

12. Oral health

Oral health refers to the health of tissues in the mouth, including mucous membranes, connective tissue, muscles, bone, teeth and periodontal structures and gums. It may also refer to immunological, physiological, sensory and digestive system functioning, but is most often used to refer to the health of two specialised tissues of the mouth: the teeth and the gums.

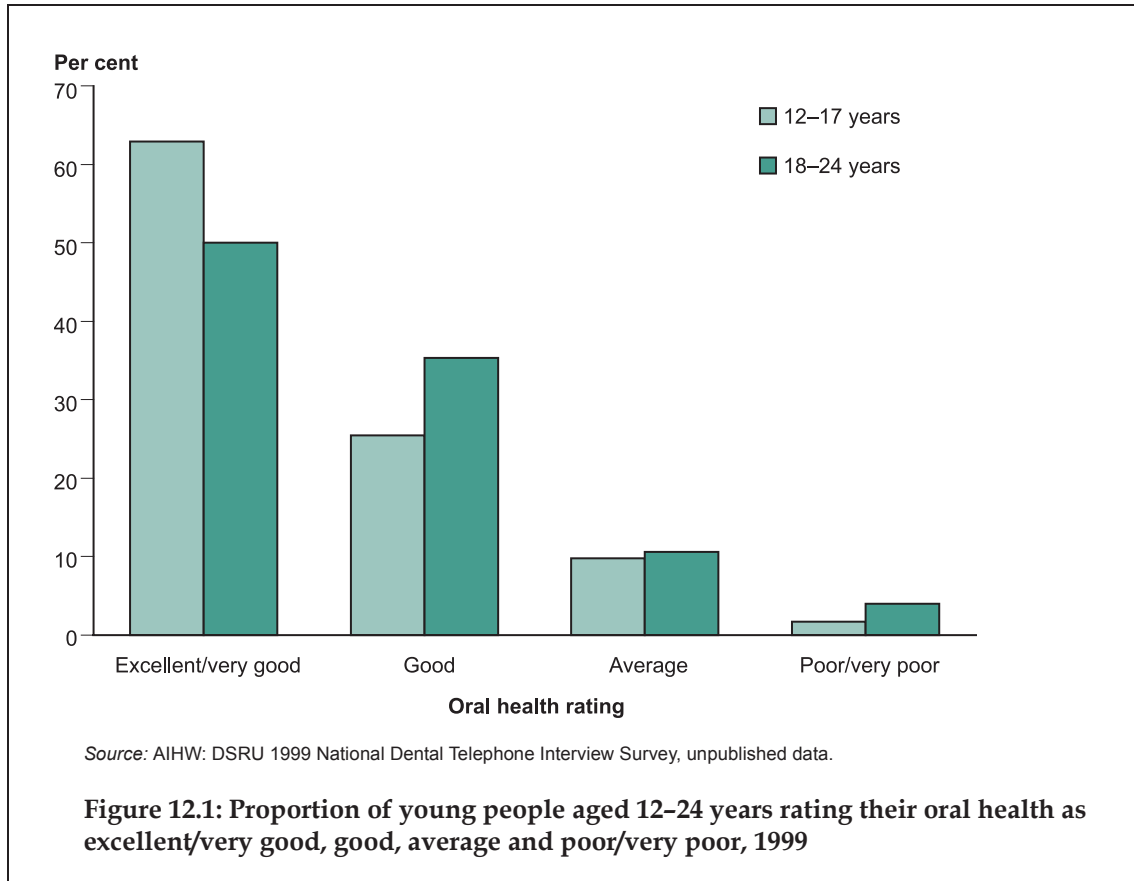
Dental decay and gum diseases are among the most prevalent illnesses in Australian adults. Decayed teeth can lead to considerable illness and pain. The loss of permanent teeth can lead to difficulties in chewing, discomfort while eating, personal embarrassment and social isolation (AIHW 2000).

Good oral health throughout infancy and early childhood contributes to better dental health in adulthood and results in less decay and reduced loss of natural teeth. Early preventive strategies, including the fluoridation of the water supply, improved oral hygiene practices, better diet and improved disease management, all help to maintain the health of teeth and gums. The level of access to dental health services in terms of availability and affordability is also an important determinant of oral health.

Australian children and young people generally experience good dental health. Following the introduction of the School Dental Scheme in 1977 there has been ongoing monitoring of child dental health. There have been great improvements in the dental health of Australian children, including a decline in the amount of decay experienced and an increase in the proportion of children with no dental decay (AIHW 1996). However, it is possible that improvements in child dental health have slowed and may be in decline (AIHW 2002b). If so, this will affect the oral health of young people in the future. Another matter of ongoing concern is that a relatively small number of disadvantaged children experience a disproportionate amount of dental decay (AIHW 2002b).

