

ORAL HEALTH IN OLDER PEOPLE 2013

Oral Health

1 Population

The proportion of people retaining a useful number of natural teeth into retirement age has increased dramatically during the past forty years. This improvement has been tracked by the ten yearly Adult Dental Health Surveys carried out by the Office for National Statistics.¹ As the number of older people rises and their complexity of care increases there will be an associated rise in demands on the service and a change in the nature of care required.

There are a number of specific dental problems and complications that occur in later life. Older people for example, will generally have a reduced salivary flow and this effect may be worsened by the side effects of medication. Saliva both lubricates the mouth during eating and speaking but is also has an important protective role in combating the decay-producing plaque acid.

Gums recede as a result of the natural process of ageing or through the cumulative effect of chronic gum disease. This, together with the reduction of the protective benefits of saliva, can bring about the onset of new decay, including attack on the newly-exposed soft root surface. A healthy, sugar-controlled diet and the continuing use of fluoride toothpaste are needed to help contain this problem.

If manual dexterity becomes reduced with age, for example because of rheumatoid arthritis, then effective oral hygiene including tooth brushing with a fluoride toothpaste can be compromised.

Dietary habits may also change, for a variety of reasons, as people become older and this may impact on oral health. If access to shops becomes harder because of mobility problems then fresh fruit and vegetables may not be readily available and there may be increased dependency on processed foods with longer shelf lives. Many of these products have a high sugar content. Tooth loss can reduce the ability to chew effectively and diet choices may become more restricted as a result.

A lack of mobility in later life may also make accessing dental services more difficult and if incomes are reduced paying for dental care may not be seen as a priority. People may only visit the dentist when they have a problem which can result in treatment becoming more complex or in late diagnosis of, for example, oral cancer.

¹ Adult Dental Health Survey 2009 <https://catalogue.ic.nhs.uk/publications/primary-care/dentistry/adult-dent-heal-surv-summ-rep-them-seri-2009/adul-dent-heal-surv-summ-them-exec-2009-rep2.pdf>

2 Trends

At the time of the first survey of adult dental health in 1968, a legacy of disease and extraction were clearly visible. Nearly half the adult population had no teeth at all and, even among the relatively young, there were many who wore complete dentures. However, by 1978, and the second national survey of adult oral health, the pattern was beginning to change. Generations who had lost all their teeth were gradually being replaced by generations who had their natural teeth filled rather than extracted.

National surveys of children's oral health were also undertaken at 10-year intervals and in 1983 the first signs of a sustained reduction in dental decay in children were observed. This was probably largely the result of the widespread introduction and marketing of fluoride toothpaste in the early 1970s. By 1988 (the next Adult Dental Health Survey) this reduction was visible in young adults.

The younger generation of 1978 (16–34-year-olds) had high levels of decay and many fillings, mostly of dental amalgam. This wave of restorations can be traced as the cohort ages, so by 1998 three groups moving through the population could be clearly identified, each with very different needs:

- Older age groups (those past the age of retirement) were dominated by those with no natural teeth at all and a need for complete dentures.
- A young generation (under the age of about 30) had lower levels of decay than their parents. They had low restorative needs and will benefit from maintaining this state throughout adult life.
- Finally, and importantly, a group between 30 and 65 could be identified who had experienced high levels of disease which had been treated by fillings and other restorations (the “heavy metal generation”) and who will have high maintenance needs as they age further.

Trends in Tooth Loss

Since 1998 oral health has improved steadily across the United Kingdom. The latest Adult Dental Health Survey in 2009¹ showed that 94% of adults across England, Wales and Northern Ireland had some natural teeth compared to only 87% in 1998. The improvement means fewer people struggling to manage with complete dentures, so more are able to eat a healthy diet and talk or smile without risk of embarrassment. Keeping teeth longer does, though, bring with it the need to maintain and replace many more fillings, crowns, bridges and partial dentures, which are expensive procedures.

Periodontal disease is an important cause of tooth loss, particularly in older age. In the 2009 Adult Dental Health Survey¹, a minority of British adults had a very healthy periodontal status (17%) and moderate periodontal disease (pockets of 4 mm to less than 6 mm) has also reduced markedly in the last decade, in line with measurably less plaque and more frequent brushing. However, more severe disease has increased slightly (from 6% to 9% of adults).

