

The global burden of oral diseases and risks to oral health

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Abstract This paper outlines the burden of oral diseases worldwide and describes the influence of major sociobehavioural risk factors in oral health. Despite great improvements in the oral health of populations in several countries, global problems still persist. The burden of oral disease is particularly high for the disadvantaged and poor population groups in both developing and developed countries. Oral diseases such as dental caries, periodontal disease, tooth loss, oral mucosal lesions and oropharyngeal cancers, human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS)-related oral disease and orodental trauma are major public health problems worldwide and poor oral health has a profound effect on general health and quality of life. The diversity in oral disease patterns and development trends across countries and regions reflects distinct risk profiles and the establishment of preventive oral health care programmes. The important role of sociobehavioural and environmental factors in oral health and disease has been shown in a large number of socioepidemiological surveys. In addition to poor living conditions, the major risk factors relate to unhealthy lifestyles (i.e. poor diet, nutrition and oral hygiene and use of tobacco and alcohol), and limited availability and accessibility of oral health services. Several oral diseases are linked to noncommunicable chronic diseases primarily because of common risk factors. Moreover, general diseases often have oral manifestations (e.g. diabetes or HIV/AIDS). Worldwide strengthening of public health programmes through the implementation of effective measures for the prevention of oral disease and promotion of oral health is urgently needed. The challenges of improving oral health are particularly great in developing countries.

Keywords Mouth diseases/epidemiology; Tooth diseases/epidemiology; Oral manifestations; Dental care/economics; Dental caries/epidemiology; Mouth neoplasms/epidemiology; HIV infections/complications; Noma/epidemiology; Tooth erosion/epidemiology; Developmental disabilities/epidemiology; Fluorosis, Dental/epidemiology; Risk factors; Cost of illness (*source: MeSH, NLM*).

Mots clés Bouche, Maladie/épidémiologie; Dent, Maladies/épidémiologie; Manifestation buccale; Soins dentaires/économie; Carie dentaire/épidémiologie; Tumeur bouche/épidémiologie; Infection à VIH/complication; Noma/épidémiologie; Erosion dentaire/épidémiologie; Troubles développement enfant/épidémiologie; Fluorose dentaire/épidémiologie; Facteur risque; Coût maladie (*source: MeSH, INSERM*).

Palabras clave Enfermedades de la boca/epidemiología; Odontopatías/epidemiología; Manifestaciones bucales; Atención odontológica/economía; Caries dental/epidemiología; Neoplasmas de la boca/epidemiología; Infecciones por VIH/complicaciones; Noma/epidemiología; Erosión dentaria/epidemiología; Incapacidades del desarrollo/epidemiología; Fluorosis dentaria/epidemiología; Factores de riesgo; Costo de la enfermedad (*fuentes: DeCS, BIREME*).

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Voir page 668 le résumé en français. En la página 668 figura un resumen en español.

Introduction

WHO recently published a global review of oral health (1) which emphasized that despite great improvements in the oral health of populations in several countries, global problems still persist. This is particularly so among underprivileged groups in both developing and developed countries. Oral diseases such

as dental caries, periodontal disease, tooth loss, oral mucosal lesions and oropharyngeal cancers, human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS)-related oral disease and orodental trauma are major public health problems worldwide. Poor oral health may have a profound effect on general health, and several oral diseases are related to

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chronic diseases (e.g. diabetes). The experience of pain, problems with eating, chewing, smiling and communication due to missing, discoloured or damaged teeth have a major impact on people's daily lives and well-being. Furthermore, oral diseases restrict activities at school, at work and at home causing millions of school and work hours to be lost each year throughout the world.

The objectives of the present paper are to outline the oral disease burden globally and to describe the influence of major sociobehavioural risk factors related to oral health. Sources of information are the WHO Global Oral Health Data Bank (2), the WHO Oral Health Country/Area Profile Programme (3) and scientific reports from population studies on oral health carried out in various countries. For both developing and developed countries, the oral health surveys recorded and used were based on nationally representative samples, obtained using either random sampling or pathfinder methodology (convenience sampling) (4). WHO standardized criteria are used for clinical registration of oral disease conditions and calibration trials are conducted for the control of quality of data and assessment of variability in results obtained by different examiners (4). The data stored in the databanks are updated regularly and the WHO Global Oral Health Data Bank is currently being linked with new information systems for surveillance of chronic disease and risk factors (5).