Oral health of young people

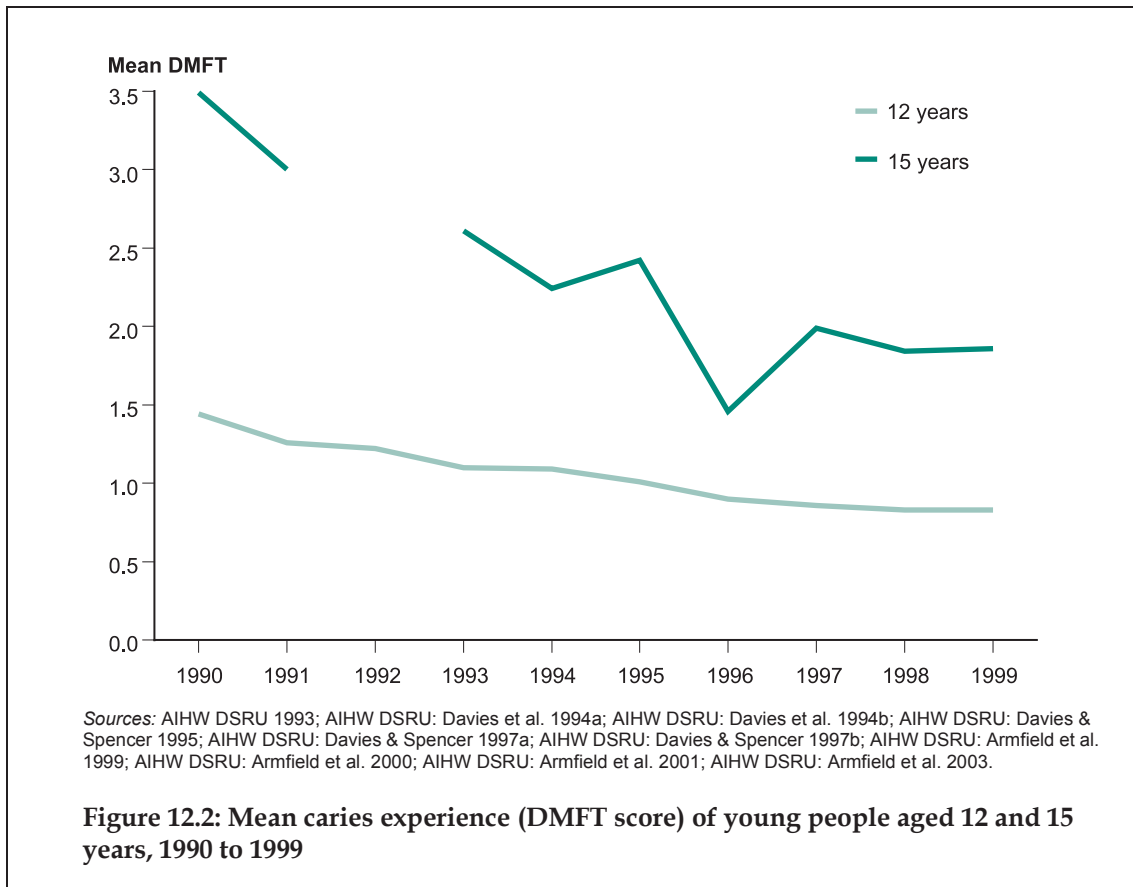
Most young people say they have good oral health (Figure 12.1).



- In 1999, around 88% of young people aged 12-17 rated their oral health as excellent, very good or good. A similar proportion (85%) of young people aged 18-24 years also rated their oral health as excellent, very good or good.
- Less than 2% of young people aged 12-17 years rated their oral health as poor or very poor, and 4% of those aged 18-24 years rated their oral health as poor or very poor.

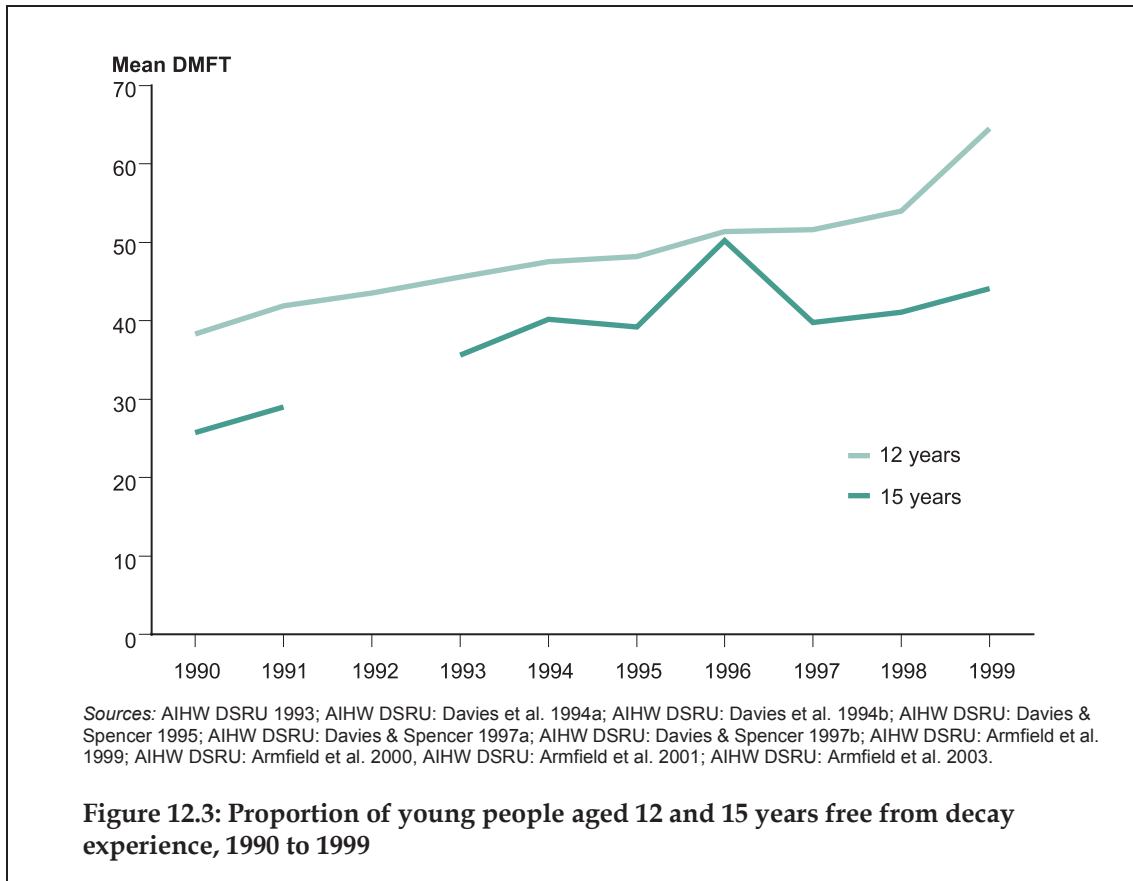
Oral health outcomes among young people are usually measured in terms of dental health decay experience. There are two main measures of dental decay experience. Dental decay experience is expressed as either a 'dmft' or a 'DMFT' score: the number of teeth currently decayed, teeth extracted due to decay, and teeth with fillings (AIHW 2000). The 'dmft' score describes the condition of deciduous teeth, and the 'DMFT' score describes permanent teeth. The other commonly used statistic is the percentage of individuals free of clinical decay, i.e. when the dmft and DMFT scores equal zero.