Many older patients suffer from long-term conditions such as diabetes, which increases the risk of developing periodontal disease.² Rheumatoid arthritis, which influences the ability of patients to adequately control oral hygiene, also increases the risk.³

Smoking is also known to contribute significantly to the development of periodontal disease.⁴

Trends in Oral Cancer

Oral cancers are among the most serious of oral diseases. In 2007, 5,410 people across the UK were diagnosed with some form of oral cancer. The disease occurs more commonly in men than women, and incidence increases with advancing age.⁵ In 2008, across the UK 1,822 deaths from one of the oral cancers were reported. Survival is poor, with approximately half of those diagnosed dying from their condition within five years of diagnosis.⁶ Early detection is important for improved survival, and dental SIGN guidelines include checking for signs of oral cancers during routine dental visits. Major risk factors for the oral cancers are smoking and drinking,^{7 8} as well as poor diet and nutrition.⁹ Human papillomavirus¹⁰ and immunosuppression have also been identified as significant risk factors.¹¹

3 Use of NHS Dental Services in Cambridgeshire

Access to NHS dental services is generally good in Cambridgeshire. The 2011 GP Survey reported that 95% of patients had been successful in getting an appointment with an NHS dentist in the last two years.¹² 96% had been successful within the last six months. In the East of England, in the same time period, 89% had been very satisfied or fairly satisfied with the treatment they had received.

² Chavarry, N.G. et al The relationship between diabetes mellitus and destructive periodontal disease: a meta- analysis. *Oral Health and Preventive Dentistry*, 7(2) 2009: pp 107-127

³ Lewis, D. et al Access to Special Care Dentistry, part 7 Special care Dentistry Services: seamless care for people in their middle years- Part 1 *British Dental Journal*, 205(6), 2008

⁴ Razali, M. et al. A retrospective study of periodontal disease in smokers and non-smokers. *British Dental Journal* 198, 2005; pp495-498. Published online: 23 April 2005 doi:10.1038/sj.bdj.4812253

⁵ Oral Cancer-UK Incidence Statistics. Cancer Research UK May 2010.

<http://info.cancerresearch.org/cancerstats/type/oral/incidence/>

⁶ ISD Online, <http://www.isdscotland.scot.nhs.uk/Health-topics/Cancer/Cancer-Statistics/Head and Neck/> Survival estimates from head and neck cancers in Scotland 2010. Information and Statistics division, NHS Scotland

⁷ Scottish Intercollegiate Guidelines Network (SIGN) 90, Diagnosis and management of head and neck cancer. A national clinical guideline October 2006

⁸ Warnakulasuriya, S, Sutherland, G and Scully C. Tobacco, oral cancer and treatment of dependence. *Oral Oncology*, 41(3) 2005: pp.244-260

⁹ Pavia, M. et al. Association between fruit and vegetable consumption and oral cancer: a meta-analysis of observational studies. *American Journal of Clinical Nutrition*, 83(5) 2006: pp.1126-34

¹⁰ Herrero, R, et al Human papilloma and oral cancer: the International Agency for research on Cancer multicentre study. *Journal of the National Cancer Institute*, 95(23) 2003: pp.1772-83

¹¹ Grulich, A et al Incidence of cancers in people with HIV/AIDS compared with immunosuppressed transplant recipients: a meta-analysis. *Lancet* 370 (9581) 2007: pp 59-67

¹² Results of GP Survey 15th December 2011 <http://www.dh.gov.uk/health/2011/12/gp-patient-survey/>

Between February 2011 and January 2013 just over 89,000 patients over the age of 64 visited an NHS dentist.¹³ Of these nearly 80,000 were treated by Cambridgeshire general dental practitioners (GDPs) while 9,181 patients also accessed services in neighbouring areas such as Lincolnshire, Bedfordshire and Essex.

Just over 38,000 attended for a check up only while approximately 45,500 received routine or more complex treatment. Of these nearly 10,000 patients attended for urgent or occasional care.

Most people over 64 years old who attended an NHS dentist in the same time period were not exempt from charges. 76,142 were non exempt with 12,966 exempt. Only 222 patients were provided with domiciliary dental care

4 Barriers to dental care

Previous research concerned with accessing dental care has shown that some obstacles to attending were linked to factors which could be described as patient-centred; these factors include dental anxiety, costs of treatment, and the attributes of the dental practice.¹⁴

Access

Just under three-fifths (58%) of adults said that they had tried to make an NHS dental appointment in the previous three years. Of those adults who had tried to make an NHS appointment the vast majority (92%) successfully received and attended an appointment while a further 1% of adults received an appointment but did not attend. The remaining 7% of adults had unsuccessfully tried to make an appointment with an NHS dentist.

Cost

Just over a quarter of adults (26%) said that the type of dental treatment they opted to have in the past had been affected by the cost of this treatment and almost one-fifth (19%) said that they had delayed dental treatment for the same reason.

Dental Anxiety

Twelve per cent of adults who had ever been to a dentist had a Modified Dental Anxiety Scale (MDAS) score of 19 or more which suggests extreme dental anxiety. The two items on the MDAS that elicited anxiety most often were both associated with receiving dental treatment; 30% of adults said that having a tooth drilled would make them very or extremely anxious and 28% reported similar levels of anxiety about having a local anaesthetic injection.

