15 Dental health

The dental services industry employs dentists, dental therapists, dental hygienists, dental technicians and dental assistants. Its goal is to provide people with dental care and to educate them about oral health care and disease prevention.

The majority of people working in the dental services industry are employed in private dental practices. DHBs, universities and private companies also employ large numbers of dental service professionals in laboratories, school dental clinics and dental schools. Government funding for dental services targets young people (children and adolescents), low-income adults, medically compromised people, people with disabilities requiring dental care in a hospital environment, and Māori and Pacific peoples.

15.1 The dental health workforce

The five types of dental health worker in Table 15.1 have common sources of information and common issues. Therefore in this section key issues are described together rather than by each workforce group.

In 2000 there were an estimated 2615 dental health workers in New Zealand (not including dental assistants), and of those almost two-thirds were dentists. This amounts to 69 dental workers per 100,000 population. Māori make up 2.8 percent of the total dental health workforce, comprising 24 dentists, 32 dental therapists and three dental technicians.

<table>
<thead>
<tr>
<th>Workforce group</th>
<th>Estimated number</th>
<th>% Māori</th>
<th>% Pacific</th>
<th>Per 100,000 population</th>
<th>Source/date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dental assistants</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dental hygienists</td>
<td>140</td>
<td></td>
<td></td>
<td></td>
<td>Member count 01</td>
</tr>
<tr>
<td>Dental technicians</td>
<td>315</td>
<td>1.0</td>
<td>0.9</td>
<td>8</td>
<td>Registration 00</td>
</tr>
<tr>
<td>Dental therapists</td>
<td>569</td>
<td>5.7</td>
<td></td>
<td>15</td>
<td>Survey 98</td>
</tr>
<tr>
<td>Dentists</td>
<td>1591</td>
<td>1.5</td>
<td>0.7</td>
<td>42</td>
<td>APC 00</td>
</tr>
<tr>
<td>Total</td>
<td>2615</td>
<td>2.8</td>
<td>0.8</td>
<td>69</td>
<td></td>
</tr>
</tbody>
</table>

15.1.1 Education and training

In 2001 all dental research and teaching was undertaken at the University of Otago. There are courses ranging from diplomas, to bachelors’ and masters’ degrees. Course details are described under each workforce group’s description later in this section. The Auckland University of Technology (AUT) is offering dental therapy training from 2002.
15.1.2 Specific regulation and interest groups

The dental services industry has its own regulatory authorities, professional bodies, and research and teaching bases. The Dental Council of New Zealand, which is governed by the Dental Act 1988, registers dentists and promotes high standards of professional education and conduct among dentists. The Dental Technicians’ Board is responsible for the registration of dental technicians. The new Health Practitioners’ Competence Assurance legislation will create registration requirements for dental therapists and dental hygienists under the authority of the Dental Council.

The professional bodies for those working in the dental services industry are the:
- New Zealand Dental Association
- New Zealand Dental Therapists’ Association
- New Zealand Dental Hygienists’ Association.

15.1.3 Key issues\(^{112}\)

**Future demand**

The Dental Council reports that there is good information about supply in the dental health workforce, but that it is not easy to obtain demand information. New Zealand’s oral health status has improved significantly over the past 50 years, but there are a number of areas that still require attention. The Council suggests that future workforce planning must take into account the high restorative needs of the increasing dentate and ageing population, and of the deterioration in oral health now evident in some groups of young children, particularly in the Māori and Pacific populations. Other influences on the dental services industry are the adoption of new dental technologies and techniques with much less focus on dentures, and an expectation that people keep their teeth for life.

**Ethnicity composition**

The dental workforce ethnicity does not match population composition. The Government has recognised the need to increase the number of Māori and Pacific people entering the dental profession to reflect the cultural and ethnic diversity of New Zealand. Also, it aims to do more in the future to target disadvantaged groups, such as low-income families, and Māori and Pacific people, and to address the health needs of older people.

**Under-supply of dental therapists**

The expected development of publicly funded oral health\(^{113}\) will have workforce implications for the number of dental therapists required. To meet this demand, this ageing workforce group will require an increase in training numbers, development of career pathways and improved remuneration. This will also require a reversal of the trends over the last decade. In 1998 the ratio of dental therapist to target population (2.5 to 12.5-year-old children) was 1:1120, down from 1:647 in 1990.

---

\(^{112}\) Sources: Dental Council of New Zealand, New Zealand Dental Therapists’ Association, New Zealand Dental Hygienists’ Association, University of Otago.