The average number of decayed permanent teeth (mean DMFT score) among young people aged 12 years and 15 years from 1990 to 1999 is shown in Figure 12.2. Data were not available for those aged 15 years in 1992.



- Average decay experience among young people aged 12 and 15 years was lower in 1999 than in 1990. For those aged 12 years, the mean DMFT fell from 1.44 to 0.83. For those aged 15 years, the DMFT score fell from 3.49 to 1.86.
- The rate of decline in average decay experience in young people aged 12 years is slowing with time.
- The rate of decline in decay experience among young people aged 15 years was higher than for those aged 12 years.

The proportions of young people aged 12 and 15 years free from clinical decay are shown in Figure 12.3. Data were not available for young people aged 15 years in 1992.



- The proportions of young people aged 12 years free from clinical decay experience increased between 1990 and 1999. The proportion with DMFT = 0 increased from 38% in 1990 to 64.5% in 1999.
- The proportion of young people aged 15 years free of clinical decay experience increased from 26% in 1990 to 44% in 1999.
- Over the period, the proportion of young people with DMFT = 0 was higher among those aged 12 years than those aged 15 years.

Another measure of oral health is the proportion of young people in need of immediate treatment. These data are shown in Table 12.1.

Table 12.1: Young people aged 12–15 years in need of immediate treatment and the state of their dental health, 1990 and 1999

Age (years)	Proportion needing immediate treatment		Mean dmft		Mean DMFT		Proportion with 4 or more decayed teeth	
	1990	1999	1990	1999	1990	1999	1990	1999
12	6.2	6.5	1.10	1.02	2.90	1.37	22.4	6.8
13	6.1	7.7	0.62	0.47	4.68	2.88	33.4	13.2
14	9.0	8.3	0.11	0.38	4.46	1.87	35.1	14.9
15	19.4	7.9	0.00	0.59	5.66	3.75	36.4	22.8

Note: Immediate treatment need was not recorded in Victoria and Western Australia in 1990 and 1999 or in the Australian Capital Territory in 1999.

Source: AIHW DSRU 1993; AIWH DSRU: Armfield et al. 2003.

- In 1990, the proportion of young people aged 15 years needing immediate treatment was more than twice the proportion of those aged 14 years and 3 times the proportion of those aged 12 years needing immediate treatment.
- By 1999, this pattern had changed, with the proportion of children aged 15 years requiring immediate treatment being considerably reduced.
- Between 1990 and 1999, a marked decrease in mean DMFT and the proportion with 4 or more decayed teeth was observed for all ages. In particular, the proportion of young people with 4 or more decayed teeth has reduced considerably.

Differences in oral health

Although there have been improvements in the oral health of Australian young people, problems have been seen in particular groups within the youth population. Davies et al. (1997) found that in 1992, Aboriginal and Torres Strait Islander children had significantly more decayed teeth and higher aggregate dental decay experience in both deciduous and permanent teeth than other Australian children. They also found that overseas-born children had more fillings than other Australian children.

The 1998 Child Dental Health Survey found that decay experience for young people aged 12 years was highest in very remote areas, followed by remote areas (AIHW DSRU: Armfield et al. 2001). Interestingly, the opposite was true for young people aged 15 years: those in remote and very remote areas had the lowest mean DMFT. This is contrary to overall trends and most likely reflects state/territory access policy for the School Dental Service and enrolment patterns across the ages 12 to 15 years.

Oral health also varied by state and territory. In 1999, Queensland had the highest DMFT for young people aged 12 years (1.3), and New South Wales had the lowest (0.55). The same pattern was seen for decay-free experience: Queensland had the lowest proportion (57%) and New South Wales the highest (75%). However, caries experience for some areas within states and territories is based on small numbers of children sampled, and although the sample was randomly selected, it may not be an accurate reflection of the entire age-group population in each area (AIHW DSRU: Armfield et al. 2003).

Dental consultations by young people

Information on dental visits by young people was collected by the National Dental Telephone Interview Survey. This information is shown in Table 12.2.

