) (Table A.32). Hygienists working part-time were asked to indicate their major reasons for doing so. The most common reasons given were 'personal preference' (51.2%) followed by 'child rearing' (41.5%) and 'household duties' (26.9%). Only 5.4% cited 'work not available' as a reason for working part-time (Figure 56).



- Hours dedicated to various areas of practice were totalled for all practice locations reported. The majority of hours worked (87.6%) were dedicated to dental hygiene clinical practice, and only small percentages of time were dedicated to oral health promotion (4.6%), administration/management (2.8%), teaching/education (2.8%), chair-side assistance (1.2%) and 'other' areas of practice (1.0%).
- Hygienists were asked to cite their preferred working hours per week. Over one-third (37.9%) reported that they were currently working their preferred hours, just over one-third (35.2%) would prefer to work less hours and approximately one-quarter (26.9%) reported that they would like to work more (Figure 57).



• Although hygienists may report that they would prefer to work less or more hours, whether they actually would choose to do so given the opportunity is unknown. Nevertheless, the difference between hours worked and hours preferred, for those preferring to work more hours, was quantified as a broad measure of the potential latent labour force. The difference between hours worked and preferred was converted to FTE hygienists based on a 37.5-hour week; the latent labour force was estimated to be 24.2 hygienists, which only amounted to 5.3% of the 2003 FTE labour force (453.0 FTE hygienists).

# 6.4 Distribution by geographic classification

# State and territory

This section presents characteristics of dental hygienists across jurisdictions. These include the number of hygienists and selected demographic and practice characteristics.

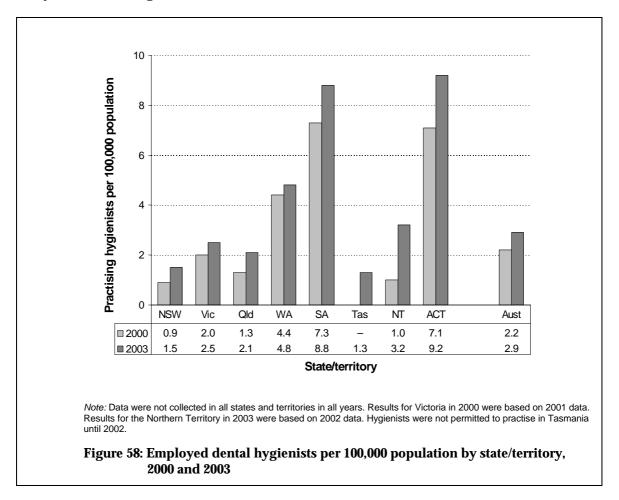
• The number of employed dental hygienists increased from 416 in 2000 to 577 in 2003, and there were increases in numbers employed in all jurisdictions (Table 11).

Table 11: Employed dental hygienists by state/territory, 2000 and 2003

Year	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
2000	58	97	45	81	110		22	2	416
2003	104	123	81	93	134	6	30	6	577

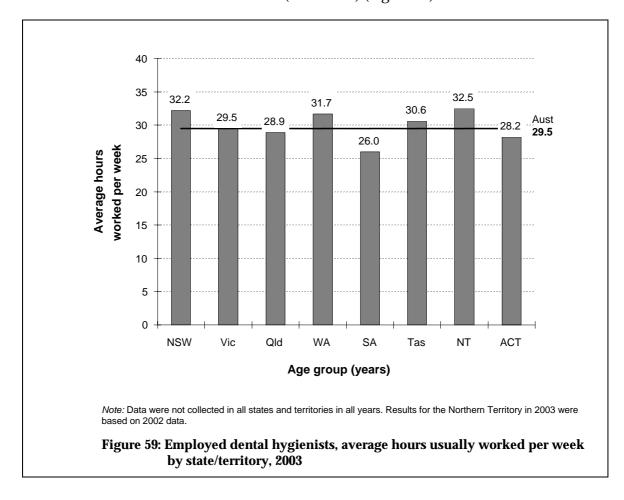
- 1. Not all columns sum to total as data have been weighted and rounded to whole numbers.
- Data were not collected in all states and territories in all years. Results for Victoria in 2000 were based on 2001 data. Results for the Northern Territory in 2003 were based on 2002 data.
- 3. Hygienists were not permitted to practise in Tasmania until 2002.

- In 2003 the distribution of dental hygienists relative to the population varied widely by state/territory. The Australian Capital Territory had the highest practising rate of hygienists per 100,000 population (9.2), followed by South Australia (8.8); in contrast, New South Wales and Tasmania had the lowest practising rates (1.5 and 1.3 respectively) (Figure 58).
- Since 2000 the practising rate per 100,000 population had increased in all jurisdictions (Figure 58).



• In 2003 there was some variation in average age by jurisdiction. The Northern Territory had the highest average age (40.0 years), followed by South Australia (39.7 years), Tasmania (38.3 years), New South Wales (38.3 years) and the Australian Capital Territory (38.2 years). The remaining jurisdictions all had average ages below the overall average for Australia (36.5), with Western Australia having the lowest average age (30.4 years) (Table A.30).

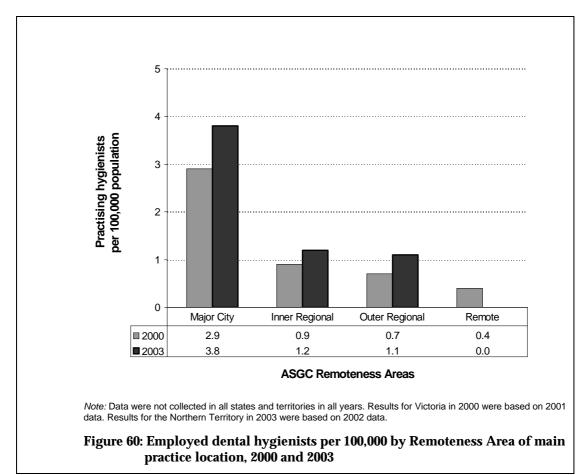
• There was some variation of average hours usually worked per week by jurisdiction. The Northern Territory had the highest average (32.5 hours per week) and South Australia had the lowest (26.0 hours) (Figure 59).



## **Remoteness Areas**

This section presents information on employed dental hygienists by Remoteness Areas as defined by the Australian Standard Geographic Classification of Remoteness (Figure 16). (For further information about this classification see ABS 2006.) Due to small cell sizes the categories of 'Remote' and 'Very Remote' regions have been collapsed into the category of 'Remote'.

- The majority of dental hygienists were employed in private dental practices and hence their distribution by regions defined by remoteness was similar to that of dentists. In 2003 the highest rate of employed hygienists per 100,000 population was in 'Major City' areas (3.8) and the lowest rate was in 'Outer Regional' areas (1.1).
- Since 2000 practising rates had increased in all regions with the exception of 'Remote' areas; in 2003 no hygienists reported working in a 'Remote' area (Figure 60).



- The average age of employed hygienists was slightly higher in less populated regions than in the most populated region. The highest average age was in 'Outer Regional' areas (38.4 years) where as in 'Major City' areas the average age was 36.3 years (Figure 61).
- Hygienists in 'Major City' areas worked a slightly longer week than those in less populated regions. Average hours usually worked were highest in 'Major City' (29.9 hours) and lowest in 'Inner Regional' areas (26.8 hours) (Figure 61).

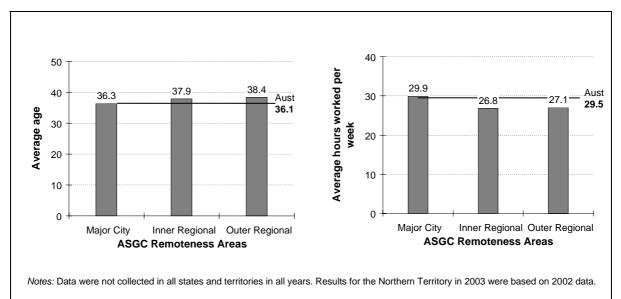


Figure 61: Employed dental hygienists, average age and average hours usually worked by Remoteness Area of main practice location, 2000 and 2003

# 7 Discussion

In 2003 the dental labour force remained dominated by dentists; dental therapists, dental prosthetists and dental hygienists together comprised approximately 23% of the total dental labour force. This occupational distribution reflects the longstanding education and registration of dentists in Australia. The three allied dental occupations emerged more recently in the order of their current numbers. Dental therapists were first trained in Australia in the late 1960s and their registration first commenced in Western Australia in the late 1990's, with the last states to commence registration (New South Wales and Queensland) in the early part of the current decade. Although dental prosthetists were first trained (non-institutional) and first registered in the late 1950s in Tasmania, training and registration did not commence in mainland states until the 1970's and 1980's, with the exception of Queensland where registration did not commence until 1993. Dental hygienists were first trained and registered in South Australia in 1971, followed by Western Australia, the Australian Capital Territory and Victoria in the mid to late 1990's, and the remaining states/territories commencing registration of hygienists in the early part of the current decade.

### Occupational roles

While allied dental practitioners supply the minority of dental visits, they play important roles in the delivery of dental services to defined population subgroups. They can be both complementary to, and a substitute for, dentists under particular circumstances. Recent changes to the education and scope of practice of hygienists and therapists will have a substantial impact on their future role in the dental health team. There has been an increase in the number of allied dental practitioner courses and these new degree courses allow newly graduated practitioners to register and practice as both a hygienist and a therapist. There have also been recent changes in practice scope (in some jurisdictions) regarding an increase in the age of patients to whom a dental therapist can provide services. The data presented in this report does not provide any early indication as to how these recent changes will impact on the dental labour force in the longer term.

# Demographic shifts in the dental labour force

The proportion of female dentists has continued to increase, and it is projected that by 2015 female dentists will comprise approximately 40% of the dentist labour force (Teusner & Spencer 2003). While the average age of the labour force has remained relatively stable, the age distribution, particularly of male dentists, continues to shift to older age groups. The combined effect of ageing and increasing feminisation of the dentist labour force may have an impact on the overall capacity of the dentist labour force to provide services. Female dentists on average work fewer hours than male dentists and older dentists work fewer hours than younger dentists. Consequently, the overall average hours worked per week may decline throughout the next decade. Hence the growth in the labour force that occurs during that time may not be matched by a similar growth in the labour force's capacity to provide services; that is, growth in capacity may be less than that indicated by increased numbers of dentists.

The age distribution of both dental therapists and dental prosthetists continued to shift to the older age groups, and this may result in greater attrition through retirement and a decline in overall numbers practising over the next decade. The introduction of new courses may reverse the shifting age distribution among dental therapists; however, it remains to be seen what practice pathways newly dual-qualified allied practitioners will undertake. The dental hygienist labour force remains predominantly female and it has aged slightly since 2000; however, with the expected growth in new graduates the age distribution is expected to remain relatively stable throughout the next decade.

## Private and public sector distribution

The dental labour force was unevenly distributed between the private and public sectors. This was indicated most clearly when comparing the estimated 30% of the adult population eligible for public dental visits with the 16.4% of dentists who work in clinical practice in the public sector. The proportion of dentists employed in public sector practice varied by state/territory, with the percentage solely employed in the public sector ranging from 9.3% in the Australian Capital Territory to 24.3% in the Northern Territory.

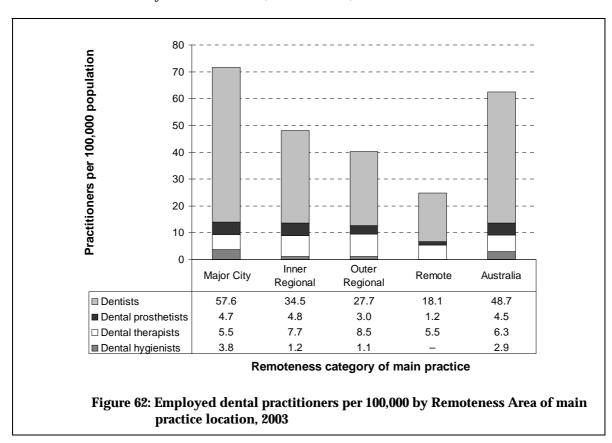
Dental hygienists are mostly employed by dentists in the private sector and therapists remain mostly employed in the public sector. However, recent legislative changes allowing therapists to practise in private practice and the emergence of new courses graduating dual-qualified hygienists and therapists means that these long-established patterns of employment are likely to change dramatically over the next decade.

Dental prosthetists remain largely self-employed or employed in the private sector and this is unlikely to change in the near future.