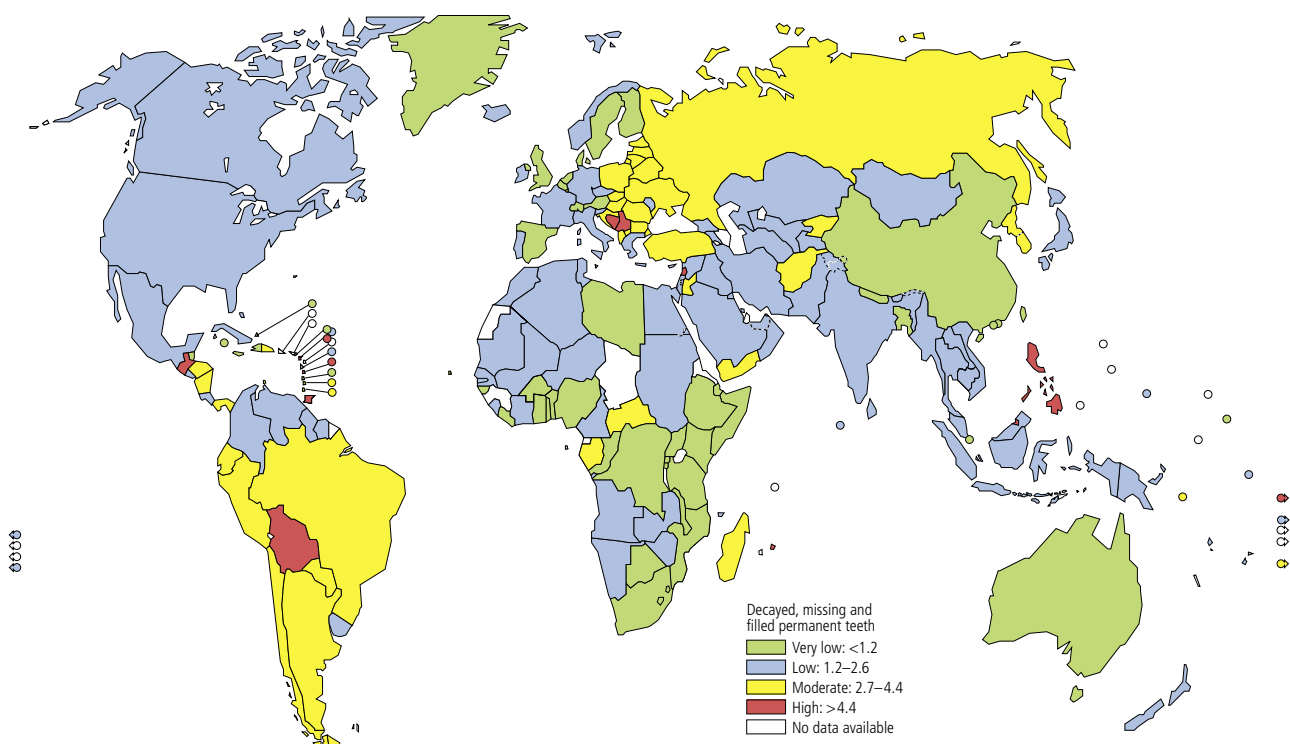
The burden of dental disease

Dental caries and periodontal disease have historically been considered the most important global oral health burdens. Dental caries is still a major health problem in most industrialized

countries as it affects 60–90% of school-aged children and the vast majority of adults. In 2004, WHO updated the epidemiological information available in the databanks (2, 3). At present, the distribution and severity of dental caries vary in different parts of the world and within the same region or country. Fig. 1 illustrates the levels (severity) of dental caries as measured in 12-year-olds by the Decayed, Missing and Filled Teeth index (DMFT). Dental caries experience in children is relatively high in the Americas (DMFT = 3.0) and in the European Region (DMFT = 2.6) whereas the index is lower in most African countries (DMFT = 1.7) (1–3). Fig. 2 illustrates the time trends in dental caries experience of 12-year-old children in developing and developed countries. In most developing countries, the levels of dental caries were low until recent years but prevalence rates of dental caries and dental caries experience are now tending to increase. This is largely due to the increasing consumption of sugars and inadequate exposure to fluorides. In contrast, a decline in caries has been observed in most industrialized countries over the past 20 years or so. This pattern was the result of a number of public health measures, including effective use of fluorides, together with changing living conditions, lifestyles and improved self-care practices. However, it must be emphasized that dental caries as a disease of children has not been eradicated, but only controlled to a certain degree.