Table 12.2: Dental consultations by young people aged 12–24 years, 1999

Question	Age (years)	
	12–17	18–24
Time since last dental visit		
< 12 months	78.5	51.6
1–< 2 years	14.2	25.6
2–< 5 years	6.8	14.5
5+ years	0.5	8.3
Place of last dental visit^(a)		
Private	58.9	81.4
Public clinic	9.9	14.5
School Dental Service	31.1	3.8
Reason for last dental visit^(a)		
Problem	28.7	45.6
Check-up	71.3	54.4
Mean number of^(a):		
Visits	3.06	2.12
Extractions	0.34	0.37
Fillings	0.46	0.54
Scale and clean services	0.75	0.95
Social impact		
Toothache ^(b)	9.8	18.2
Food avoidance ^(c)	11.6	11.9

(a) Among young people who made a dental visit in the previous 12 months.

(b) Percentage reporting experience of toothache as 'very often', 'often', or 'sometimes' during the last 12 months.

(c) Percentage reporting avoidance of eating some foods because of problems with their teeth or mouth as 'very often', 'often', or 'sometimes' during the last 12 months.

Source: AIHW DSRU 1999 National Dental Telephone Interview Survey, unpublished data.

- In 1999, 79% of young people aged 12–17 years and 52% of young people aged 18–24 years had visited a dentist or dental professional in the previous 12 months.
- Around one-third aged 12–17 years had used the school dental service on their last dental visit, and 59% had consulted a private dentist. Among those aged 18–24 years, 81% used a private dentist and 15% a public clinic.
- Among those aged 12–17 years, over two-thirds (71%) had last visited a dentist for a check-up. Among those aged 18–24 years, most visited for a check-up (54%) rather than for a problem.
- Among those who had visited a dentist in the past 12 months, the mean number of visits for those aged 12–17 years and 18–24 years was 3 and 2 respectively.
- In 1999, 10% of those aged 12–17 years and 18% of those aged 18–24 years reported experiencing toothache. Around 12% of those aged 12–24 years reported avoiding eating some foods because of problems with their teeth or gums.

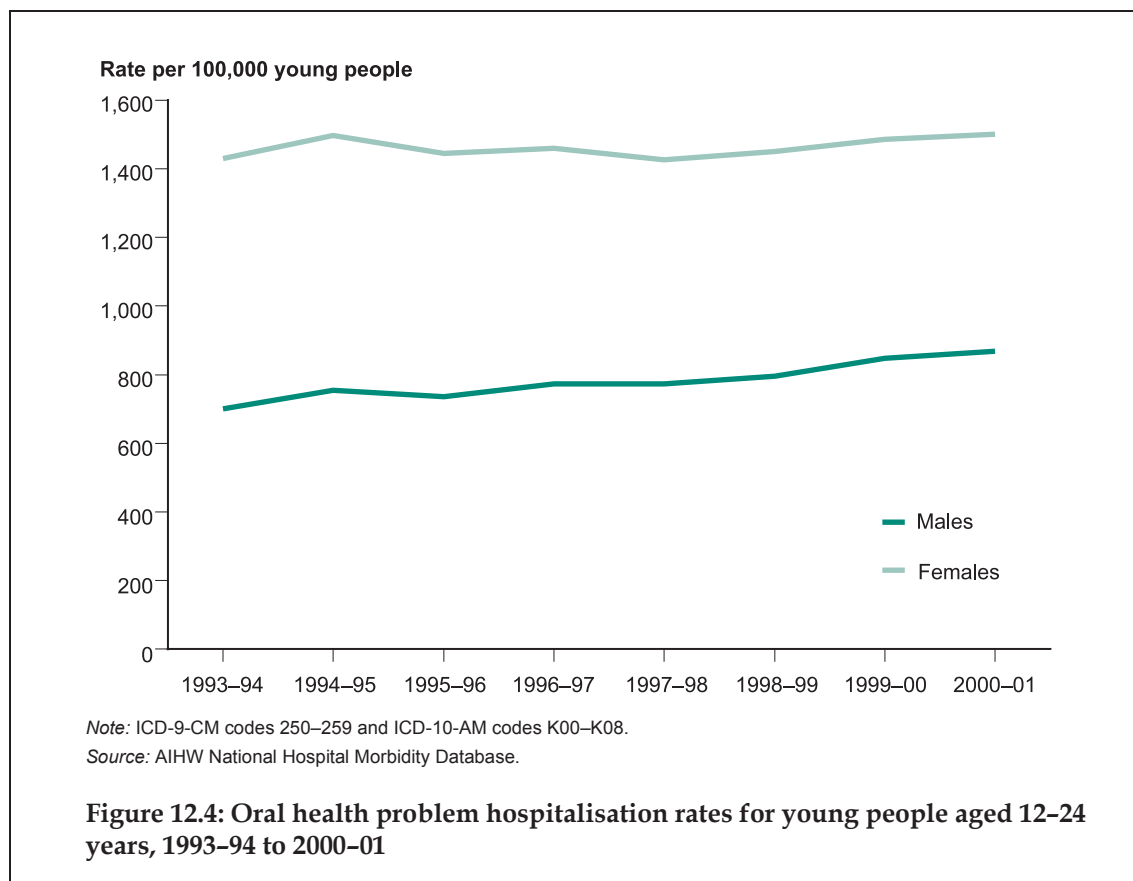
The proportion of young people who visited a dentist or dental professional in the previous 12 months remained fairly stable between 1994 and 1999. For those aged 12–17 years, the proportion fluctuated between 72% (1995) and 79% (1999). For those aged 18–24 years, the proportion fluctuated between 50% (1996) and 58% (1995).