# Geographic distribution of dentists

The geographic distribution of the dental labour force is different to that of the general population. The broadest indicator of this uneven distribution is evident among the states and territories, where considerable variation exists in the supply of dentists per 100,000 population. The highly urbanised Australian Capital Territory and South Australia had the highest practising rates (66.8 and 54.5 dentists per 100,000 population respectively). The larger states had similar rates, ranging between 46.5 and 50.1, while the Northern Territory and Tasmania had the lowest rates (32.7 and 33.0 dentists per 100,000 population respectively). The comparatively low rates of Tasmania and the Northern Territory are most likely related to a lack of dentist training in those jurisdictions and the perceived unattractiveness or working/living in less urbanised areas.

The second level of geographic distribution is across regions defined by remoteness. Employed dentists were unevenly distributed, with the practising rate per 100,000 population decreasing markedly from the most populated region, 'Major City' areas, to the least populated region, 'Remote/Very Remote' areas (from 57.6 to 18.1 dentists per 100,000 population) (Figure 62). This pattern of distribution was similar to the geographic distribution of the medical labour force in 2003; however, the disparity in supply between 'Major City' and 'Remote' areas was greater for dentists. The number of medical doctors per 100,000 population was 2.1 times higher in 'Major City' areas than in 'Remote 'areas and 2.5 times higher than 'Very Remote' areas. In contrast, the number of dentists per 100,000 population was 3.2 times higher in 'Major City' areas than in 'Remote/Very Remote' areas (AIHW 2005a).



### Geographic distribution of allied dental practitioners

Distribution among the states and territories of allied dental practitioners was disproportionate to the population's distribution. This uneven distribution reflects the differences between the states and territories in local dental health policy and in employment and training opportunities.

For example, practising rates of therapists were greatest in Western Australia, where therapists have been allowed to work in the private sector since the late 1990s, creating greater employment opportunities and thereby possibly increasing retention of therapists. Comparatively low rates of therapists in New South Wales reflect the relatively fewer employment opportunities existing within the school dental service in that jurisdiction.

The existing distribution of dental hygienists can be correlated with the historical availability of training programs; in South Australia training of hygienists commenced in 1971, more than two decades prior to other jurisdictions, resulting in a practising rate nearly three times the national average.

For dental prosthetists, in addition to the availability of training courses, demand for services may be another factor that has influenced their distribution. The correlation of supply with need is reflected in the higher rates of dental prosthetists per 100,000 population apparent in the states with relatively older populations who have a greater need for dentures.

Distribution across Remoteness Areas was relatively even for dental therapists in contrast to other dental practitioners, with the highest practising rates in 'Inner Regional' and 'Outer Regional' areas. The markedly different distribution of dental therapists from other dental practitioners can be explained by their employment locations, with the majority working within the state/territory school dental services. Predictably hygienists were distributed in a similar pattern to dentists, as dentists are their main employers. There were similar practising rates for dental prosthetists in 'Major City' and 'Inner Regional' areas, but these rates were four times higher than the lowest rate in 'Remote' areas.

In summary, the bulk of the dental labour force, with the exception of dental therapists, show a gradient in their geographic distribution. The availability of dental providers was highest in 'Major City' areas and lowest in 'Remote' areas. As with the wider health labour force, further monitoring of the distribution of the dental labour force will be valuable in informing health policy.

# 8 References

ABS (Australian Bureau of Statistics) 2006. Australian Standard Geographical Classification. 2005. Cat. No. 1216.0.

AIHW (Australian Institute of Health and Welfare) 2005a. Medical labour force 2003. Cat. No. HWL 32. Canberra: AIHW (National Health Labour Force Series No. 32).

AIHW 2005b. Rural, regional and remote health – Indicators of health. Canberra: AIHW.

Brownlea AA & Taylor CM 1984. Australia's environment and its influences on health. Social Science and Medicine 18: 901–907.

Humphreys JS 1988. Social provision and service delivery: problems of equity, health, and health care in rural Australia. Geoforum 19: 323–38.

Humphreys J, Hegney D, Lipscombe J, Gregory G, & Chater B 2002. Whither rural health? Reviewing a decade of progress in rural health. Australian Journal of Rural Health 10: 2–14.

Stewart JF, Carter KD & Brennan DS 1998. Adult access to dental care – rural and remote dwellers. AIHW Dental Statistics and Research Series No. 17, The University of Adelaide, Adelaide.

Teusner DN & Spencer AJ 2003. Projections of the Australian dental labour force. Cat. no. POH 1. Canberra: AIHW (Population Oral Health Series No. 1).

# **Appendix A Data tables**

# A1 Dentist tables

Table A.1: Registered dentists by work status, states and territories, 2003

Practice status	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total	Per cent
(a)										
Working in dentistry <sup>(a)</sup>	3,346	2,284	1,821	957	833	157	216	65	9,678	84.9
Mainly in another state	70	37	30	5	14	4	13	12	185	1.6
Only in another state	131	29	74	27	18	4	7	7	297	2.6
On leave	35	13	_	8	1	3	3	_	62	0.5
Overseas	293	106	136	34	16	5	_	4	593	5.2
Not working	164	38	62	12	11	1	8	2	297	2.6
Not working in dentistry	50	32	18	8	8	_	4	_	120	1.1
Retired	84	30	_	36	14	_	4	4	171	1.5
Total	4,172	2,568	2,141	1,086	915	175	254	93	11,404	100.0
Employed in state/territory (per cent)	80.2	88.9	85.0	88.1	91.0	89.9	85.1	69.8	84.9	
Percentage female (per cent)	25.3	29.7	25.2	24.6	26.1	25.6	32.8	24.5	26.4	
Practising rate <sup>(b)</sup>	50.1	46.5	47.9	49.1	54.5	33.0	66.8	32.7	48.7	
FTE rate (35 hrs per week) <sup>(c)</sup>	57.4	49.7	53.1	52.8	57.7	37.3	71.8	36.9	53.8	
FTE rate (37.5 hrs per week) <sup>(c)</sup>	53.5	46.4	49.6	49.3	53.8	34.8	67.0	34.4	50.3	
FTE rate (40 hrs per week) <sup>(c)</sup>	50.2	43.5	46.5	46.2	50.5	32.6	62.8	32.3	47.1	

<sup>(</sup>a) Employed solely or mainly in state/territory of registration.

<sup>(</sup>b) Practising rate: the number of practising dentists per 100,000 population.

<sup>(</sup>c) Full-time equivalent dentists per 100,000 population. Calculated by multiplying the number of employed dentists by the average weekly hours worked and then dividing by a reference week (35, 37.5 and 40 hours/week have been provided). This value is then population standardised to allow comparisons with other states/territories.

Table A.2: Australian university dentistry course completions by institution and sex, 1993 to 2003

Institution	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
						Males					
The University of Adelaide	24	23	24	31	18	22	17	26	22	15	25
The University of Melbourne	29	31	24	27	25	19	26	22	22	19	25
The University of Queensland	30	32	26	20	29	32	30	25	25	28	30
The University of Sydney	43	54	52	32	47	24	37	26	25	32	34
The University of Western Australia	19	8	20	12	12	16	15	13	18	18	17
Total	145	148	146	122	131	113	125	112	112	112	131
					F	emales					
The University of Adelaide	16	18	21	18	20	9	23	29	14	17	20
The University of Melbourne	12	15	20	26	24	23	18	24	23	26	23
The University of Queensland	16	19	14	22	18	12	18	36	32	35	41
The University of Sydney	25	31	33	26	21	26	24	26	29	26	27
The University of Western Australia	13	10	9	15	13	11	15	20	14	11	9
Total	82	93	97	107	96	81	98	135	112	115	120
					Р	ersons					
The University of Adelaide	40	41	45	49	38	31	40	55	36	32	45
The University of Melbourne	41	46	44	53	49	42	44	46	45	45	48
The University of Queensland	46	51	40	42	47	44	48	61	57	63	71
The University of Sydney	68	85	85	58	68	50	61	52	54	58	61
The University of Western Australia	32	18	29	27	25	27	30	33	32	29	26
Total	227	241	243	229	227	194	223	247	224	227	251

Table A.3: Employed dentists, sex and age by state/territory, 2003

Age group (years)	NSW	Vic	Qld	SA	WA	Tas	ACT	NT	Total
					Males				
<25	46	23	36	6	23	1	1	_	137
25–29	182	124	99	41	35	1	4	4	490
30–34	248	154	149	62	62	11	17	7	710
35–39	323	180	128	38	72	12	9	2	763
40–44	287	225	187	59	107	10	29	7	911
45–49	406	219	208	107	110	27	26	16	1,119
50-54	357	223	158	125	119	24	25	4	1,035
55–59	271	204	171	110	103	12	18	11	899
60–64	165	120	120	32	58	10	4	2	510
65–69	104	83	56	22	22	5	7	_	299
70–74	62	37	41	7	9	3	7	_	166
75+	43	21	13	8	6	_	3	_	94
Total	2,494	1,612	1,365	617	728	117	148	51	7,132
				F	emales				
<25	29	34	36	4	9	_	5	_	116
25–29	159	122	83	44	56	7	8	_	479
30–34	176	123	87	37	32	4	21	4	484
35–39	151	114	67	27	37	4	8	4	412
40-44	121	109	72	25	34	7	13	2	383
45–49	109	69	55	40	28	7	10	_	320
50-54	62	56	28	20	18	5	3	2	194
55–59	20	25	15	16	10	3	_	2	92
60-64	13	13	3	1	3	4	_	2	39
65–69	6	5	6	1	1	_	_	_	20
70–74	1	_	3	_	_	_	_	_	4
75+	3	_	_	1	_	_	_	_	4
Total	852	672	455	216	229	41	68	14	2,546
					ersons				
<25	75	57	72	9	32	1	7	_	253
25–29	342	246	182	85	91	8	12	4	968
30–34	425	277	236	99	94	15	38	11	1,194
35–39	474	293	195	65	110	16	17	5	1,176
40–44	409	334	259	84	141	16	42	9	1,293
45–49	515	288	263	147	138	34	36	16	1,438
50-54	419	279	186	145	137	30	27	5	1,229
55–59	290	229	186	126	114	15	18	12	991
60–64	178	134	122	33	61	14	4	4	549
65–69	109	88	62	24	23	5	7	_	319
70–74	63	37	44	7	9	3	7	_	170
75+	46	21	13	9	6	_	3	_	98
Total	3,346	2,284	1,821	833	957	157	216	65	9,678

 $Table \ A.4: Employed \ dentists, type \ of \ main \ practice \ by \ age \ group, \ 2003$ 

			Age grou	p (years)			
Practice type	<30	30–39	40–49	50–59	60+	Total	Average age
			Male	s			
Solo	71	447	758	778	510	2,562	50.0
Solo with assistant	47	221	381	314	101	1,063	46.7
Partnership	33	151	222	173	55	634	45.9
Associateship	66	239	332	324	101	1,062	45.9
Assistant	228	200	95	82	65	669	38.2
Other private	12	24	23	28	28	115	48.8
Dental hospital	62	44	42	48	66	263	46.2
Other public	38	49	59	76	40	262	46.1
Mainly general dental	46	68	74	60	45	293	44.7
Tertiary education institution	11	14	27	30	28	109	50.7
Other	14	16	16	22	31	99	49.6
Total	627	1,473	2,029	1,934	1,069	7,132	46.9
			Femal	les			
Solo	17	121	160	73	27	398	43.8
Solo with assistant	63	89	87	20	2	262	37.9
Partnership	20	90	80	35	6	230	40.8
Associateship	45	98	53	25	3	224	37.6
Assistant	241	248	128	37	3	657	34.2
Other private	16	25	16	3	2	163	36.4
Dental hospital	64	65	45	21	6	200	37.1
Other public	27	57	44	24	7	159	40.1
Mainly general dental	75	67	61	30	8	241	37.4
Tertiary education institution	10	17	20	13	2	62	41.9
Other	15	21	8	5	_	49	34.6
Total	595	896	702	285	67	2,546	38.1
			Perso	ns			
Solo	88	568	918	851	537	2,961	49.1
Solo with assistant	110	310	468	334	103	1,325	45.0
Partnership	53	241	302	207	61	864	44.5
Associateship	111	337	385	350	103	1,286	44.5
Assistant	469	447	223	119	68	1,326	36.2
Other private	28	49	40	31	30	178	44.3
Dental hospital	126	109	87	70	73	464	42.2
Other public	65	106	103	99	47	421	43.8
Mainly general dental	121	135	135	90	53	534	41.4
Tertiary education institution	21	31	47	42	30	171	47.5
Other	29	37	24	27	31	148	44.6
Total	1,222	2,370	2,732	2,220	1,136	9,678	44.6

Table A.5: Employed dentists, sector of main practice and selected characteristics, 2003

·	Public	Private	Total
	Numb	per employed	
Persons	1,590	8,088	9,678
	Pe	ercentage	
Per cent Female	41.6	23.3	26.3
	Averag	ge age (years)	
Males	46.2	47.0	46.9
Females	38.4	38.0	38.1
Persons	42.9	44.9	44.6
	Average total hours		
Males	37.2	41.0	40.5
Females	35.3	33.2	33.8
Persons	36.4	39.1	38.7
	Average direct patient	t care hours worked per weel	k
Males	30.6	35.9	35.2
Females	30.6	29.7	29.9
Persons	30.6	34.4	33.8
	Percen	tage part-time	
Males	25.6	19.1	19.9
Females	30.8	44.1	40.6
Persons	27.8	24.9	25.4

<sup>1.</sup> Full-time is working 35 hours or more per week.