Worldwide, the prevalence of dental caries among adults is high as the disease affects nearly 100% of the population in the majority of countries. Fig. 3 illustrates the levels of dental caries among 35–44-year-olds, as measured by the mean DMFT index (1–3). Most industrialized countries and some countries of Latin America show high DMFT values (i.e. 14

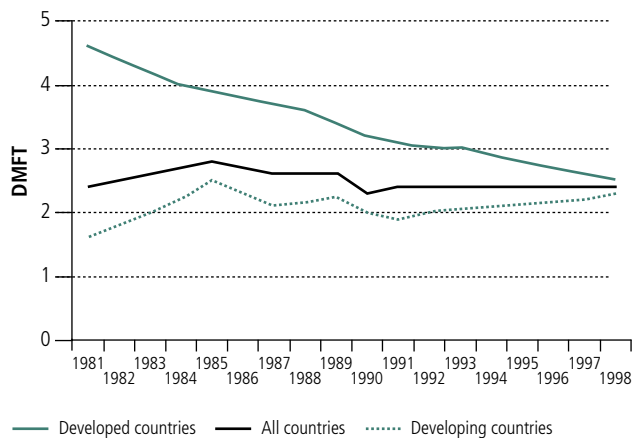
Fig. 1. Dental caries levels (Decayed, Missing and Filled Teeth (DMFT) index) among 12-year-olds worldwide, December 2004



Source: refs. 1–3.

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Fig. 2. Changing levels of dental caries experience (Decayed, Missing and Filled Teeth (DMFT) index) among 12-year-olds in developed and developing countries



Source: refs. 1–3.

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teeth or more) whereas levels of dental caries experience are much lower in the developing countries of Africa and Asia. In several industrialized countries, older people have often had their teeth extracted early in life because of pain or discomfort, leading to reduced quality of life. The proportion of edentulous adults aged 65 years or more is still high in some countries (Table 1), although in many industrialized countries there has been a positive trend of reduction in tooth loss among older adults in recent years (6–9).

In developing countries, oral health services are mostly offered at the regional or central hospitals of urban centres and little, if any, importance is given to preventive or restorative dental care. Many countries of Africa, Asia and Latin America have a shortage of oral health personnel and the capacity of the systems is generally limited to pain relief or emergency care. In Africa, the dentist to population ratio is approximately 1:150 000 compared with about 1:2000 in most industrialized countries. In children and adults suffering from severe tooth decay, teeth are often left untreated or are extracted to relieve pain or discomfort. Public health problems related to tooth loss and impaired oral function are therefore expected to increase in many developing countries.

Tooth loss in adult life may also be attributable to poor periodontal health. Severe periodontitis, which may result in tooth loss, is found in 5–20% of most adult populations worldwide. Fig. 4 illustrates the periodontal health status of 35–44-year-olds by WHO region (2, 10), using the so-called Community Periodontal Index. The data available from the WHO Global Oral Health Data Bank (2) indicate that symptoms of periodontal disease are highly prevalent among adults in all regions. Furthermore, most children and adolescents worldwide have signs of gingivitis. Aggressive periodontitis, a severe periodontal condition affecting individuals during puberty and which may lead to premature tooth loss, affects about 2% of youth (11).

Oral mucosal lesions and oral cancer

It is noteworthy that few systematic epidemiological studies of oral mucosal diseases at the global level have been carried out.