The proportion of young people who reported experiencing toothache remained fairly stable between 1994 and 1999. For those aged 12–17 years, the proportion fluctuated between 8% (1996) and 10% (1999). For those aged 18–24 years, the proportion fluctuated between 15% (1995) and 18% (1999).

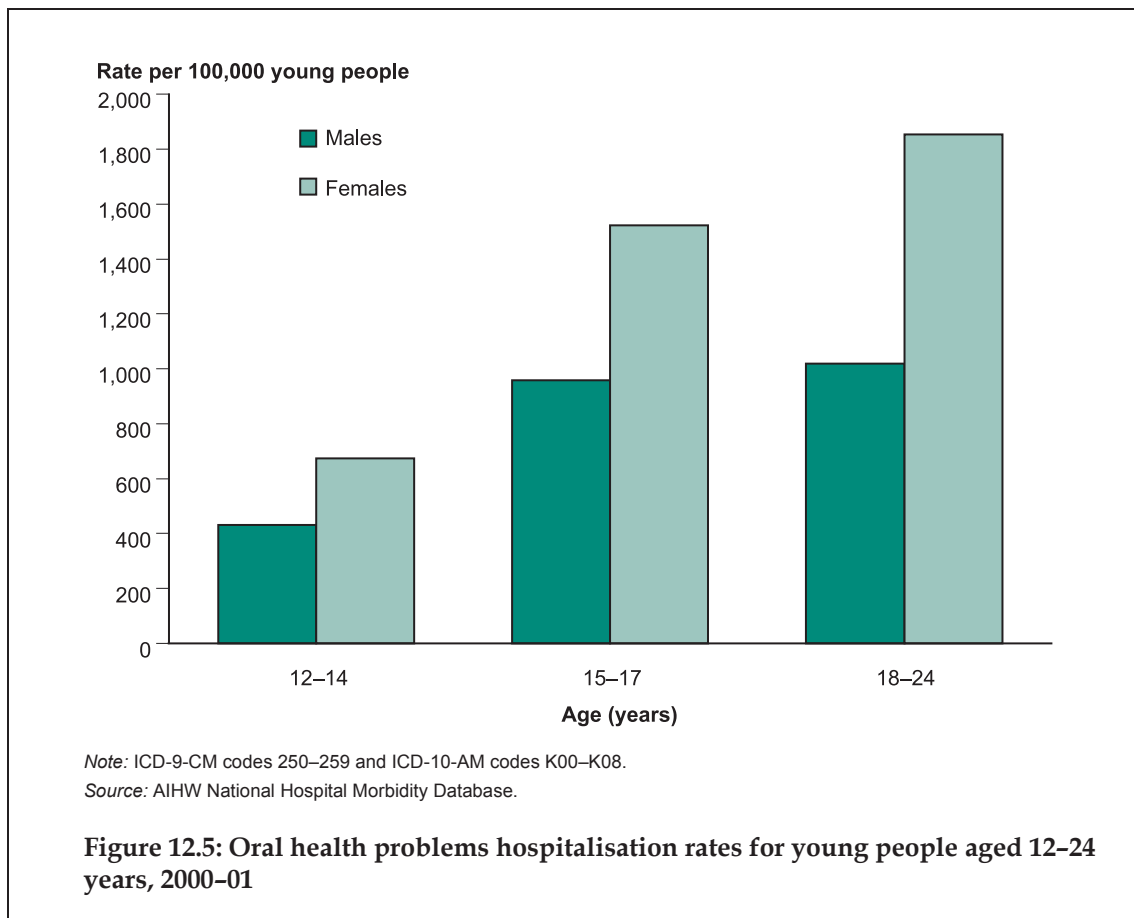
The 1999 National Dental Telephone Interview Survey found that the number of dental visits in the last 12 months was associated with sociodemographic status (AIHW DSRU 2002). Those young people who had made a dental visit in the last 12 months were more likely to be non-indigenous males from non-English-speaking backgrounds, live in urban areas, have private health insurance and not hold a government dental card. These patterns reflect the need for treatment among these population groups as well as issues about accessibility to dental treatment in terms of both availability and affordability.

Hospitalisations

In 2000–01, there were over 40,000 hospitalisations of young people aged 12–24 years for oral health problems. The hospitalisation rates from 1993–94 to 2000–01 are shown in Figure 12.4.



- Rates for oral problem hospitalisations increased slightly between 1993–94 and 2000–01. Rates for females increased by 5% (1,430 to 1,501 per 100,000), and rates for males increased by 24% (700 to 868 per 100,000).
- Rates were consistently higher for females than for males. In 2000–01, rates for females were 1.7 times those for males.



- Hospitalisation rates for oral problems were higher for older age groups. Rates for those aged 18-24 years were 2.6 times the rates for those aged 12-14 years.
- Hospitalisation rates were greater for females than males in all age groups. The greatest difference was in the age group 18-24 years, where rates for females were 1.8 times those for males.

The most common reason for oral problem hospitalisations for both males and females was impacted teeth – accounting for 81% of dental hospitalisations – followed by anomalies of tooth position and dental decay, which accounted for an additional 10%.