<sup>2.</sup> The statistics for the 'private' group include dentists that cited 'other' practice type.

Table A.6: Employed dentists, sex and area of main practice by state/territory, 2003

Area of main practice	NSW <sup>(a)</sup>	Vic	Qld	WA	SA	Tas	ACT	NT	Aust	Per cent
					Male	es				
General practice	2,145	1,324	1,147	606	492	96	112	42	5,964	61.6
Registered specialist	276	221	164	91	73	16	31	9	882	9.1
Restricted practice	_	18	8	13	14	1	4		59	0.6
Administration	14	14	17	8	12	1	1	_	67	0.7
Teaching/education	26	25	20	6	20	_	_	_	98	1.0
Research	8	1	1	_	4	1	_	_	15	0.2
Other	25	8	9	4	2	_	_	_	48	0.5
Total	2,494	1,612	1,365	728	617	117	148	51	7,132	73.7
					Fema	les				
General practice	761	584	407	206	161	38	64	14	2,234	23.1
Registered specialist	47	59	25	17	22	3	3	_	176	1.8
Restricted practice	_	9	_	1	4	_	_	_	14	0.1
Administration	10	3	1	1	2	_	1	_	20	0.2
Teaching/education	12	3	11	4	16	_	_	_	47	0.5
Research	2	1	3	_	7	_	_	_	13	0.1
Other	20	12	8	_	2	_	_	_	42	0.4
Total	852	672	455	229	216	41	68	14	2,546	26.3
					Perso	ns				
General practice	2,906	1,908	1,554	812	654	134	176	56	8,200	84.7
Registered specialist	322	280	189	107	95	19	34	9	1,056	10.9
Restricted practice	_	27	8	14	18	1	4	_	73	0.8
Administration	24	17	18	9	14	1	3	_	87	0.9
Teaching/education	38	29	30	10	37	_	_	_	145	1.5
Research	10	2	4	_	11	1	_	_	28	0.3
Other	45	20	17	4	5	_	_	_	90	0.9
Total	3,346	2,284	1,821	957	833	157	216	65	9,678	100.0

<sup>(</sup>a) The NSW labour force survey does not differentiate between Registered Specialist and Restricted Practice.

Table A.7: Employed dentists, sex, average age and area of main practice by state/territory, 2003

Area of main practice	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
				Male	es				
General practice	46.1	46.6	46.0	46.1	47.0	47.7	48.7	45.5	46.4
Registered specialist/ restricted practice	49.7	48.3	49.8	51.0	51.9	50.3	45.8	47.4	49.6
Administration	58.6	55.1	55.0	54.2	51.9	50.0	38.0	_	54.6
Teaching/education	51.4	50.1	43.0	56.2	42.2	_	_	_	47.7
Research	63.7	26.0	82.0	_	67.0	57.0	_	_	62.6
Other	38.2	45.2	48.4	46.0	39.0	_	_	_	41.9
Total	46.6	47.0	46.6	46.9	47.7	48.2	47.9	45.8	46.9
				Fema	ales				
General practice	37.8	37.7	37.1	37.2	38.0	43.0	36.3	43.5	37.7
Registered specialist/ restricted practice	41.0	41.7	38.5	44.8	47.0	44.0	32.5	_	42.0
Administration	40.4	39.3	55.0	50.0	49.5	_	47.0	_	43.9
Teaching/education	45.0	33.0	45.2	44.0	39.6	_	_	_	42.0
Research	39.4	30.0	37.2	_	46.7	_	_	_	42.1
Other	36.7	34.1	37.4	_	44.0	_	_	_	36.5
Total	38.0	38.1	37.5	38.0	39.7	43.0	36.3	43.5	38.1
				Pers	ons				
General practice	43.9	43.9	43.7	43.8	44.8	46.4	44.2	45.0	44.0
Registered specialist/ restricted practice	48.4	46.9	48.4	50.1	50.8	49.5	44.9	47.4	48.3
Administration	52.2	52.0	55.0	53.6	51.5	50.0	42.5	_	52.5
Teaching/education	49.4	48.1	43.8	51.6	41.1	_	_	_	45.9
Research	58.5	28.0	52.0	_	53.4	57.0	_	_	53.2
Other	37.6	38.7	42.9	46.0	41.5	_	_	_	39.4
Total	44.4	44.4	44.3	44.8	45.6	46.9	44.3	45.3	44.6

Table A.8: Employed dentists, average hours worked per week and area of main practice by state/territory, 2003

Area of main practice	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
			Average	total ho	ours wo	rked pe	r week		
General practice	39.9	37.2	38.7	37.7	37.5	38.3	37.7	39.0	38.6
Registered specialist/ restricted practice	43.2	39.2	41.9	38.9	37.1	46.6	37.1	42.6	40.8
Administration	35.9	36.9	38.1	35.3	42.0	59.0	_	_	37.9
Teaching/education	38.9	34.0	28.0	30.4	29.7	_	_	_	32.9
Research	40.0	38.4	45.5	_	26.7	_	_	_	34.4
Other	37.6	34.0	32.1	35.5	29.8	_	_	_	35.3
Total	40.1	37.4	38.8	37.7	37.0	39.6	37.6	39.5	38.7
			Averag	e direct	care ho	urs per	week		
General practice	34.9	33.2	34.8	33.9	33.7	34.1	33.4	34.0	34.3
Registered specialist/ restricted practice	35.9	31.9	35.6	32.3	31.3	39.3	35.0	31.3	34.0
Administration	12.8	6.9	9.5	2.5	11.3	19.0	_	_	10.1
Teaching/education	18.8	9.6	15.6	21.0	10.8	_	_	_	14.6
Research	15.6	15.0	18.2	_	15.0	_	_	_	15.9
Other	31.6	25.7	33.0	30.5	19.7	_	_	_	29.9
Total	34.7	32.6	34.4	33.6	32.3	34.6	33.7	33.7	33.8

Table A.9: Employed dentists, sex, sector and type of main practice by state/territory, 2003

Sector/type of main practice	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Public				Ma	ales				
Dental hospital	77	52	93	13	27	1	_	_	263
Mainly school dental	_	5	28	23	15	1	_	2	74
Mainly general dental	70	63	63	30	47	12	7	2	293
Defence forces	21	8	14	10	4	_	3	7	66
Other public	176	18	17	1	7	_	1	2	122
Tertiary education institution	22	28	19	10	28	_	_	2	109
Total	265	173	234	88	128	15	10	14	928
Private									
Solo	1,049	501	444	266	179	47	59	18	2,562
Solo with assistant	378	283	211	109	58	22	_	4	1,063
Partnership	215	128	127	78	69	3	13	2	634
Associateship	300	289	157	132	117	15	44	9	1,062
Assistant	209	188	138	47	49	14	21	4	669
Locum	29	31	22	5	4	_	1	2	93
Industry	10	6	_	3	4	_	_	_	22
Total .	2,190	1,425	1,097	639	479	100	138	37	6,105
Other									
Other	39	14	34	1	9	1	_	_	99
Total	2,494	1,612	1,365	728	617	117	148	51	7,132
Public				Fen	nales				
Dental hospital	79	37	47	13	21	3	_	_	200
Mainly school dental	_	15	18	5	7	_	1	_	45
Mainly general dental	49	92	34	21	34	4	4	4	241
Defence forces	7	6	11		1	_	8	_	32
Other public	42	21	8	1	7	_	1	_	81
Tertiary education institution	12	6	17	9	18	_	_	_	62
Total	190	176	135	49	88	7	14	4	662
Private									
Solo	143	103	58	48	31	4	7	5	398
Solo with assistant	89	80	40	35	16	1	_	_	262
Partnership	89	54	39	19	15	3	10	2	230
Associateship	78	52	32	30	19	10	4	_	224
Assistant	221	186	124	37	35	16	33	4	657
Locum	7	8	14	9	1	_	_	_	39
Industry	9	10	1	_	4	_	_	_	24
Total	636	493	306	178	122	34	53	11	1,834
Other				-					7===
Other	26	2	14	1	5	_	_	_	49
Total	852	672	455	229	216	41	68	14	2,546

(continued)

Table A.9 (cont): Employed dentists, sex, sector and type of main practice by state/territory, 2003

Sector/type of main practice	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Public					Persons				
Dental hospital	157	89	139	26	48	4	_	_	464
Mainly school dental	_	18	46	28	22	1	1	2	119
Mainly general dental	119	155	97	50	81	16	10	5	534
Defence forces	27	14	25	10	5	_	10	7	98
Other public	118	40	25	3	14	_	3	2	203
Tertiary education institution	34	33	37	19	46	_	_	2	171
Total	454	349	368	137	217	22	25	18	1,590
Private									
Solo	1,192	604	502	314	210	52	65	23	2,961
Solo with assistant	467	363	251	144	74	23	_	4	1,325
Partnership	304	181	165	97	85	5	23	4	864
Associateship	378	341	188	162	135	24	48	9	1,286
Assistant	430	374	261	84	86	30	53	7	1,326
Locum	36	39	36	14	5	_	1	2	132
Industry	19	16	1	3	7	_	_	_	46
Total	2,826	1,918	1,404	817	602	134	191	47	7,940
Other									
Other	65	16	49	3	14	1	_	_	148
Total	3,346	2,284	1,821	957	833	157	216	65	9,678

Table A.10: Employed dentists, type of main practice and average hours worked per week by state/territory, 2003

Sector/type of main practice	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
Private									
Solo	42.9	39.1	43.0	38.6	39.9	41.8	43.7	39.0	41.5
Solo with assistant	44.5	41.5	42.0	39.4	40.9	43.0	_	46.6	42.5
Partnership	39.2	38.1	39.1	37.4	38.1	47.5	39.1	32.5	38.7
Associateship	39.7	40.2	39.9	38.4	38.0	37.5	39.7	39.6	39.5
Assistant	32.3	31.4	31.4	33.5	33.7	36.2	31.5	45.5	32.2
Other private	31.9	30.1	26.9	25.5	38.8	_	_	18.0	30.0
Total	40.5	37.9	39.4	37.7	38.4	40.2	38.5	39.4	39.2
Public									
Dental hospital	38.6	34.3	36.2	41.4	30.0	22.3	_	_	36.2
Other public	37.0	32.9	38.8	38.2	34.5	36.0	33.4	36.4	36.4
Mainly general dental	38.1	36.3	39.3	38.3	34.0	37.5	26.1	39.7	37.0
Tertiary education institution	41.6	33.3	29.7	30.6	35.3	_	_	60.0	34.9
Total	38.2	34.8	37.1	37.7	33.5	34.4	30.0	39.8	36.4
Other									
Other	36.2	30.7	33.0	43.0	34.9	59.0	_	_	34.8
Total	40.1	37.4	38.8	37.7	37.0	39.6	37.6	39.5	38.7

Table A.11: Employed dentists, type of main practice and average age by state/territory, 2003