Table 1. Prevalence (percentage) of edentulousness in the elderly reported for selected countries

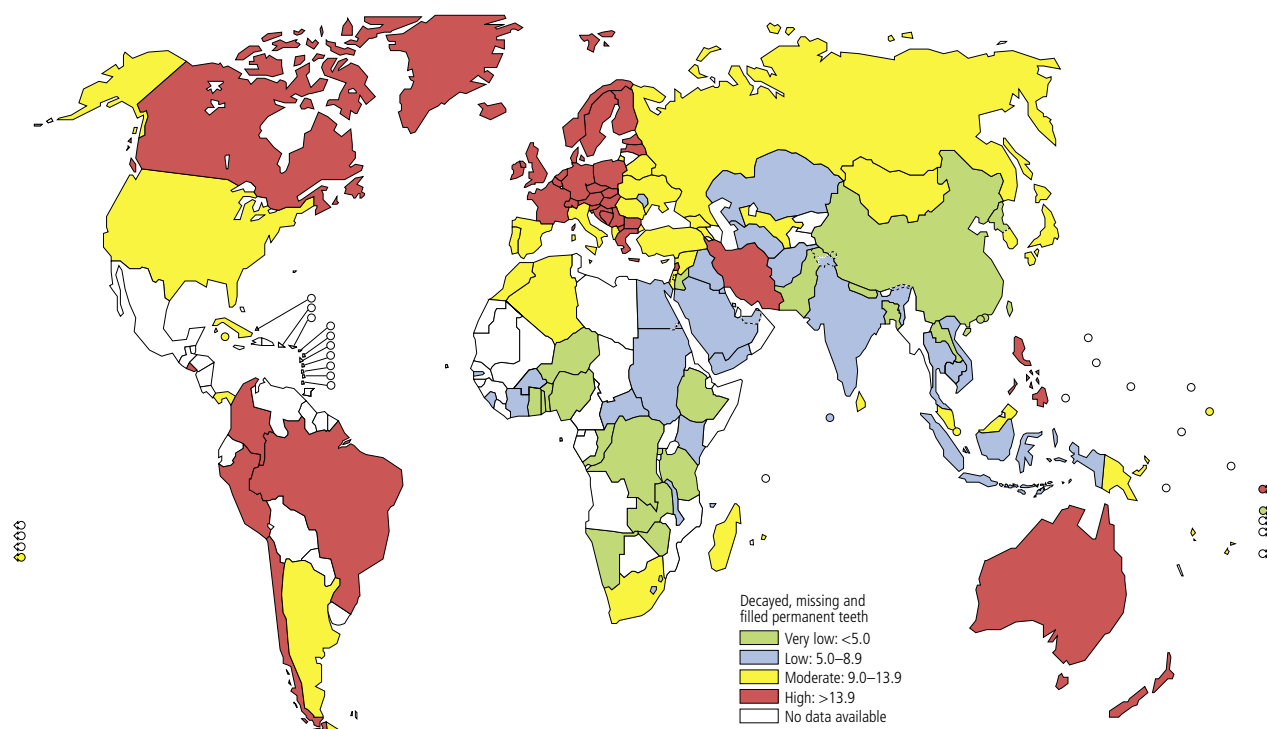
WHO region/Country	Percentage edentulous	Age group (years)
African		
Madagascar	25	65–74
The Americas		
Canada	58	65+
USA	26	65–69
Eastern Mediterranean		
Egypt	7	65+
Lebanon	35	65–75
Saudi Arabia	31–46	65+
European		
Albania	69	65+
Austria	15	65–74
Bosnia and Herzegovina	78	65+
Bulgaria	53	65+
Denmark	27	65–74
Finland	41	65+
Hungary	27	65–74
Iceland	72	65+
Italy	13	65–74
Lithuania	14	65–74
Poland	25	65–74
Romania	26	65–74
Slovakia	44	65–74
Slovenia	16	65+
United Kingdom	46	65+
South-East Asia		
India	19	65–74
Indonesia	24	65+
Sri Lanka	37	65–74
Thailand	16	65+
Western Pacific		
Cambodia	13	65–74
China	11	65–74
Malaysia	57	65+
Singapore	21	65+

Source: WHO Global Oral Health Data Bank (2) and WHO Oral Health Country/Area Profile Programme (3).

Leukoplakia is the most frequent form of oral precancer and appears in the oral cavity as a white patch that cannot be rubbed off, typically in the oral mucosa, lateral borders of the tongue and floor of the mouth. The prevalence of leukoplakia among adults (15 years or older) has been reported to range from 1.1% in Cambodia (12) to 3.6% in Sweden (13). Erythroplakias appear as red patches and are less common but have a greater tendency towards malignant transformation than leukoplakias (14). Erythroplakia apparently occurs less frequently with population prevalences of 1% or less.