References

- ABS (Australian Bureau of Statistics) various years(a). Births, Australia. ABS Cat. 3301.0. Canberra: ABS.
- ABS (Australian Bureau of Statistics) various years(b). National Health Survey: summary of results. ABS Cat. No. 4364.0. Canberra: ABS.
- ABS (Australian Bureau of Statistics) 1998. National Health Survey: asthma and other respiratory conditions. Cat. No. 4373.0. Canberra: ABS.
- ABS (Australian Bureau of Statistics) 2001. Corrective services, Australia. ABS Cat. 4512.0. Canberra: ABS.
- ABS (Australian Bureau of Statistics) 2002. National Health Survey: summary of results. ABS Cat. No. 4364.0. Canberra: ABS.
- Adelson PL, Frommer MS & Weisberg E 1995. A survey of women seeking termination of pregnancy in New South Wales. *Medical Journal of Australia* 163(8):419-22.
- AHMAC (Australian Health Ministers' Advisory Council) 1991. Cervical cancer screening in Australia: options for change. Prevention Program Evaluation Series No. 2. Canberra: Australian Institute of Health.
- AIHW (Australian Institute of Health and Welfare) various years. Cervical screening in Australia. Canberra: AIHW.
- AIHW (Australian Institute of Health and Welfare) 1996. Australia's Health 1996: the fifth biennial health report of the Australian Institute of Health and Welfare. Canberra: AGPS.
- AIHW (Australian Institute of Health and Welfare) 2000. Australia's Health 2000: the seventh biennial health report of the Australian Institute of Health and Welfare. Canberra: AIHW.
- AIHW (Australian Institute of Health and Welfare) 2002a. Diabetes: Australian facts 2002. AIHW Cat. No. CVD 20 (Diabetes Series No. 3). Canberra: AIHW.
- AIHW (Australian Institute of Health and Welfare) 2002b. Australia's Health 2002: the eighth biennial health report of the Australian Institute of Health and Welfare. Canberra: AIHW.
- AIHW DSRU (Australian Institute of Health and Welfare Dental Statistics and Research Unit) 1993. The child dental health survey, Australia 1990. AIHW DSRU Series No. 2. Adelaide: Adelaide University.
- AIHW DSRU (Australian Institute of Health and Welfare Dental Statistics and Research Unit) 2002. Access to dental services of Australian children and adolescents 1999. AIHW Dental Statistics and Research Unit Research Report No. 2. South Australia: AIHW DSRU.
- AIHW DSRU (Australian Institute of Health and Welfare Dental Statistics and Research Unit): Armfield J, Roberts-Thomson K & Spencer A 1999. The child dental health survey, Australia 1996. AIHW Dental Statistics and Research Unit Series No. 20. Adelaide: Adelaide University.
- AIHW DSRU (Australian Institute of Health and Welfare Dental Statistics and Research Unit): Armfield J, Roberts-Thomson K & Spencer A 2000. The child dental health survey, Australia 1997. AIHW Dental Statistics and Research Unit Series No. 21. Adelaide: Adelaide University.
- AIHW DSRU (Australian Institute of Health and Welfare Dental Statistics and Research Unit): Armfield J, Roberts-Thomson K & Spencer A 2001. The child dental health survey, Australia 1998. AIHW Dental Statistics and Research Unit Series No. 24. Adelaide: Adelaide University.
- AIHW DSRU (Australian Institute of Health and Welfare Dental Statistics and Research Unit): Armfield JM, Roberts-Thomson KF & Spencer AJ 2003. The Child Dental Health Survey, Australia 1999: trends across the 1990s. AIHW Dental Statistics and Research Series No. 27. Adelaide: Adelaide University.
- AIHW DSRU (Australian Institute of Health and Welfare Dental Statistics and Research Unit): Davies M, Spencer A & Slade G 1994a. The child dental health survey, Australia 1991. AIHW Dental Statistics and Research Unit Series No. 4. Adelaide: Adelaide University.