Sector/type of main practice	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
Private									
Solo	48.6	49.6	49.6	48.5	50.0	50.8	49.7	49.0	49.1
Solo with assistant	44.5	45.0	45.1	45.0	46.2	48.9	_	41.5	45.0
Partnership	43.9	42.8	44.6	47.1	46.6	49.3	44.9	46.5	44.5
Associateship	43.8	46.0	42.6	43.4	46.8	41.3	45.9	40.2	44.5
Assistant	36.5	36.5	36.4	34.4	34.3	38.6	36.0	38.5	36.2
Other private	46.9	44.9	42.4	39.7	41.3	_	51.0	43.0	44.3
Total	44.9	44.8	44.6	45.1	45.9	46.0	44.4	44.9	44.9
Public									
Dental hospital	40.5	43.1	43.6	42.6	40.8	54.7	_	_	42.2
Other public	41.4	44.8	42.2	43.5	47.1	47.0	40.5	45.7	43.8
Mainly general dental	40.8	38.7	41.7	41.0	43.5	52.1	47.9	49.0	41.4
Tertiary education institution	48.9	46.7	44.9	48.0	49.0	_	_	45.0	47.5
Total	41.5	41.8	42.8	43.1	44.7	52.3	43.6	46.6	42.9
Other									
Other	41.1	53.9	45.8	56.0	41.5	50.0	_	_	44.6
Total	44.4	44.4	44.3	44.8	45.6	46.9	44.3	45.3	44.6

Table A.12: Employed dentists, sex, sector and type of main practice by Remoteness Area of main practice, 2003

_	Rer	noteness Area	of main practice	e	
Sector/type of main practice	Major City	Inner Regional	Outer Regional	Remote	Total
			Males		
Public					
Dental hospital	208	36	19	_	263
Mainly school dental	49	16	10	_	74
Mainly general dental	191	65	8	9	293
Defence forces	42	13	9	2	66
Other public	90	21	9	3	122
Tertiary education institution	103	4	3	_	109
Total	683	154	77	13	928
Private					
Solo	1,966	387	180	29	2,562
Solo with assistant	826	178	56	4	1,063
Partnership	519	79	34	2	63
Associateship	871	125	53	13	1,06
Assistant	503	127	34	4	669
Locum	50	33	9	1	9:
Industry	20	1	1	<u>.</u>	2
Total	<i>4,755</i>	930	367	53	6,10
Other	4,700	000	007	00	0, 10
Other	80	11	17	1	9
Total	5,518	1,095	451	69	7,13
Total	3,310	1,033	451	03	7,13
Public			Females		
Dental hospital	170	20	9	1	20
Mainly school dental	30	11	3	1	4
Mainly general dental	185	35	21	1	24
Defence forces	20	9	2	1	3
Other public	68	10	2	_	8
Tertiary education institution	58	3	1		6
Total	<b>530</b>	88	39	5	66
Private	550	00	39	3	00
	205	45	04	7	20
Solo	325	45	21	7	39
Solo with assistant	216	36	8	1	26
Partnership	182	37	8	3	23
Associateship	182	31	11	_	22
Assistant .	537	96	22	2	65
Locum	33	4	1	1	3
Industry	22	1	_	1	2
Total	1,497	250	73	15	1,83
Other					
Other	43	2	1	2	49
Total	2,070	340	113	23	2,546

(continued)

Table A.12 (cont.): Employed dentists, sex, sector and type of main practice by Remoteness Area of main practice, 2003

		Remotenes	ss area of main <sub>l</sub>	oractice	
Sector/type of main practice	Major City	Inner Regional	Outer Regional	Remote	Total
Public			Persons		
Dental hospital	377	57	28	1	464
Mainly school dental	79	27	13	1	119
Mainly general dental	376	100	48	10	534
Defence forces	62	22	11	2	98
Other public	158	31	11	3	203
Tertiary education institution	161	6	4	_	171
Total	1,213	242	117	18	1,590
Private	,				,
Solo	2,291	432	201	36	2,961
Solo with assistant	1,042	213	64	5	1,325
Partnership	700	116	43	5	864
Associateship	1,053	156	64	13	1,286
Assistant	1,040	223	57	6	1,326
Locum	83	37	10	2	132
Industry	42	2	1	1	46
Total	6,251	1,180	439	69	7,940
Other					
Other	124	13	8	4	148
Total	7,588	1,435	564	91	9,678

Table A.13: Employed dentists, average hours worked per week, sector and type of main practice by Remoteness Area of main practice, 2003

		Remotenes	ss area of main p	oractice	
Sector/type of main practice	Major City	Inner Regional	Outer Regional	Remote	Total
Public					
Dental hospital	36.7	33.4	34.2	38.0	36.2
Other public	36.2	36.6	37.7	37.6	36.4
Mainly general dental	36.5	37.8	39.2	38.5	37.0
Tertiary education institution	34.4	51.1	60.0	_	34.9
Total	36.2	36.6	37.9	38.2	36.4
Private					
Solo	41.5	42.2	40.6	41.5	41.5
Solo with assistant	42.5	42.4	42.6	37.4	42.5
Partnership	39.1	37.5	37.6	24.6	38.7
Associateship	39.7	38.3	40.1	33.2	39.5
Assistant	31.8	33.1	34.6	37.6	32.2
Other private (a)	78.2	32.4	40.9	37.0	30.0
Total	39.2	39.2	39.7	37.9	39.2
Other					
Other	35.2	32.5	30.8	39.6	34.8
Total	38.7	38.8	39.2	38.0	38.7

<sup>(</sup>a) Includes 'Other sector'.

90

Table A.14: Employed dentists, average age, sector and type of main practice by Remoteness Area of main practice, 2003

		Remotenes	ss area of main p	oractice	
Sector/type of main practice	Major City	Inner Regional	Outer Regional	Remote	Total
Public					
Dental hospital	42.6	42.3	37.7	23.0	42.2
Other public	44.3	42.6	42.9	41.0	43.8
Mainly general dental	40.9	43.1	43.4	34.0	41.4
Tertiary education institution	47.4	49.9	49.9	_	47.5
Total	43.1	42.1	42.1	35.9	42.9
Private					
Solo	48.8	50.3	51.4	45.5	49.1
Solo with assistant	44.7	46.3	44.5	46.2	45.0
Partnership	44.3	45.5	45.7	40.2	44.5
Associateship	44.7	43.7	43.4	40.4	44.3
Assistant	36.2	36.1	37.6	37.4	36.2
Other private (a)	42.1	50.5	48.6	40.8	44.3
Total	44.7	45.5	46.8	43.3	44.9
Other					
Other	43.7	49.6	51.7	44.1	44.6
Total	44.4	45.1	45.9	41.8	44.6

<sup>(</sup>a) Includes 'Other sector'.

Table A.15: Employed dentists, area of main practice, average hours and direct care hours worked per week by Remoteness Area of main practice, 2003

		Remoteness	area of main	practice					
Area of main practice	Major City	Inner Regional	Outer Regional	Remote	Total				
		Average	total hours wo	orked					
General practice	38.5	38.6	38.9	38.3	38.6				
Registered specialist/restricted practice	40.6	41.5	43.8	16.0	40.8				
Administration	38.0	36.6	40.0	_	37.9				
Teaching/education	32.9	_	_	_	32.9				
Research	34.4	_	_	_	34.4				
Other	35.7	34.2	25.0	_	35.3				
Total	38.7	38.8	39.2	38.0	38.7				
	Average direct care hours worked								
General practice	34.1	34.7	34.6	35.4	34.3				
Registered specialist/restricted practice	33.8	35.7	34.8	13.0	34.0				
Administration	9.8	8.9	18.0	_	10.1				
Teaching/education	14.6	_	_	_	14.6				
Research	15.9	_	_	_	15.9				
Other	30.5	26.2	25.0	_	29.9				
Total	33.6	34.6	34.5	35.0	33.8				

Table A.16: Employed dentists, sex, average age and area of main practice by Remoteness Area of main practice, 2003

		Remoteness	s area of main	practice				
Area of practice	Major City	Inner Regional	Outer Regional	Remote	Total			
			Males		_			
General practice	4,501	990	409	66	5,965			
Registered specialist/restricted practice	814	89	35	2	939			
Administration	55	8	4	_	67			
Teaching/education	95	1	1	_	98			
Research	12	3	1	_	15			
Other	42	5	1	_	48			
Total	5,518	1,095	451	69	7,132			
			Females					
General practice	1,782	320	109	23	2,234			
Registered specialist/restricted practice	177	11	1	_	189			
Administration	16	2	1	_	20			
Teaching/education	46	_	1	_	47			
Research	13	_	_	_	13			
Other	36	6	_	_	42			
Total	2,070	340	113	23	2,546			
	Persons							
General practice	6,283	1,310	518	89	8,200			
Registered specialist/restricted practice	991	99	36	2	1,129			
Administration	71	11	5	_	87			
Teaching/education	141	1	3	_	145			
Research	25	3	1	_	28			
Other	78	11	1	_	90			
Total	7,588	1,435	564	91	9,678			
		Aver	age age (years	s)				
General practice	43.8	44.7	45.5	41.1	44.0			
Registered specialist/restricted practice	48.1	49.4	50.0	67.1	48.3			
Administration	52.7	51.9	50.7	_	52.5			
Teaching/education	45.9	79.0	26.5	_	45.9			
Research	49.9	70.3	82.0	_	53.2			
Other	38.6	42.6	64.0	_	39.4			
Total	44.4	45.1	45.9	41.8	44.6			

Table A. 17: Employed dentists, Remoteness Area by state/territory, 2003

Remoteness area	NSW	Vic	Qld	SA	WA	Tas	NT	ACT	Total
Major City	2,745	1,936	1,161	728	803			216	7,588
Inner Regional	480	296	402	40	80	137			1,435
Outer Regional	109	52	234	45	54	20	49		564
Remote	12	_	24	20	19	_	16		91
Total	3,346	2,284	1,821	833	957	157	65	216	9,678
			Rate p	er 100,000	) population	on			
Major City	57.5	53.7	58.0	66.4	58.4			66.9	57.6
Inner Regional	34.8	28.3	40.8	20.8	32.5	45.0			34.5
Outer Regional	22.6	20.6	35.1	25.1	29.1	12.6	45.5		27.7
Remote	25.1	_	16.6	33.5	13.8	_	17.4		18.1
Total	50.1	46.5	47.9	54.5	49.1	33.0	32.7	66.9	48.7

Table A.18: Number of employed dentists, average weekly hours worked and practising rates by statistical division, 2003

Statistical division	Number of dentists	Average hours worked/ week	Population	Practising rate	FTE <sup>(a)</sup> (35.0 hrs)	FTE <sup>(b)</sup> (37.5 hrs)	FTE <sup>(c)</sup> (40.0 hrs)
NSW							
Sydney	2,526	40.4	4,198,543	60.2	69.4	64.8	60.8
Hunter	194	38.8	599,575	32.3	35.8	33.4	31.3
Illawarra	143	39.8	407,771	35.1	40.0	37.3	35.0
Richmond-Tweed	104	38.3	221,394	47.1	51.6	48.1	45.1
Mid-North Coast	95	38.5	287,837	33.1	36.4	33.9	31.8
Northern	58	40.2	179,607	32.2	36.9	34.5	32.3
North Western	29	38.9	119,016	24.1	26.8	25.0	23.4
Central West	51	41.0	178,840	28.4	33.2	31.0	29.1
South Eastern	65	38.5	198,466	32.9	36.2	33.8	31.7
Murrumbidgee	42	39.8	152,896	27.5	31.3	29.2	27.4
Murray	33	40.5	114,230	29.3	33.9	31.6	29.6
Far West	6	35.8	23,878	23.5	24.0	22.4	21.0
Total NSW	3,346	40.1	6,682,053	50.1	57.4	53.5	50.2
Vic							
Melbourne	1,881	37.2	3,555,321	52.9	56.2	52.5	49.2
Barwon	102	39.2	262,155	38.8	43.5	40.6	38.0
Western District	33	38.3	100,467	33.2	36.4	34.0	31.8
Central Highlands	57	33.8	144,311	39.3	38.0	35.4	33.2
Wimmera	11	40.2	50,855	22.2	25.5	23.8	22.3
Mallee	16	38.6	91,014	17.6	19.4	18.1	17.0
Loddon	52	38.1	170,649	30.5	33.2	31.0	29.0
Goulburn	45	40.1	198,504	22.6	25.9	24.1	22.6
Ovens-Murray	21	37.9	94,798	22.5	24.4	22.8	21.3
East Gippsland	24	36.3	81,152	29.5	30.5	28.5	26.7
Gippsland	42	38.6	162,199	25.6	28.3	26.4	24.7
Total Vic	2,284	37.4	4,911,425	46.5	49.7	46.4	43.5
Qld							
Brisbane	1,020	38.9	1,735,181	58.8	65.3	61.0	57.1
Moreton	336	38.0	775,537	43.3	47.0	43.9	41.1
Wide Bary-Burton	80	39.9	244,847	32.6	37.1	34.6	32.5
Darling Downs	95	38.6	215,857	44.0	48.5	45.3	42.4
South West	7	42.8	27,036	26.9	32.9	30.7	28.8
Fitzroy	58	40.7	185,354	31.4	36.5	34.1	32.0
Central West	3	40.0	12,378	21.3	24.4	22.8	21.3
Mackay	48	37.2	141,729	34.1	36.2	33.8	31.7
Northern	69	39.6	197,611	34.9	39.5	36.8	34.5
Far North	98	38.6	231,494	42.3	46.7	43.6	40.8
North West	7	39.1	34,015	21.6	24.1	22.5	21.1
Total Qld	1,821	38.8	3,801,039	47.9	53.1	49.6	46.5