\(^{113}\) Oral health is one of the 13 population health objectives, and a major issue in the National Strategic Plan for Māori Health.
However, many services have now introduced dental assistants to work with dental therapists. A national survey of dental therapists and dental assistants in 2000 (Waitemata District Health Board 2000) found that dental assistants made up 25 percent of the dental therapist/dental assistant workforce. This survey also estimated that this number will increase to 36 percent by 2004. No formal research or evaluation has been done to measure the impact of dental assistant employment on the provision of services nationally.

**Recruitment and retention**

There is anecdotal evidence of recruitment difficulties for dentists in rural and provincial areas. This is aggravated by low and decreasing retention rates overall, particularly for new graduates. Retention rates for New Zealand-registered immigrant dentists are also falling. This suggests overseas dentists may be using New Zealand as a means to get into Australia. In addition, New Zealand graduates are taking longer to return from overseas. The size of student loans is considered to be a contributing factor to these recruitment and retention concerns.

**Integration of dental care**

The integration of dental care into other primary health care services is considered important with an ageing population. It is also suggested that there is a need for greater teamwork among dental service workers in the primary sector.

**Training**

There is an intention to transfer the current diploma training for dental therapists to a three-year degree programme, plus some development of career pathways.

The possibility of a new ‘single entrance – multiple exit’ teaching programme to promote a more co-ordinated workforce has been raised. This would mean dentists, dental hygienists, dental technicians and dental therapists being trained in the same environment. This option is less likely with the introduction of a new dental therapy course in Auckland.

It is difficult to make strategic decisions about the numbers of students to admit to postgraduate studies because some of the specialities are so small that even one or two specialists have a significant impact. The University of Otago reports a decline in the number of dental graduates undertaking postgraduate studies. This trend requires monitoring.

**Clinical dental technicians**

The Dental Technician Board made submissions in December 1999 for registered clinical dental technicians to become approved health service providers for accident compensation purposes. No progress has been made on gaining services provider status, which is a concern to clinical dental technicians and the board.
**Dental hygienists’ supervision**

Currently dental hygienists can only practise under the direction of a registered dentist present on the premises at which work is being carried out. This is restrictive, and is hindering the development of community health promotion. The Dental Council of New Zealand considers that, provided a dentist has assessed the patient and established a treatment plan, there is no necessity for the dentist to be on the premises.

### 15.2 Dentists

A dentist studies and treats diseases, injuries and problems of the mouth, teeth, gums and jaws, and educates patients on how to avoid oral health problems. There are a number of dental specialties that a dentist can undertake with additional training.

#### 15.2.1 Capacity

The number of dentists has increased by 371 since 1990 (Table 15.2). This increase has kept pace with the population increase in the same time period.

**Table 15.2: Characteristics of dentists**

<table>
<thead>
<tr>
<th></th>
<th>Number with an APC</th>
<th>Estimated FTE*</th>
<th>% Male</th>
<th>% Female</th>
<th>% Māori</th>
<th>% Pacific</th>
<th>% Working in private practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>1226</td>
<td>1091.2</td>
<td>87.4</td>
<td>12.6</td>
<td>0.3</td>
<td>0.15</td>
<td>85.3</td>
</tr>
<tr>
<td>1994</td>
<td>1591</td>
<td>1283.2</td>
<td>76.4</td>
<td>23.6</td>
<td>1.5</td>
<td>0.7</td>
<td>83.1</td>
</tr>
<tr>
<td>2000</td>
<td></td>
<td></td>
<td>14</td>
<td>143</td>
<td>506</td>
<td>466</td>
<td>27</td>
</tr>
<tr>
<td>% change (number)</td>
<td>29.8</td>
<td>17.6</td>
<td>14</td>
<td>143</td>
<td>506</td>
<td>466</td>
<td>27</td>
</tr>
</tbody>
</table>

Source: APC surveys, 1990, 1994 and 2000. There was a very good response rate to the APC survey of 97.5%

* Worked out from number of reported hours divided by 40.

#### 15.2.2 Training and regulation

A Bachelor of Dental Surgery from Otago University, or an equivalent overseas qualification that is accepted by the Dental Council of New Zealand, is required to be able to practice as a dentist in New Zealand. Dentists must be registered and hold an APC from the Dental Council of New Zealand before they can work.

### 15.3 Dental hygienists

A dental hygienist treats gum diseases and helps patients maintain good oral and general health, by educating them about prevention of oral disease through care of their teeth and gums. Dental hygienists work under the supervision of a dentist in a practice, clinic or health care organisation. They are required to complete the Diploma in Dental Hygiene. This is a two-year, full-time programme at the University of Otago.
15.3.1 Capacity

The New Zealand Hygienists Association reports over 140 members at November 2001.