- AIHW DSRU (Australian Institute of Health and Welfare Dental Statistics and Research Unit): Davies M, Spencer A & Slade G 1994b. The child dental health survey, Australia 1992. AIHW Dental Statistics and Research Unit Series No. 5. Adelaide: Adelaide University.
- AIHW DSRU (Australian Institute of Health and Welfare Dental Statistics and Research Unit): Davies M & Spencer A 1995. The child dental health survey, Australia 1993. AIHW Dental Statistics and Research Unit Series No. 7. Adelaide: Adelaide University.
- AIHW DSRU (Australian Institute of Health and Welfare Dental Statistics and Research Unit): Davies M & Spencer A 1997a. The child dental health survey, Australia 1994. AIHW Dental Statistics and Research Unit Series No. 9. Adelaide: Adelaide University.
- AIHW DSRU (Australian Institute of Health and Welfare Dental Statistics and Research Unit): Davies M & Spencer A 1997b. The child dental health survey, Australia 1995. AIHW Dental Statistics and Research Unit Series No. 10. Adelaide: Adelaide University.
- AIHW NISU (Australian Institute of Health and Welfare National Injury Surveillance Unit) 1995. The literature on adolescents and young adults. Australian Injury Prevention Bulletin 11. Adelaide: AIHW NISU.
- AIHW NPSU (Australian Institute of Health and Welfare National Perinatal Statistics Unit) 2003. Australia's mothers and babies 2000. Cat. No. PER 21. Sydney: AIHW NPSU.
- AIHW (Australian Institute of Health and Welfare) & DHFS (Commonwealth Department of Health and Family Services) 1997. First report on National Health Priority Areas 1996. Canberra: AIHW and DHFS.
- American Diabetes Association 2000. Type 2 diabetes in children and adolescents. Consensus statement. *Diabetes Care* 23(3):381-9.
- Andrews G 2003. K10 symptom scale. Clinical Research Unit for Anxiety and Depression. Viewed 1 July 2003, <<http://www.crufad.com/K10/k10info.htm>>.
- Andrews G & Slade T 2001. Interpreting scores on the Kessler Psychological Distress Scale (K10). *Australian and New Zealand Journal of Public Health* 25(6):494-7.
- Andrews G, Hall W, Teeson M & Henderson S 1999. The mental health of Australians. Canberra: DHAC.
- APA (American Psychiatric Association) 1994. Diagnostic and statistical manual of mental disorders (DSM IV), 4th edn. Washington, DC: APA.
- Beautrais AL 2000. Risk factors for suicide and attempted suicide among young people. *Australian and New Zealand Journal of Psychiatry* 34(3):420-36.
- CDC (Center for Disease Control) 1998. Youth risk behaviour surveillance – United States, 1997. *MMWR Surveillance Summaries* 47 (No. SS-3).
- CDC (Center for Disease Control) 2003a. Measles – what you need to know. National Immunization Program (NIP). Viewed 1 July 2003, <<http://www.cdc.gov/nip/diseases/measles/vac-chart.htm>>.
- CDC (Center for Disease Control) 2003b. Viral hepatitis B fact sheet. National Center for Infectious Diseases. Viewed 1 July 2003, <<http://www.cdc.gov/ncidod/diseases/hepatitis/b/fact.htm>>
- Counahan ML, Hocking JS & Fairley CK 2003. Enhanced chlamydia surveillance indicates more screening needed. *Medical Journal of Australia* 178(10):523.
- Davies MJ, Spencer AJ, Westwater A & Simmons B 1997. Dental caries among Australian Aboriginal, non-Aboriginal Australian-born, and overseas-born children. *WHO Bulletin* 75(3):197-203.
- DHAC (Commonwealth Department of Health and Aged Care) 2000a. Promotion, prevention and early intervention for mental health: a monograph. Canberra: DHAC.
- DHAC (Commonwealth Department of Health and Ageing) 2000b. National HIV/AIDS strategy 1999-2000 to 2003-2004. Canberra: DHAC.

- DHAC (Commonwealth Department of Health and Ageing) 2001. National injury prevention plan priorities for 2001–2003. Canberra: DHAC.
- DHS (Department of Human Services), Victoria 2003. The Blue Book. Guidelines for the control of infectious diseases. Infectious Diseases Unit, Public Health Division, Victorian Department of Human Services. Viewed 1 July 2003, <http://www.dhs.vic.gov.au/phb/hprot/inf_dis/bluebook/infdis.pdf>.
- DHFS (Commonwealth Department of Health and Family Services) 1997. Youth suicide in Australia: a background monograph. Canberra: DHFS.
- Ehtisham S, Kirk J, McEvelly A, Shaw N, Jones S, Rose S et al. 2001. Prevalence of Type 2 diabetes in children in Birmingham. *British Medical Journal* 322(7299):1428.
- Fagot-Campagna A, Narayan K & Imperatore G 2001. Type 2 diabetes in children. *British Medical Journal* 322(7283):377–8.
- Farnsworth A & Mitchell HS 2003. Prevention of cervical cancer. *Medical Journal of Australia* Vol 178 (12):653–654.
- Gies HP, Roy C, Toomey S, MacLennan R & Watson M 1998. Solar ultraviolet radiation exposures of school children at three locations in Queensland. *Photochemistry and Photobiology* 68(1):78–83.
- Groholt B, Ekeberg O, Wichstrom L & Haldorsen T 2000. Young suicide attempters: a comparison between a clinical and an epidemiological sample. *Journal of the American Academy of Child and Adolescent Psychiatry* 39(7):868–875.
- Hansen BC, Saye JA & Wennogle LP 1999. The metabolic syndrome X: convergence of insulin resistance, glucose intolerance, hypertension, obesity, and dyslipidemias—searching for the underlying defects. *Annals of the New York Academy of Sciences* 892.
- Handelsman P & Jackson L 1999. A national needs assessment of children and adolescents with diabetes, Australia, 1999. Sydney: The Diabetes Research Foundation, Juvenile Diabetes Foundation of Australia.
- Hawton K, Rodham K, Evans E & Weatherall R 2002. Deliberate self-harm in adolescents: self-report survey in schools in England. *British Medical Journal* 325(7374):1207–11.
- Healy K 2001. Choices and pathways for young women who are pregnant and parenting: supporting health relationships, education and training. Canberra: Commonwealth of Australia.
- Isacson G & Rich CL 2001. Management of patients who deliberately harm themselves. *British Medical Journal* 322(7280):213–5.
- Jenkinson D 1988. Duration of effectiveness of pertussis vaccine: evidence from a 10-year community study. *British Medical Journal (Clin Res Ed)* 296(6622):612–4.
- Keitel WA & Edwards KM. 1995. Pertussis in adolescents and adults: time to reimmunize? *Seminars in Respiratory Infections* 10(1):51–7.
- Lindsay J, Smith A & Rosenthal D 1997. Secondary students, HIV/AIDS and sexual health 1997. Monograph series no. 3. Carlton: La Trobe University.
- McIntyre P, Amin J, Gidding H, Hull B, Torvaldsen S, Tucker A et al. 2000. Vaccine preventable diseases and vaccination coverage in Australia, 1993–1998. *Communicable Disease Intelligence supplement* 24(9):276–7.
- Monash University 2003. Socioeconomic status and injury. Hazard. Viewed 14 January 2003, <<http://www.general.monash.edu.au/muarc/visar/Haz.htm>>.
- National Centre in HIV Epidemiology and Clinical Research 2002. HIV/AIDS, viral hepatitis and sexually transmissible infections in Australia annual surveillance report. Sydney: National Centre in HIV Epidemiology and Clinical Research, The University of New South Wales.
- National Asthma Campaign (NAC) 1998. Asthma management handbook 1998. NAC. Viewed 1 July 2003, <<http://www.nationalasthma.org.au>>.