(continued)

Table A.18 (cont.): Number of employed dentists: Number, average weekly hours worked and practising rates by statistical division, 2003

Statistical division	Number of dentists	Average hours worked/ week	Population	Practising rate	FTE <sup>(a)</sup> (35.0 hrs)	FTE <sup>(b)</sup> (37.5 hrs)	FTE <sup>(c)</sup> (40.0 hrs)
WA							
Perth	804	37.7	1,431,498	56.2	60.5	56.5	52.9
South West	79	35.3	203,940	38.7	39.0	36.4	34.1
Lower Great Southern	23	39.3	53,762	43.3	48.6	45.4	42.5
Upper Great Southern	5	35.5	18,542	27.9	28.3	26.4	24.7
Midlands	10	42.0	53,258	19.4	23.3	21.7	20.4
South Eastern	13	44.8	54,886	23.6	30.2	28.1	26.4
Central	10	38.4	60,251	17.2	18.8	17.6	16.5
Pilbara	6	40.8	39,482	16.4	19.1	17.8	16.7
Kimberley	5	44.5	34,329	15.1	19.1	17.9	16.8
Total WA	957	37.7	1,949,948	49.1	52.8	49.3	46.2
SA							
Adelaide	735	36.8	1,119,097	65.7	69.0	64.4	60.4
Outer Adelaide	21	41.2	118,763	17.9	21.0	19.6	18.4
Yorke and Lower North	7	40.8	44,513	15.9	18.5	17.3	16.2
Murray Lands	19	34.1	68,455	27.5	26.8	25.0	23.5
South East	16	35.3	62,951	26.2	26.4	24.7	23.1
Eyre	13	35.8	34,383	37.7	38.5	36.0	33.7
Northern	21	42.4	78,139	27.1	32.9	30.7	28.8
Total SA	833	37.0	1,526,301	54.5	57.7	53.8	50.5
Tas							
Greater Hobart	96	40.7	199,926	48.2	56.0	52.3	49.0
Southern	1	44.0	35,036	3.9	4.9	4.6	4.3
Northern	37	39.6	135,149	27.1	30.7	28.6	26.8
Mersey-Lyell	23	34.8	107,194	21.5	21.4	20.0	18.7
Total Tas	157	39.6	477,305	33.0	37.3	34.8	32.6
ACT							
Canberra	216	37.6	323,363	66.8	71.8	67.0	62.8
Total ACT	216	37.6	323,363	66.8	71.8	67.0	62.8
NT							
Darwin	49	40.0	108,039	45.5	52.0	48.5	45.5
NT Bal	16	37.8	90,505	17.4	18.8	17.6	16.5
Total NT	65	39.5	198,544	32.7	36.9	34.4	32.3
Australia <sup>(d)</sup>	9,678	38.7	19,869,978	48.7	53.9	50.3	47.1

<sup>(</sup>a) FTE dentists per 100,000 population based on a 35-hour week.

<sup>(</sup>b) FTE dentists per 100,000 population based on a 37.5-hour week.

<sup>(</sup>c) FTE dentists per 100,000 population based on a 40-hour week.

<sup>(</sup>d) Excludes external territories.

Table A.19: Employed dental specialists by Remoteness Area of main practice, 2003

Specialty	Major City	Inner Regional	Outer Regional	Remote	Total
Orthodontics	427	72	22	1	523
Periodontics	112	6	5	1	125
Prosthodontics	122	2	1	_	126
Oral pathology	19	_	2	_	21
Oral and maxillofacial surgery	152	14	5	_	172
Endodontics	92	3	_	_	94
Paediatric dentistry	49	_	_	_	49
Other	17	2	_	_	20
Total	991	101	36	2	1,131

# A2 Dental prosthetists

Table A.20: Registered dental prosthetists, practice status by state/territory, 2003

Practice status	NSW	Vic	Qld	WA	SA	Tas	ACT	Total	Per cent
Working in state/territory (a)	308	268	125	84	29	50	15	878	83.1
Working in another state/territory	12	4	6	_	_	1	_	23	2.2
On 3+ months leave/overseas	2	_	5	_	_	1	_	7	0.7
Not working	19	6	_	2	_	_	_	26	2.5
Working but not in dental prosthetics	41	7	8	3	_	_	_	58	5.5
Retired from work	29	7	_	21	4	1	3	64	6.1
Total	409	292	143	107	35	53	18	1,057	100.0
Employed in state/territory (a)	75.3	91.8	87.4	78.5	81.4	93.6	85.7	83.1	75.3
Practising rate (b)	4.6	5.5	3.3	4.3	1.9	10.4	4.8	4.5	
FTE rate (35 hrs per week) (c)	5.7	6.6	4.1	5.3	2.2	12.8	6.1	5.5	5.7
FTE rate (37.5 hrs per week) (c)	5.3	6.1	3.8	5.0	2.0	12.0	5.7	5.1	5.3
FTE rate (40 hrs per week) (c)	5.0	5.7	3.6	4.6	1.9	11.2	5.3	4.8	5.0

<sup>(</sup>a) Employed solely or mainly in state/territory of registration.

#### Notes

- 1. There was no Western Australian collection in 2003; results were based on data from the 2002 collection.
- 2. Not all columns/rows sum to total as weighted data have been rounded to whole numbers.
- Prosthetists were not permitted to practise in the Northern Territory in 2003.

Table A.21: Employed dental prosthetists, age group, percentage female and average age by state/territory, 2003

Age group (years)	NSW	Vic	Qld	WA	SA	Tas	ACT	Total	Per cent
20–29	3	4	_	2	_	1	_	11	1.2
30–39	66	41	8	17	_	9	3	142	16.4
40–49	109	129	47	38	16	20	8	361	41.7
50–59	85	59	44	21	8	15	_	228	26.3
60+	44	35	26	6	5	5	5	125	14.4
Total	308	268	125	84	29	50	15	878	100.0
			Pe	ercentage	female				
Per cent female	11.0	7.8	5.2	12.8	_	18.2	_	9.2	
			Av	erage ag	e (years)				
Males	49.0	48.6	52.1	46.3	52.3	48.5	52.7	49.2	
Females	45.3	39.4	50.5	37.2	_	43.0	_	42.8	
Persons	48.5	47.9	52.0	45.9	52.3	47.5	52.7	48.7	

- 1. There was no Western Australian collection in 2003; results were based on data from the 2002 collection.
- 2. Not all columns/rows sum to total as weighted data have been rounded to whole numbers.
- 3. Prosthetists were not permitted to practise in the Northern Territory in 2003.

<sup>(</sup>b) Practising rate: the number of practising prosthetists per 100,000 population.

<sup>(</sup>c) Full-time equivalent dentists per 100,000 population. Calculated by multiplying the number of employed prosthetists by the average weekly hours worked and then dividing by a reference week (35, 37.5 and 40 hours/week have been provided). This value is then population standardised to allow comparisons with other states/territories.

Table A.22: Employed dental prosthetists, practice type by state/territory, 2003

Practice type	NSW	Vic	Qld	WA	SA	Tas	ACT	Total	Per cent
Self-employed	257	241	106	71	26	34	12	749	85.3
Employee-private practice	10	9	2	10	_	6	_	37	4.3
Employee-private laboratory	12	4	2	_	_	1	_	19	2.2
Government clinic/laboratory	17	11	15	_	3	7	3	56	6.4
Educational institution	5	3	_	2	_	_	_	10	1.2
Other	5	_	_	_	_	1	_	6	0.7
Total	308	268	125	29	84	50	15	878	100

#### Notes

- 1. There was no Western Australian collection in 2003; results were based on data from the 2002 collection.
- 2. Not all columns/rows sum to total as weighted data have been rounded to whole numbers.
- 3. Prosthetists were not permitted to practise in the Northern Territory in 2003.

Table A.23: Employed dental prosthetists, characteristics of hours usually worked per week by state/territory, 2003

Hours group	NSW	Vic	Qld	WA	SA	Tas	ACT	Total
				Per ce	nt			
<20	5.3	9.5	8.6	5.4	9.1	5.1	_	7.0
20–29	7.6	5.3	1.4	16.2	_	2.6	_	6.3
30–39	15.2	14.2	25.7	10.8	18.2	20.5	25.0	16.4
40–49	33.3	40.2	25.7	40.5	50.0	43.6	50.0	36.4
50–59	24.6	18.3	21.4	10.8	13.6	15.4	_	19.7
60+	14.0	12.4	17.1	16.2	9.1	12.8	25.0	14.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
			Average ho	ours usually	worked pe	r week		
Hours	43.5	42.1	43.5	43.2	41.0	43.2	44.4	43.0
			Working pa	art-time (<3	5 hours per	week)		
Per cent	19.9	21.3	20.0	21.6	18.2	12.8	_	19.8

### Notes

- 1. Part-time is defined as less than 35 hours per week.
- 2. There was no Western Australian collection in 2003; results were based on data from the 2002 collection.
- 3. Prosthetists were not permitted to practise in the Northern Territory in 2003.

Table A.24: Average numbers of completed/repaired dentures in the last week by type and state/territory, 2003

Dentures issued	NSW	Vic	Qld	WA	SA	Tas	ACT	Total	Per cent
Partial dentures repaired	3.1	1.9	2.8		0.7	1.4	5.7	2.4	16.6
Partial dentures completed	5.2	3.5	3.2		0.4	3.4	6.7	4.0	27.6
Full dentures repaired	2.8	2.6	2.6		3.7	2.1	3.0	2.7	18.3
Full dentures completed	5.7	5.5	4.5		5.3	7.0	5.7	5.5	37.5

Note: There was no Western Australian collection in 2003 and this data item was not collected in the 2002 data collection.

# A3 Dental therapists

Table A.25: Dental therapists, practice status by state/territory, 2003

Practice status	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total	Per cent
Employed as therapist in state/territory (a)	195	152	354	309	128	61	22	16	1236	79.2
Employed in therapy and hygiene	_	1	_	5	_	_	_	_	6	0.4
Employed as hygienist	_	26	_	4	6	_	_	_	36	2.3
Employed as therapist in other state/territory	_	1	_	_	_	_	_	_	1	0.1
On 3+ months leave/overseas	10	11	11	17	9	1	_	2	61	3.9
Not working	12	17	18	48	2	1	4	_	102	6.6
Working in dentistry, but not as allied dental practitioner	7	7	18	9	_	_	2	_	45	2.9
Working, but not in dentistry	7	14	21	24	2	_	2	2	73	4.6
Total	232	229	422	417	147	63	31	19	1560	100.0
Employed in state/territory (per cent)	84.0	66.8	83.8	75.4	86.8	96.2	72.0	83.3	79.6	
Practising rate (b)	2.9	3.1	9.3	16.1	8.4	12.7	6.9	8.0	6.3	
FTE rate (35 hrs per week) (c)	2.6	2.5	8.5	12.2	6.8	10.7	6.0	8.4	5.2	
FTE rate (37.5 hrs per week) (c)	2.4	2.3	7.9	11.4	6.3	10.0	5.6	7.8	4.9	
FTE rate (40 hrs per week) (c)	2.2	2.2	7.4	10.7	5.9	9.3	5.3	7.3	4.6	

<sup>(</sup>a) Employed solely or mainly in state/territory of registration.

#### Notes

Table A.26: Employed dental therapists, age group and average age by state/territory, 2003

Age group (years)	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total	Per cent	
20–24	12	13	11	9	12	_	_	_	59	4.7	
25–29	22	16	14	15	8	5	_	2	80	6.5	
30–34	10	25	44	41	14	6	_	_	139	11.2	
35–39	32	17	60	40	16	12	9	_	185	14.9	
40–44	64	35	136	81	20	8	6	8	358	28.8	
44–49	44	35	80	100	43	19	6	6	334	26.9	
50+	10	13	9	28	15	11	1	_	87	7.0	
Total	195	153	354	314	128	61	22	16	1242	100.0	
		Average age (years)									
Persons	39.4	38.4	40.2	41.3	40.2	41.9	42.2	42.6	40.3	39.4	

Note: There was no Northern Territory collection in 2003; results were based on data from the 2002 collection.