Overall, the majority of adults were positive about their last visit to the dentist; 80% of adults gave no negative feedback about their last visit to the dentist. However, 20% of consultations were considered to be less than satisfactory in one way or another

¹³ NHS Business Services Authority Dental Practice Division dental data

¹⁴ Finch et al (1988) Barriers to the receipt of dental care, Social and Community Planning Research

5 Inequalities in Oral Health

Poverty and challenging life circumstances can often make it more difficult for people to stay healthy.¹⁵ Being from a deprived community makes it more likely that a person may suffer from poorer oral health. The effect is observed from childhood, and shows a clear gradient across society.

The frequency of impact of poor oral health on people's lives has reduced in the last decade.¹ However, while clinical conditions are improving, there is a proportion of dentate adults that experience negative effects on their daily life frequently (16%) and/or severely (17%) due to their oral health; who are more likely to be those in a lower socioeconomic position and those with worse clinical status in terms of caries and periodontal disease.¹⁶

Oral cancer incidence is also linked to deprivation.¹⁷ Between 1976 and 2002, there was a general increase in oral cancer incidence with increasing deprivation. The effect is more pronounced in men than women. Smoking and alcohol consumption constitute major risk factors, acting together to increase oral cancer risk. While smoking has reduced across all social groups, cigarette use is lower in more affluent communities. Oral cancer is also associated with reduced consumption of fruit and vegetables, which is seen more commonly in more deprived communities.⁹

6 Key issues

- The two most common oral diseases, dental decay and gum disease are largely preventable by reducing the frequency of sugar consumption and by carrying out good oral hygiene and using fluoride toothpaste.¹⁸
- In addition to personal awareness and healthy choices, achieving oral health also requires effective partnership between the individuals, health and social services, and local authorities.
- Some important risk factors for oral diseases such as poor diet, smoking and inappropriate alcohol consumption, are the same as those for major diseases, including cardiovascular disease, respiratory diseases, diabetes and cancer.¹⁹ Addressing these common risk factors will help maintain both oral and general health.
- Tooth loss is associated with psychological and social disability.²⁰ Preventing oral diseases will help to reduce this.

¹⁵ Townsend, P. Davidson, N. Whitehead, N. Inequalities in Health: the Black report and the health Divide. Harmondsworth: Penguin 1988

¹⁶ White, D.A. Adult Dental Health Survey 2009: Common oral health conditions and their impact on the population *British Dental Journal* **213**, 567 - 572 (2012)
Published online: 7 December 2012 | doi:10.1038/sj.bdj.2012.1088

¹⁷ Conway, D.I. et al Widening socio-economic inequalities in oral cancer incidence in Scotland 1976-2002 *British Journal of Cancer* **96**(5) 2007; pp 818-820

¹⁸ Levine, R, Stillman-Lowe, C. The Scientific Basis of Oral Health Education 6th Edition British Dental Journal 2009

¹⁹ Oral health. Factsheet No 318 <http://www.who.int/mediacentre/factsheet/fs318/en/index.html> World Health Organisation, 2007

²⁰ Fuller, E et al oral health and function- a report from the Adult Dental Health Survey 2009. The Health and Social Care Centre

- Dental problems are associated with pain and suffering.²⁰ Preventing oral diseases early maintains a healthy functioning dentition and helps to reduce this.
- For older people, treatment can be more complicated, and preventing oral diseases helps keep treatment simple and helps people to stay healthy.²¹
- More people are keeping some natural teeth for life and will need continuing care into older age.¹ It is important to plan for how these needs will be met.
- The most serious oral disease, oral cancer, is also amenable to prevention.¹⁸ The development of oral cancer is strongly linked to smoking and excess alcohol consumption, although the risk factors for this disease are more complex, with additional factors such as diet^{9 22} and deprivation playing a part.¹⁷ Poverty and challenging life circumstances can often make it more difficult for people to stay healthy and maintain good oral health especially in later life.¹⁵

The combination of greater numbers of older people with more teeth needing restoration adds up to more and more complex work for the dental team.²³

More older patients
 +
More Teeth
 X
Wider range of clinical issues
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CHALLENGES

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²¹ Davies,R, Bedi, R, Scully, C. ABC of oral health care for patients with special needs. *British Medical Journal*, 321 (7259), 2000; pp.495-498

²² Macfarlane, G.J et al. Alcohol, tobacco, diet and the risk of oral cancer: a pooled analysis of three case-controlled studies. *European Journal of Cancer Part B oral Oncology* 31(B) 1995: pp.181-187

²³ British Dental Association, Oral Health Care for Older People. 2020 Vision. 2003