Oropharyngeal cancer is more common in developing than developed countries (Fig. 5a, b) (1, 15). The prevalence of oral cancer is particularly high among men and it is the eighth most common cancer worldwide. Incidences for oral cancer vary in men from 1 to 10 cases per 100 000 inhabitants in many countries. In south-central Asia, cancer of the oral

Fig. 3. Dental caries levels (Decayed, Missing and Filled Teeth (DMFT) index) among 35–44-year-olds worldwide, December 2004



Source: refs. 1–3.

WHO 05.113

cavity ranks among the three most common types of cancer. In India, the age-standardized incidence of oral cancer is 12.6 per 100 000 population. It is noteworthy that sharp increases in the incidences of oral/pharyngeal cancers have been reported for several countries and regions such as Denmark, France, Germany, Scotland, central and eastern Europe and to a lesser extent Australia, Japan, New Zealand and the USA (1, 15).

Oral health and HIV/AIDS

A number of studies have demonstrated the negative impact on oral health of HIV infection (16–20). Approximately 40–50% of people who are HIV-positive have oral disease caused by fungal, bacterial or viral infections that often occur early in the course of the disease. Oral lesions strongly associated with HIV infection are pseudo-membranous oral candidiasis, oral hairy leukoplakia, HIV gingivitis and periodontitis, Kaposi sarcoma and non-Hodgkin lymphoma. Dry mouth as a result of decreased salivary flow rate may not only increase the risk of dental caries but also have a negative impact on quality of life because it leads to difficulty in chewing, swallowing and tasting food. The need for oral health care including immediate care and referral, treatment of manifest oral disease, prevention of problems and health promotion is particularly great among the underserved, disadvantaged population groups of developing countries, including people infected with HIV (17, 19).

Noma (cancrum oris)

Noma, a debilitating orofacial gangrene, is an important contributor to the disease burden on many developing countries,

particularly in Africa and Asia (Fig. 6) (1). Noma primarily starts as a localized gingival ulceration and spreads rapidly through the orofacial tissues, establishing itself with a blackened necrotic centre (21, 22). About 70–90% of cases are fatal in the absence of care. Fresh noma is seen predominantly in the age group 1–4 years, although late stages of the disease occur in adolescents and adults. WHO has suggested a global incidence of 140 000 cases with a prevalence in 1997 of 770 000 victims (23). Poverty is the key risk condition for development of noma; the environment that induces noma is characterized by severe malnutrition and growth retardation, unsafe drinking-water, deplorable sanitary practices, residential proximity to unkempt animals, and a high prevalence of infectious diseases such as measles, malaria, diarrhoea, pneumonia, tuberculosis and HIV/AIDS.

Orofacial trauma

In contrast to dental caries and periodontal disease, reliable data on the frequency and severity of orofacial trauma are still lacking in most countries, particularly in developing countries (22). Some countries in Latin America report dental trauma in about 15% of schoolchildren, whereas prevalences of 5–12% have been found in children aged 6–12 years in the Middle East. Furthermore, studies from certain industrialized countries have revealed that the prevalence of dental traumatic injuries is on the increase, ranging from 16% to 40% among 6-year-old children and from 4% to 33% among 12–14-year-old children (24). A significant proportion of dental trauma relates to sports, unsafe playgrounds or schools, road accidents or violence.

Dental erosion

Dental erosion is the progressive, irreversible loss of dental hard tissue that is chemically etched away from the tooth surface by extrinsic and/or intrinsic acids. Dental erosion appears to be a growing problem in several countries, affecting 8–13% of adults (25), and the increasing levels are thought to be due to higher consumption of acidic beverages (i.e. sugary carbonated drinks and fruit juices). Worldwide, there is a need for more systematic population-based studies on the prevalence of dental erosion using a standard index of measurement.