<sup>(</sup>b) Practising rate: the number of practising prosthetists per 100,000 population.

<sup>(</sup>c) Full-time equivalent therapists per 100,000 population. Calculated by multiplying the number of employed therapists by the average weekly hours worked and then dividing by a reference week (35, 37.5 and 40 hours/week have been provided). This value is then population standardised to allow comparisons with other states/territories.

<sup>1.</sup> There was no Northern Territory collection in 2003; results were based on data from the 2002 collection.

<sup>2.</sup> Not all columns/rows sum to total as weighted data have been rounded to whole numbers.

Table A.27: Employed dental therapists, practice type at main location by state/territory, 2003

Practice type	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total	Per cent
Public										
School dental service	83	119	330	173	120	51	11	16	902	72.6
Community dental clinic	88	15	5	4	1	5	10	_	127	10.2
Dental hospital	8	_	_	4	_	_	_	_	12	1.0
Teaching institution	13	4	9	8	6	_	_	_	39	3.1
Private										
Clinical practice	3	7	2	80	_	5	_	_	97	7.8
Specialist practice	_	8	5	44	_	_	1	_	58	4.7
Other	3	_	2	1	1	_	_	_	7	0.6
Total	195	153	354	314	128	61	22	16	1,242	100.0

#### Notes

- 1. There was no Northern Territory collection in 2003; results were based on data from the 2002 collection.
- 2. Not all columns/rows sum to total as weighted data have been rounded to whole numbers.
- 3. In 2003, dental therapists were not permitted to practise in the private sector in the Northern Territory.

Table A.28: Employed dental therapists, characteristics of hours usually worked per week by state/territory, 2003

Hours group	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Total
				F	er cent				
>10	1.3	7.5	0.7	8.6	1.8	5.9	_	_	4.0
10–19	11.5	13.3	18.0	19.3	14.4	5.9	5.6	_	15.3
20–29	26.9	26.7	10.7	23.2	27.1	35.3	33.3	_	21.5
30–39	33.3	46.6	39.3	45.1	54.9	37.3	55.6	100	43.3
40+	26.9	5.8	31.3	3.9	1.8	15.7	5.6	_	15.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
			Av	erage hou	ırs usuall	y worked			
Hours	30.7	27.8	31.8	26.6	28.4	29.4	30.6	36.8	29.4
			Workin	g part-tim	e (<35 ho	urs per w	eek)		
Per cent	52.6	65.9	45.3	64.9	64.4	62.7	55.6	_	56.3

- 1. There was no Northern Territory collection in 2003; results were based on data from the 2002 collection.
- 2. Not all columns/rows sum to total as weighted data have been rounded to whole numbers.

# A4 Dental hygienists

Table A.29: Dental hygienists, practice status by state/territory, 2003

Practice status	NSW	Vic	Qld	WA	SA	Tas	NT	ACT	Total	Per cent
Employed as hygienist in state/territory (a)	104	122	81	134	88	6	6.4	30	570	79.5
Employed in therapy and hygiene	_	1	_	_	5	_	_	_	7	0.9
Employed as therapist	_	_	_	1	16	_	_	_	17	2.4
Employed as therapist in other state/territory	3	1	1	15	7	_	2	1	31	4.3
On 3+ months leave/overseas		7	1	8	13	_	_	4	34	4.8
Not working	3	9	1	7	6	_	_	3	30	4.2
Working in dentistry, but not in dental hygiene	2	2	4	1	7	_	_	_	17	2.4
Working, but not in dentistry	0	1	3	1	6	_	_	_	11	1.5
Total	111	144	93	168	149	6	8	38	717	100.0
Employed in state/territory (per cent)	93.2	85.4	87.3	79.6	62.7	100.0	76.2	77.8	80.4	
Practising rate (b)	1.5	2.5	2.1	8.8	4.8	1.3	3.2	9.2	2.9	
FTE rate (35 hrs per week) (c)	1.4	2.1	1.8	7.9	3.6	1.1	3.0	7.4	2.4	
FTE rate (37.5 hrs per week) (c)	1.3	2.0	1.6	7.4	3.3	1.0	2.8	6.9	2.3	
FTE rate (40 hrs per week) (c)	1.2	1.8	1.5	6.9	3.1	1.0	2.6	6.5	2.1	

<sup>(</sup>a) Employed solely or mainly in state/territory of registration.

### Notes

Table A.30: Employed dental hygienists, age group and average age by state/territory, 2003

Age group (years)	NSW	Vic	Qld	WA	SA	Tas	NT	ACT	Total	Per cent		
20–24	_	11	9	24	_	_		3	46	8.0		
25–29	15	21	7	34	13	_	2	4	97	16.7		
30–34	21	21	19	12	24	3	_	6	105	18.3		
35–39	17	32	21	4	35	2	3	4	117	20.4		
40–44	29	13	15	15	27	_	_	3	101	17.5		
44–49	12	17	6	3	21	_	_	3	62	10.7		
50+	11	8	4	1	14	2	2	7	49	8.4		
Total	104	123	81	93	134	6	6	30	577	100.0		
	Average age (years)											
Persons	38.3	36.0	35.8	30.4	39.7	38.3	40.0	38.2	36.5			

<sup>(</sup>b) Practising rate: the number of practising prosthetists per 100,000 population.

<sup>(</sup>c) Full-time equivalent hygienists per 100,000 population. Calculated by multiplying the number of employed hygienists by the average weekly hours worked and then dividing by a reference week (35, 37.5 and 40 hours/week have been provided). This value is then population standardised to allow comparisons with other states/territories.

<sup>1.</sup> There was no Northern Territory collection in 2003; results were based on data from the 2002 collection.

<sup>2.</sup> Not all columns/rows sum to total as weighted data have been rounded to whole numbers.

<sup>1.</sup> There was no NT collection in 2003; results are based on data from the 2002 collection.

<sup>2.</sup> Not all columns/rows sum to total as weighted data have been rounded to whole numbers.

Table A.31: Employed dental hygienists, practice type at main location by state/territory, 2003

Practice type	NSW	Vic	Qld	WA	SA	Tas	NT	ACT	All	Per cent
Private										
General practice	77	96	59	66	101	5	4	21	430	74.5
Orthodontic practice	9	15	7	15	10	2	2	3	63	10.9
Periodontic practice	5	8	3	1	8	_	_	4	29	5.0
Other specialist	3	1	_	1	1	_	_	_	7	1.2
Health fund clinic	6	_	_	_	_	_	_	_	6	1.0
Public										
Community dental clinic	_	_	9	6	3	_	_	_	17	3.0
Dental hospital	2	_	1	1	3	_	_	_	7	1.2
Teaching institution	_	1	1	1	8	_	_	_	12	2.0
Other	3	1	_	_	1	_	_	1	7	1.2
Total	104	123	81	93	134	6	6	30	577	100.0

#### Notes

- 1. There was no Northern Territory collection in 2003; results were based on data from the 2002 collection.
- 2. Not all columns/rows sum to total as weighted data have been rounded to whole numbers.

Table A.32: Employed dental hygienists, characteristics of hours usually worked per week by state/territory, 2003

Hours group	NSW	Vic	Qld	WA	SA	Tas	NT	ACT	All
					Per cent				
>10	_	4.4	9.1	6.6	1.6	_	_	10.0	4.5
10–19	5.8	11.0	10.9	25.8	15.8	25.0	_	5.0	14.0
20–29	26.1	26.4	21.8	27.4	19.3	_	25.0	25.0	24.4
30–39	52.2	41.7	43.6	29.7	39.0	75.0	75.0	50.0	41.8
40+	15.9	16.5	14.5	10.6	24.2	_	_	10.0	15.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
			A	Average ho	urs usually	y worked			
Hours	32.2	29.5	28.9	31.7	26.0	30.6	32.5	28.2	29.5
			Work	ing part-tir	ne (<35 ho	urs per we	ek)		
Per cent	62.3	66.0	58.2	46.5	73.2	50.0	50.0	80.0	63.3

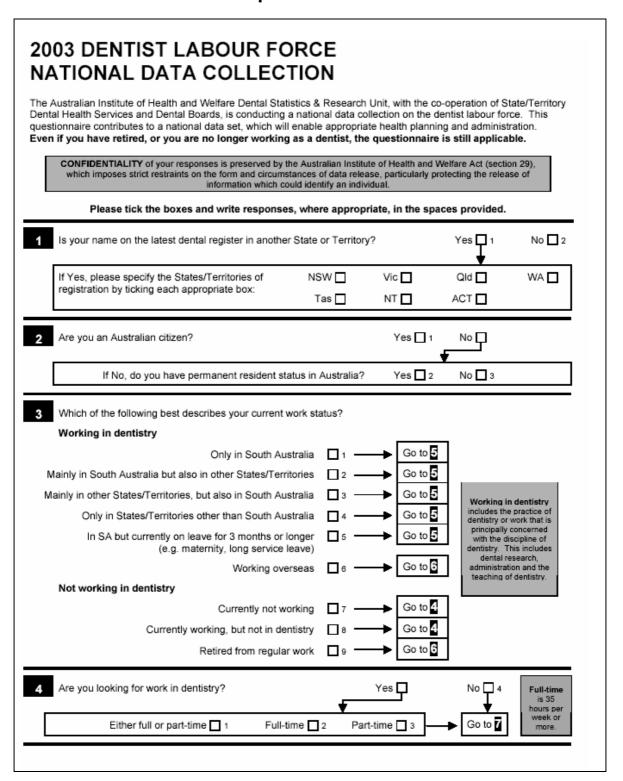
### Notes

<sup>1.</sup> There was no NorthernTerritory collection in 2003; results are based on data from the 2002 collection.

<sup>2.</sup> Not all columns/rows sum to total as weighted data have been rounded to whole numbers.

## Appendix B Examples of labour force questionnaires, 2003

## **B1** Dentist labour force questionnaire



		1	Main Location				
Postcode:	Area of practice		Type of practice				
	General practice		Private Solo	<b>1</b>	Public	Dental hospital	□8
Suburb/Town:	Registered specialist	<b>2</b>	Solo with assistant	<b>2</b>		Mainly school dental service	9
	Restricted practice	<b>3</b>	Partnership	□3		Mainly general dental service	<b>1</b> 0
	Administration	<b>4</b>	Associateship	<b>4</b>		Defence forces	□ 11
	Teaching/education	<b>5</b>	Assistant	<b>5</b>		Other public	<b>1</b> 2
otal hours vorked per week:	Research	□6	Locum	<b>□</b> 6		Tertiary education institution	<b>1</b> 3
N	Other (Please specify)	<b>7</b>	Industry	<b>7</b>	Other	Other practice type	<b>1</b> 4
Direct patient care pours per week:					Oulei	Other practice type	
					(please	specify)	
		Se	econd Location				
Postcode:	Area of practice		Type of practice				
	General practice	<b>1</b>	Private Solo	□1	Public	Dental hospital	□ 8
Suburb/Town:	Registered specialist	<b>□</b> 2	Solo with assistant	<b>2</b>		Mainly school dental service	9
	Restricted practice	□3	Partnership	Вз		Mainly general dental service	10
	Administration	□ 4	Associateship	□ 4		Defence forces	<b>1</b> 1
otal hours	Teaching/education	<b>5</b>	Assistant	<b>5</b>		Other public	12
vorked per week:	Research	6	Locum	<b>6</b>		Tertiary education institution	13
Direct patient care	Other (Please specify)	<b>7</b>	Industry	<b>7</b>	Other	Other practice type	□ 14
ours per week:					(nlease	specify)	
					(piceso	apounty	
		7	Third Location				
Postcode:	Area of practice		Type of practice	_			
	General practice		Private Solo	<b>1</b>	Public	Dental hospital	□8 □°
Suburb/Town:	Registered specialist	□2 □2	Solo with assistant	□ 2 □ 2		Mainly school dental service	_9 9
-	Restricted practice	□3 □4	Partnership	□3 □4		Mainly general dental service	<b>1</b> 0
	Administration	□ 4 □ 5	Associateship	□ 4 □ 5		Defence forces Other public	□ 11 □ 42
otal hours	Teaching/education Research	□ 5 □ 6	Assistant	□5 □6		•	☐ 12 ☐ 13
vorked per week:	Other (Please specify)	□°		_		Tertiary education institution	13
Direct patient care	Other (Frease specify)		Industry	<b>7</b>	Other	Other practice type	<b>1</b> 4
ours per week:					(please	specify)	
_							
Comments:			Please r	return	comple	eted form to:	
				Dental B		outh Australia	
						TH SA 5067	