15.3.2 Training and regulation

Currently the Dental Act allows people who are not qualified to perform dental hygienists’ tasks. They work under the direct supervision of dentists, who must be present at the premises at which the work is carried out.

The New Zealand Dental Hygienists’ Association is seeking registration through the Health Practitioner’s Competence Assurance Bill, under a combined Dental Council. This raises issues around the standardisation of qualifications, and whether hygienists will only be able to operate under the direct supervision of dentists or be permitted to operate under indirect supervision.

15.4 Dental technicians

A dental technician creates and repairs devices for the treatment, replacement and protection of damaged, badly positioned or missing teeth. A clinical dental technician has the same expertise, but is also qualified to work on patients. A dental technician works from a mould of a patient’s mouth made by a dentist or a clinical dental technician, and custom-makes a wide range of appliances for the mouth.

15.4.1 Capacity

The total number of registered dental technicians has increased from 226 in 1990 to 315 in 2000, a 39.4 percent increase (Table 15.3). Clinical dental technicians were first registered in 1991, but now make up 42 percent of the total number of dental technicians.

<table>
<thead>
<tr>
<th></th>
<th>Number registered</th>
<th>Number of clinical dental technicians*</th>
<th>% Māori</th>
<th>% Pacific</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>226</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td>315</td>
<td>132</td>
<td>1.0</td>
<td>0.9</td>
</tr>
<tr>
<td>% change</td>
<td>39.4</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: APC survey and the Dental Technicians’ Board

* Included in the overall registration number.

15.4.2 Training and regulation

Dental technicians are required to complete the three-year Bachelor of Dental Technology degree offered at the University of Otago. Dental technicians must be registered with the Dental Technicians’ Board, and must hold an APC. To qualify as a clinical dental technician, a registered dental technician must complete two years of dental technicians’ work, and successfully complete an approved advanced programme in clinical dental technology.
15.5 Dental therapists

A dental therapist, previously known as a dental nurse, treats children’s teeth and advises children (and sometimes their parents) about how to take care of them. They usually work in dental clinics at primary and intermediate schools. They may also work in mobile dental therapy units.

15.5.1 Capacity

Between 1990 and 1998 the total number of dental therapists decreased by 290 (Table 15.4). This has resulted in a major change in the ratio of dental therapist to target population (2.5 to 12.5-year-old children) from 1:647 in 1990 to 1:1120 in 1998. Almost 46 percent of dental therapists in 1998 were over the age of 45.

Table 15.4: Characteristics of dental therapists

<table>
<thead>
<tr>
<th>Year</th>
<th>Number</th>
<th>Estimated FTE</th>
<th>% Male</th>
<th>% Female</th>
<th>% Māori</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990*</td>
<td>859</td>
<td>760</td>
<td>0.2</td>
<td>99.8</td>
<td>5.7</td>
</tr>
<tr>
<td>1998</td>
<td>569</td>
<td>509.5</td>
<td></td>
<td>99.8</td>
<td>5.7</td>
</tr>
<tr>
<td>% change</td>
<td>-33.8</td>
<td>-33</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sources: Survey of CHEs May 1998; the Dental Council of NZ
* These numbers are for dental nurses in 1990.

15.5.2 Training and regulation

Dental therapists must have a Diploma in Dental Therapy. This is a two-year full-time programme offered by the University of Otago. A new dental therapy course at the Auckland University of Technology began in 2002.

15.6 Dental assistants

A dental assistant helps a dentist or dental therapist with patient care and the running of a dental practice. Dental assistants can be involved with a range of tasks, including greeting and preparing patients for treatment; mixing materials for fillings; cleaning and preparing instruments; passing instruments and materials to the dentist as required; keeping the patient’s mouth clear by using a suction machine; developing x-rays; and keeping the clinic clean and hygienic. They may also perform general reception and clerical duties.

15.6.1 Capacity

There is very little workforce data available for dental assistants. In 1998 a survey showed that there were 64.2 FTE dental assistants in all New Zealand Crown Health Enterprises. This number had increased by 75 percent within two years, when a 2000 survey found that there were 116.2 FTE dental assistants funded by the HFA (Mune 2001). However there are an unknown number of dental assistants working with dentists in private practice.
15.6.2 Training

The New Zealand Dental Association runs annual courses for dental assistants in work, through polytechnics and by correspondence. A nationally recognised qualification follows success in the final exam.

15.7 Sources of information used for the ‘dental health’ section