- National Cancer Institute 2002. National Cancer Institute: research on causes of cancers in children. National Cancer Institute. Viewed 1 August 2003, <http://cis.nci.nih.gov/fact/6_40.htm>.
- NCCH (National Centre for Classification in Health) 1998. The international statistical classification of diseases and related health problems, 10th revision, Australian modification (ICD-10-AM). Vol. 1. Sydney: National Centre for Classification in Health, Faculty of Health Sciences, University of Sydney.
- NHMRC (National Health and Medical Research Council) 1997. The Australian immunisation handbook, 6th edn. Canberra: NHMRC.
- NHMRC (National Health and Medical Research Council) 2000. The Australian immunisation handbook, 7th edn. Canberra: NHMRC.
- Norton R & Lam L 1999. Young males and risk-taking project: report to the Injury Prevention Policy Unit Health Promotion Branch NSW Health. Sydney: Institute for International Health.
- O'Riordan DL, Stanton WR, Eyeson-Annan M, Gies P & Rey C 1999. Correlations between reported and measured ultraviolet radiation exposure of others and young children. *Photochemistry and Photobiology* 71(1):60-64.
- Patton GC, Harris R, Carlin JB, Hibbert ME, Coffey C, Schwartz M and Bowes G 1997. Adolescent suicidal behaviours: a population-based study of risk. *Psychological Medicine*. 27(3):715-24.
- Robertson CF, Dalton MF, Peat JK, Haby MM, Bauman A, Kennedy JD & Landau LI 1998. Asthma and other atopic diseases in Australian children: Australian arm of the International Study of Asthma and Allergy in Childhood. *Medical Journal of Australia* 168(9):434-8.
- Sawyer MG, Arney FM, Baghurst PA, Clark JJ, Graetz BW, Kosky RJ, Nurcombe B, Patton GC, Prior MR, Raphael B, Rey J, Whaites LC & Zubrick SR 2000. The mental health of young people in Australia. Canberra: Commonwealth Department of Health and Aged Care.
- Scott I 1998. Injuries to young men in Australia. *Injury Prevention* 4:77-78.
- Sexual Health and Family Planning Australia 2002. Who do family planning organisations serve in the Australian community? Fact Sheet 2. Viewed 1 July 2003, <<http://www.fpa.net.au/pdfs/Factsheet%202.PDF>>.
- Tapsall J W 2001. Annual report of the Australian meningococcal surveillance programme, 2000. *Communicable Diseases Intelligence* 25(3):113-21.
- Taylor DM & Cameron PA 1998. Deliberate self-inflicted trauma: population demographics, the nature of injury and a comparison with patients who overdose. *Australian and New Zealand Journal of Public Health* 22(1):120-5.
- Towner EML, Jarvis SN, Walsh SSM & Aynsley-Green A 1994. Measuring exposure to injury risk in schoolchildren aged 11-14. *British Medical Journal* 308(6926):449-52.
- UNICEF (United Nations Children's Fund) 2001. A league table of teenage births in rich nations. Innocenti Report Card No. 3. Florence: UNICEF Innocenti Research Centre.
- USDHHS (United States Department of Health and Human Services) 1999. Mental health: a report of the Surgeon General. Washington, DC: USDHHS.
- Van der Klis KAM, Leontine L, Westenberg A, Chan A, Dekker G & Keane RJ 2002. Teenage pregnancy: trends, characteristics and outcomes in South Australia and Australia. *Australian and New Zealand Journal of Public Health* 26(2):125-31.
- WHO (World Health Organization) 1975. Education and treatment in human sexuality: the training of health professionals. Report of a WHO meeting. Technical Report Series No. 572. Viewed 1 July 2003, <<http://www2.hu-berlin.de/sexology/GESUND/ARCHIV/WHOR.HTM>>.
- WHO (World Health Organization) 2000. Hepatitis C: fact sheet no. 164. World Health Organization. Viewed 1 July 2003, <<http://www.who.int/inf-fs/en/fact164.html>>.

WHO (World Health Organization) 2003. Adolescent sexual and reproductive health. Department of Reproductive Health and Research (RHR), World Health Organization. Viewed 1 July 2003, <http://www.who.int/reproductive-health/adolescent/Adolescent_intro.en.html>.

Woolcock A, Bastiampillai S, Marks G & Keena VA 2001. The burden of asthma in Australia. *Medical Journal of Australia* 175(3):141-5.

Yih WK, Lett SM, des Vignes FN, Garrison KM, Sipe PL & Marchant CD 2000. The increasing incidence of pertussis in Massachusetts adolescents and adults, 1989-1998. *Journal Infectious Diseases* 182(5):1409-16.

Youthsafe 2003. Young people and injury. Youthsafe. Viewed 9 January 2003, <<http://www.youthsafe.org/injury/summary.htm>>.

Zardawi IM 2002. Cervical screening: time to change the policy. *Medical Journal of Australia* 177(6):332-3.