## B2 Dental prosthetist labour force questionnaire

#### 2003 DENTAL PROSTHETIST LABOUR FORCE NATIONAL DATA COLLECTION The Australian Institute of Health and Welfare Dental Statistics & Research Unit, with the co-operation of State/Territory Dental Health Services and Dental Boards, is conducting a national data collection on the dental prosthetist labour force. This questionnaire contributes to a national data set, which will enable appropriate health planning and administration. Even if you have retired, or you are no longer working as a Prosthetist, the questionnaire is still applicable. CONFIDENTIALITY of your responses is preserved by the Australian Institute of Health and Welfare Act (section 29), which imposes strict restraints on the form and circumstances of data release, particularly protecting the release of information which could identify an individual. Please tick the boxes and write responses, where appropriate, in the spaces provided. In which States and/or Territories does your name appear on the latest dental technician and prosthetist register? Please specify the States/Territories of NSW -Vic Qld 🗌 registration by ticking each appropriate box: WA . Tas ACT Are you an Australian citizen? Yes 1 No 🗆 If No, do you have permanent resident status in Australia? Yes 🔲 2 No 🔲 3 In what year did you first practise as a dental prosthetist in Australia: Which of the following best describes your current work status? Working in dental prosthetics Only in South Australia 2 Working in South Australia and in other States/Territories Only in States/Territories other than South Australia 3 Working in dental prosthetics includes the On leave for 3 months or longer (e.g. maternity, long service leave) clinical practice of dental prosthetics or work that is Working overseas 5 rincipally concerned with the discipline of dental prosthetics. This includes research, administration Not working in dental prosthetics Currently not working 6 and teaching/education. Working in dentistry but not working in dental prosthetics $\square_7$ 8 Currently working, but not in dental prosthetics or dentistry 9 Retired from work 5 Are you looking for paid work in dental prosthetics? Yes 🗌 No 4 Full-time is 35 hours Full-time 2 Either full or part-time 1 Part-time 3 more. If at present you work less than a total of 35 Household duties 11 Illness 4 hours per week, please indicate your reasons Insufficient work 2 Preference 5 for doing so? (Tick as many as applicable) Further study 3 Other (Please specify) 6

	ob or location, please provide n work locations, and unpaid	e all in descending order of usu voluntary activities.)	al hours per week.
Postcode Suburb	Main Location	Second Location	Third Location
Type of practice			
Self-employed  Employee in private practice  Employee in commercial laboratory	□1 □2 □3	□1 □2 □3	□1 □2 □3
Government clinic/laboratory  Defence forces	□ 4 □ 5	□ 4 □ 5	□ 4 □ 5
Public education institution Other (Please specify)	□6 □7	□6 □7	□6 □7
Area of practice and hours worked per week			
Clinical Laboratory Teaching/education Administration/management Research Other (Please specify)	hours hours hours hours hours hours	hours hours hours hours hours hours	hours hours hours hours hours hours
Practice activity			

Thank you for your time and contribution.
Please return completed questionnaire to the Dental Board of South Australia.

## **B3** Dental therapist labour force questionnaire

	AL THERAPIS DRCE NATIO					ST	Regis	tration Number
alth Services and I s questionnaire co	te of Health and Welfare Dental Boards, is conduc ntributes to a national da ired, or you are no long	ting a national d ata set, which wil	ata collection on I enable appropri	the dental ate health	therapist planning	Voral hea and adr	alth therapis ministration	st labour force.
	Y of your responses is preson and circumstances of date							
Pleas	e tick the boxes and	write respons	es, where app	ropriate,	in the s	paces p	provided.	
In which States	and Territories does	your name app	ear on the lates	t dental t	herapist	register	?	
	States/Territories of ing each appropriate box:	nsw□ vi	ic Qld 🔲	WA 🔲	SA	Tas	s NT	☐ ACT ☐
Are you an Aus	stralian citizen?				Yes	1	No 🔲	
	If No, do you hav	e permanent resid	ent status in Austra	lia?	Yes	2	No 3	
	llowing best describes	•						
		.,	Only in	South Aust	tralia	<b>□</b> 1		
	Wor	king in South Aust	ralia and in other S	tates/Territo	ories	<b>□</b> 2		
		Only in States/Te	rritories other than	South Aust	tralia	□ 3	therapy	ing in dental or oral health y includes the
	On leave for 3	months or longer	(e.g. maternity, Ion	g service le	ave)	<b>4</b>	practice	e of dental/oral herapy or work
			W	orking over	seas	5	conce	s principally rned with the
Not working in	n dental therapy or o	ral health ther	ару				health	e of dental/oral therapy. This les research,
			Curre	ntly not wor	rking	6	admir	nistration and eaching.
	Working in dentistry b	ut not working in d	ental therapy or ora	I health the	гару	7		
	Currently working, but	t not in dental there	apy, oral health ther	apy or dent	tistry	8		
Are you looking	for paid work in denta	al therapy or or	al health therap	y?	Yes	]	No 🔲 4	Full time is 35 hours
	Either full or part-time	1	Full-time 2			Part-time	e 🔲 3	per week or more.
	u work less than a tot		Househ	old duties	<b>□</b> 1		Work not av	ailable 4
therapist, pleas	dental therapist or ora se indicate your major	reasons for	Ch	ld rearing	□ 2	Р	ersonal prefe	erence 5
doing so? (tick	as many as applicable	<del>)</del> )	Other en	ployment	З	Oth	ier (please sj	pecify) 6
What is your p	referred number of wo	rkina hours per	week?			hours		

What is your most likely career position in 12 months time? (tick one option only)  Please indicate the practice/profes usual hours worked per week. If you descending order of usual hours poactivities.)	ou work in more than one jo	py (full-time)	se provide all in
	Main Location	Second Location	Third Location
Postcode			
Suburb			
Mobile clinic (Van)  Position title	1	□1	1
Dental therapist Oral health therapist Dental Hygienist Other (please specify)	1   2   3	□ 1 □ 2 □ 3	□1 □2 □3
Type of practice			
Public: school dental service Public: community dental clinic Public: dental hospital Public: teaching institution Private: clinical practice Private: specialist orthodontic practice Private: specialist periodontal practice Private: other specialist practice Other (please specify)	1 2 3 4 5 5 6 6 7 8 9 9	1 2 3 4 5 5 6 6 7 8 9 9	1
Area of practice (duties) and hours worked per week			
Clinical practice – Dental therapy Clinical practice – Dental hygiene Oral health promotion Administration/management Teaching/education Chairside assistance Research Other (please specify)	hours hours hours hours hours hours hours hours	hours hours hours hours hours hours hours hours	hour hour hour hour hour hour hour hour

## B4 Dental hygienist labour force questionnaire

Australian Institute of Health and Welfare Dental ntal Health Services and Dental Boards, is conduct s questionnaire contributes to a national data set, en if you have retired, or you are no longer wo	cting a national data collection which will enable appropriate	on on the de te health pl	ental hygienist labour force. anning and administration.
CONFIDENTIALITY of your responses is preserved which imposes strict restraints on the form and cit information wh			
Please tick the boxes and write resp	onses, where appropriate	, in the sp	aces provided.
In which States and Territories does your name	e appear on the latest denta	ıl hygienist	register?
Please specify the States/Territories of registration by ticking each appropriate box:	Vic 🔲 Tas 🔲	WA 🗌 NT 🔲	SA 🔲 ACT 🔲
Are you an Australian citizen?		Yes 🔲 1	No
If No, do you have permanent r	esident status in Australia?	Yes 2	No 🔲 3
Only in States/Ten On leave for 3 months or longer (4) Not working in dental hygiene  Working in dentistry	Only in South Australia alia and in other States/Territories ritories other than South Australia e.g. maternity, long service leave) Working overseas  Currently not working but not working in dental hygiene	1 2 3 3 4 5 5 5 6 7 7 8 8	Working in dental hygiene includes the clinical practice of dental hygiene or work that is principally concerned with the discipline of dental hygiene. This includes dental research, oral health promotion, administration and the teaching of dental hygiene.
Either full or part-time 1		Yes T	No 4 Full time is 35 hours per week or more.
If at present you work <b>less</b> than a <b>total</b> of 35 hours per week as a dental hygienist, please indicate your major reasons for doing so? (tick as many as applicable)	Household duties 1 Child rearing 2 Other employment 3	Hy	personal preference 5 Other (Please specify) 6
What is your preferred number of working hou	rs ner week?	h	ours

What is your most likely career	Working only in dental h	ygiene (full-time)	W	orking only in another/ profession/industry	
position in 12 months time? (Tick one option only)	Working only in dental hy	giene (part-time) 2	On 3 n	nonths leave or longer	
()	Working in dental to	herapy (full-time)		Not working/retired	П
	Working in dental h	iygiene part-time 4		-	_
	and Working in dental h	varione part time —		Other (Please specify)	
	and in another pr				
If at present you work in more th	an one Desired number			our employer operates	
practice location as a dental hyg	ienist, not availab	e at one location 1		tiple practice locations	_
please indicate your major reaso doing so: (Tick as many as appli	cable)	Variety 2		Other (Please specify)	
doing so. ( now as many as appir	Per	sonal preference 3			
Please indicate the practice/prof- practice, please estimate usual h please provide all in descending (Exclude travel time between wo	ours worked per week. If order of usual hours per v	you work in more to week.			
	Main Location	Second Lo	cation	Third Loca	ation
Postcode			$\Box$		Т
Suburb					
Practice details					
Number of dentists working to:			7 T		┰
Number of dentists at this location:			┨ │		1
	<del></del>		1		┨
Number of Hygienists at this location:					
Type of practice	П.	п.			
Private: general practice	□1 □2	□ 1 □ 2		□1 □2	
Private: specialist orthodontic practice  Private: specialist periodontal practice	□2			□ 2 □ 3	
Private: other specialist practice	□ <sup>3</sup>				
Public: community dental clinic	□5	5		<b>-</b> 5	
Public: dental hospital	<b>□</b> 6			<b>□</b> 6	
Public: teaching institution	<b>D</b> 7			<b>-</b> 7	
Other (please specify)	<b>-</b> 8			□8	
Area of practice (duties) and hours worked per week					
			٦.		
Clinical practice	hours		hours		houn
Oral health promotion	hours		hours		houn
Chairside assistance	hours		hours		houn
Administration/management	hours		hours		houn
Teaching/education	hours		hours		hour
Research	hours		hours		hours
Other (please specify)	hours		hours		hour
		1			
	r completed form to the				

# **Appendix C Estimated resident population state and territories, 2003**

	ASGC Remoteness Area								
State/ territory	Major City	Inner Regional	Outer Regional	Remote	Very Remote	Total			
NSW	4,775,409	1,376,797	483,271	38,671	7,905	6,682,053			
Vic	3,606,783	1,044,980	253,800	5,862	n.a.	4,911,425			
Qld	2,002,747	986,154	665,626	93,151	53,361	3,801,039			
SA	1,096,221	192,300	177,957	46,149	13,674	1,526,301			
WA	1,375,645	246,942	186,525	90,745	50,091	1,949,948			
Tas		304,624	161,723	8,406	2,552	477,305			
NT			108,039	41,316	49,189	198,544			
ACT	322,727	636				323,363			
Total	13,179,532	4,152,433	2,036,941	324,300	176,772	19,869,978			

Source: ABS 2006.

## Appendix D Publications from the national dental labour force data collections

### **Articles**

ARCPOH, Teusner DN 2005. Geographic distribution of the dentist labour force. Australian Dental Journal (Data watch). 50(2): 119–22

ARCPOH, Teusner DN, Chrisopoulous S 2006. Australian dentist labour force 2003. Australian Dental Journal (Data watch). 51 (2): 191–4

### **Newsletters**

AIHW DSRU (Australian Institute of Health and Welfare, Dental Statistics and Research Unit) 1992. AIHW Dental Statistics and Research Newsletter. Adelaide: AIHW (Dental Statistics and Research Unit Newsletter; Vol. III; no 2.

AIHW DSRU (Australian Institute of Health and Welfare, Dental Statistics and Research Unit) 1991. AIHW Dental Statistics and Research Newsletter. Adelaide: AIHW (Dental Statistics and Research Unit Newsletter; Vol. II; no 1.

AIHW DSRU (Australian Institute of Health and Welfare, Dental Statistics and Research Unit) AIHW Dental Statistics and Research Newsletter. Adelaide: AIHW (Dental Statistics and Research Unit Newsletter: Vol. I: no 1.

AIHW DSRU (Australian Institute of Health and Welfare, Dental Statistics and Research Unit) 1999. AIHW Dental Statistics and Research Newsletter. Adelaide: AIHW (Dental Statistics and Research Unit Newsletter; Vol. X; no. 1). (DEN 49).

AIHW DSRU (Australian Institute of Health and Welfare, Dental Statistics and Research Unit) 1999. AIHW Dental Statistics and Research Newsletter. Adelaide: AIHW (Dental Statistics and Research Unit Newsletter; Vol. X; no.2). (DEN 51).

AIHW DSRU (Australian Institute of Health and Welfare, Dental Statistics and Research Unit). 1999. AIHW Dental Statistics and Research Unit Newsletter. Adelaide: AIHW (Dental Statistics and Research Unit Newsletter; Vol. X; no. 3) (DEN 52).

## **Research Reports**

AIHW DSRU 2002. Dental hygienist labour force data collection 2000: research report No. 6. Adelaide: AIHW, 2002. (DEN 97).

AIHW DSRU 2002. Dental therapist labour force data collection 2000: research report No. 7. Adelaide: AIHW, 2002 (DEN 110).

AIHW DSRU 2005. Dental hygienist labour force in Australia, 2003: research report No. 22. Adelaide: AIHW, (DEN 146).

AIHW DSRU 2006. Dental prosthetist labour force in Australia, 2003: research report No. 25. Adelaide: AIHW, 2006. (DEN 150).

AIHW DSRU 2006. Dental therapist labour force in Australia, 2003: research report No. 29. Adelaide: AIHW, 2006. (DEN 155).

## **Reports**

Australian Institute of Health and Welfare 1994. Dental practitioner statistics, Australia, 1992. AIHW Dental Statistics and Research Series No. 6, Adelaide: The University of Adelaide.

Australian Institute of Health and Welfare 1996. Dental practitioner statistics, Australia, 1993. AIHW Dental Statistics and Research Series No. 8, Adelaide: The University of Adelaide.

Spencer AJ, Teusner DN, Carter KD & Brennan DS 2003. The dental labour force in Australia: the position and policy directions. Canberra: AIHW cat. no. POH 2. Canberra: Australian Institute of Health and Welfare.

Szuster FSP & Spencer AJ 1997. Dental hygienist labour force, Australia 1996. AIHW Dental Statistics and Research Series No. 12. Adelaide: The University of Adelaide.

Szuster FSP & Spencer AJ 1997. Dental practitioner statistics Australia, 1994. Dental Statistics and Research Series No. 11. Adelaide: The University of Adelaide.

Szuster FSP & Spencer AJ 1997. Dental therapist labour force, Australia, 1996. AIHW Dental Statistics and Research Series No. 13. Adelaide: The University of Adelaide.

Teusner DN, Mihailidis S, Carter KD & Spencer AJ 2005. The South Australian dental labour force. AIHW cat. no. POH 5. Canberra: Australian Institute of Health and Welfare.

Teusner DN & Spencer AJ 2003. Dental labour force, Australia, 2000. Dental Statistics and Research Series No. 28. Canberra: Australian Institute of Health and Welfare.

Teusner DN & Spencer AJ 2003. Projections of the Australian dental labour force. AIHW cat. no. POH 1. Canberra: Australian Institute of Health and Welfare.

## List of tables

Table 1:	Dentist data collection details by state/territory, 2003	8
Table 2:	Dental prosthetist data collection details by state/territory, 2003	8
Table 3:	Dental therapist data collection details by state/territory, 2003	9
Table 4:	Dental hygienist data collection details by state/territory, 2003	10
Table 5:	Employed dentists by state/territory, 2000 and 2003	20
Table 6:	Full-time equivalent dentists by state/territory, 2000 and 2003	21
Table 7:	Employed dentists by Remoteness Area of main practice, 2000 and 2003	27
Table 8:	Employed dental prosthetists by state/territory, 2000 and 2003	41
Table 9:	Full-time equivalent dental prosthetists per 100,000 population by state/territory, 2000 and 2003	43
Table 10:	Employed dental therapists by state/territory, 2000 and 2003	56
Table 11:	Employed dental hygienists by state/territory, 2000 and 2003	69
Table A.1:	Registered dentists by work status, states and territories, 2003	79
Table A.2:	Australian university dentistry course completions by institution and sex, 1993 to 2003	80
Table A.3:	Employed dentists, sex and age by state/territory, 2003	81
Table A.4:	Employed dentists, type of main practice by age group, 2003	82
Table A.5:	Employed dentists, sector of main practice and selected characteristics, 2003	83
Table A.6:	Employed dentists, sex and area of main practice by state/territory, $2003\dots$	84
Table A.7:	Employed dentists, sex, average age and area of main practice by state/territory, 2003	85
Table A.8:	Employed dentists, average hours worked per week and area of main practice by state/territory, 2003	85
Table A.9:	Employed dentists, sex, sector and type of main practice by state/territory, 2003	
Table A.10	Employed dentists, type of main practice and average hours worked per week by state/territory, 2003	87
Table A.11	Employed dentists, type of main practice and average age by state/territory, 2003	88
Table A.12	Employed dentists, sex, sector and type of main practice by Remoteness Area of main practice, 2003	89
Table A.13	Employed dentists, average hours worked per week, sector and type of main practice by Remoteness Area of main practice, 2003	90

Table A.14:	Employed dentists, average age, sector and type of main practice by Remoteness Area of main practice, 2003
Table A.15:	Employed dentists, area of main practice, average hours and direct care hours worked per week by Remoteness Area of main practice, 200391
Table A.16:	Employed dentists, sex, average age and area of main practice by Remoteness Area of main practice, 2003
Table A. 17	: Employed dentists, Remoteness Area by state/territory, 200393
Table A.18:	Number of employed dentists, average weekly hours worked and practising rates by statistical division, 200394
Table A.19:	Employed dental specialists by Remoteness Area of main practice, 2003 96 $$
Table A.20:	Registered dental prosthetists, practice status by state/territory, 200397 $$
Table A.21:	Employed dental prosthetists, age group, percentage female and average age by state/territory, $2003\ldots$ 97
Table A.22:	Employed dental prosthetists, practice type by state/territory, 200398 $$
Table A.23:	Employed dental prosthetists, characteristics of hours usually worked per week by state/territory, 2003
Table A.24:	Average numbers of completed/repaired dentures in the last week by type and state/territory, 2003
Table A.25:	Dental therapists, practice status by state/territory, 200399
Table A.26:	Employed dental therapists, age group and average age by state/territory, 2003
Table A.27:	Employed dental therapists, practice type at main location by state/territory, 2003100
Table A.28:	Employed dental therapists, characteristics of hours usually worked per week by state/territory, 2003
Table A.29:	Dental hygienists, practice status by state/territory, 2003 101
Table A.30:	Employed dental hygienists, age group and average age by state/territory, 2003
Table A.31:	Employed dental hygienists, practice type at main location by state/territory, 2003
Table A.32:	Employed dental hygienists, characteristics of hours usually worked per week by state/territory, 2003102

## **List of figures**

Figure 1:	All registered dentists in Australia, 2003	. 12
Figure 2:	Numbers of registered and employed dentists per 100,000 population, 1993 to 2003	
Figure 3:	Employed dentists by sex, 1994, 2000 and 2003	. 14
Figure 4:	Percentage of employed dentists by age group, 1994, 2000 and 2003	. 15
Figure 5:	Percentage of employed dentists by age group and sex, 2003	. 15
Figure 6:	Employed dentists by average hours usually worked per week, age group and sex, 2003	
Figure 7:	Employed dentists, sector of practice by sex, 2003	. 17
Figure 8:	Employed dentists by practice type at main location, 2003	. 18
Figure 9:	Employed dental specialists by specialty of practice, 2003	. 19
Figure 10:	Employed dentists per 100,000 population by state/territory, 2000 and 2003	. 20
Figure 11:	Employed dentists, percentage female by state/territory, 2003	. 21
Figure 12:	Employed dentists, average age by state/territory, 2003	. 22
Figure 13:	Employed dentists, average hours usually worked per week by state/territory, 2003	. 23
Figure 14:	Employed dentists, sector of practice by state/territory, 2003	. 24
Figure 15:	Employed dental specialists per 100,000 population by state/territory, 2000 and 2003	
Figure 16:	ASGC Remoteness Areas, Australia, 2001	. 26
Figure 17:	Number of employed dentists per 100,000 population by Remoteness Area of main practice, 2000 and 2003	
Figure 18:	Percentage of female employed dentists by Remoteness Area, 2000 and 2003	. 28
Figure 19:	Employed dentists, average age and sex by Remoteness Area, 2003	. 29
Figure 20:	Employed dentists, average hours usually worked by Remoteness Area, 2000 and 2003	. 30
Figure 21:	Employed dentists, sector of practice by Remoteness Area of main practice 2003	
Figure 22:	Employed dental specialists per 100,000 population by Remoteness Area of main practice, 2003	
Figure 23:	Employed dentists per 100,000 by statistical division of main practice, 2003	. 33
Figure 24:	All registered dental prosthetists in Australia, 2003	. 34
Figure 25:	Employed dental prosthetists and practising rate per 100,000 population by year, 1998 and 2000 to 2003	,

	Percentage employed dental prosthetists by age group, 2000 and 200336
Figure 27:	Percentage employed dental prosthetists by years of practice, 2003
Figure 28:	Employed dental prosthetists, average hours worked per week by age group, 2003
Figure 29:	Employed dental prosthetists, average age and average hours worked by practice area group, 2003
Figure 30:	Percentage full and partial denture services by main practice setting of dental prosthetist, 2003
Figure 31:	Percentage dental prosthetists, most common reasons for working part-time, 200341
Figure 32:	Employed dental prosthetists per 100,000 population by state/territory, 2000 and 2003
Figure 33:	Employed dental prosthetists, average age by state/territory, 200343
Figure 34:	Employed dental prosthetists, average hours usually worked by state/territory, 2003
Figure 35:	Employed dental prosthetists, percentage hours worked by area of practice and state/territory, 200345
Figure 36:	Employed dental prosthetists per 100,000 population by Remoteness Area, 2000 and 2003
Figure 37:	Employed dental prosthetists, average age and average hours worked per week by Remoteness Area, 2003
Figure 38:	All dental therapists in Australia, 200348
Figure 39:	Employed dental therapists and practising rate per 100,000 population, 1997 to 2003
Figure 40:	Percentage employed dental therapists by age group, 1997, 2000 and 200350
Figure 41:	Percentage employed dental therapists by practice type at main location, 2003
Figure 42:	Employed dental therapists, average hours usually worked per week by age group, 2003
Figure 43:	Percentage employed dental therapists, most common reasons for working part-time, 2003
Figure 44:	Employed dental therapists, percentage hours dedicated to areas of practice by main practice type, 200354
Figure 45:	Percentage employed dental therapists, preferred working hours, 2003 55
Figure 46:	Employed dental therapists per 100,000 population by state/territory, 2000 and 200357
Figure 47:	Employed dental therapists, average hours usually worked per week by state/territory, 2003
Figure 48:	Percentage employed dental therapists by practice type and state/territory, 2003

Figure 49:	Employed dental therapists per 100,000 by Remoteness Area of main practice location, 2000 and 200360
Figure 50:	Employed dental therapists, average age and average hours worked per week by Remoteness Area, 2003
Figure 51:	All registered dental hygienists in Australia, 200362
Figure 52:	Employed dental hygienists and practising rate per 100,000 population, 1997 to 2003
Figure 53:	Percentage employed dental hygienists by age group, 1997, 2000 and 2003
Figure 54:	Percentage employed dental hygienists by number of locations worked and full-time status, 2003
Figure 55:	Employed dental hygienists, average hours usually worked per week by age group, 2003
Figure 56:	Percentage dental hygienists, most common reasons for working part-time, 2003
Figure 57:	Percentage employed dental hygienists, preferred working hours, 2003 68
Figure 58:	Employed dental hygienists per 100,000 population by state/territory, 2000 and 200370
Figure 59:	Employed dental hygienists, average hours usually worked per week by state/territory, 2003
Figure 60:	Employed dental hygienists per 100,000 by Remoteness Area of main practice location, 2000 and 2003
Figure 61:	Employed dental hygienists, average age and average hours usually worked by Remoteness Area of main practice location, 2000 and 2003 73
Figure 62:	