Developmental disorders

Of the developmental disorders, congenital diseases of the enamel or dentine of teeth, problems related to the number, size and shape of teeth, and craniofacial birth defects such as cleft lip and/or palate (CL/P) are most important. The incidence of CL/P varies tremendously worldwide. Native Americans show the highest incidences at 3.74 per 1000 live births, whereas a fairly uniform incidence of 1:600 to 1:700 live births is reported among Europeans. The incidences appear high among Asians (0.82–4.04 per 1000 live births), intermediate in Caucasians (0.9–2.69 per 1000 live births) and low in Africans (0.18–1.67 per 1000 live births) (26). The causes of CL/P are complex involving numerous genetic and environmental risk factors. In particular, risk factors such as folic acid deficiency, maternal smoking and maternal age have been implicated in the formation of clefts (26).

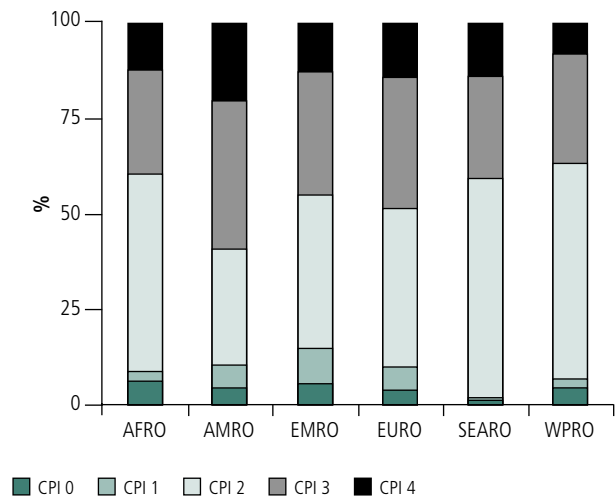
Malocclusion is not a disease but rather a set of dental deviations which in some cases can influence quality of life. Estimates of different traits of malocclusion are available from a number of countries, primarily in North America and northern Europe. For example, prevalences of dento-facial anomalies have been reported at about 10%, according to the Dental Aesthetic Index (6). Other conditions that may lead to special oral health care needs include Down syndrome, cerebral palsy, learning and developmental disabilities, and genetic and hereditary disorders with orofacial defects.

There is no consistent evidence of any time trends in developmental disorders, or any consistent variation by socio-economic status, but these aspects have not been adequately studied (26). In addition, there are many parts of the world in which little or no information is available on the frequency of developmental disorders, in particular parts of Africa, central Asia, Latin America, the Middle East and eastern Europe.

Fluorosis of teeth

Dental fluorosis develops during the formation of teeth in young children. Drinking-water with more than 1.5 ppm (parts per million) of fluoride can give rise to enamel defects and discolouration of teeth leading to endemic fluorosis in the population. Dental fluorosis can differ in intensity from mild to severe. For example in East Africa, in the Great Rift Valley area, and in some parts of India and north Thailand, the groundwater has very high levels of fluoride. In such areas, dental fluorosis may be found in most of the people (27, 28). Fluorosis of the teeth can also occur in individuals in developed countries due to widespread use of certain forms of fluorides for prevention of dental caries, although the degree of fluorosis is mostly very mild when compared to that in countries where fluorosis is endemic.

Fig. 4. Mean percentages of maximum Community Periodontal Index (CPI) scores among 35–44-year-olds, by WHO region



CPI 0 = individuals with healthy periodontal conditions; CPI 1 = individuals with bleeding from gums; CPI 2 = individuals with bleeding gums and calculus; CPI 3 = individuals with shallow periodontal pockets (4–5 mm); CPI 4 = individuals with deep periodontal pockets (≥ 6 mm). AFRO = African Region; AMRO = Region of the Americas; EMRO = Eastern Mediterranean Region; EURO = European Region; SEARO = South-East Asia Region; WPRO = Western Pacific Region.

Source: refs. 1–3.

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The economic impact of oral disease

Traditional treatment of oral disease is extremely costly; it is the fourth most expensive disease to treat in most industrialized countries. In industrialized countries, the burden of oral disease has been tackled through establishment of advanced oral health systems which primarily offer curative services to patients. Most systems are based on demand for care and oral health care is provided by private dental practitioners to patients, with or without third-party payment schemes. Some countries, including those of Scandinavia and the United Kingdom, have organized public health services, providing oral health care, particularly to children and disadvantaged population groups. Traditional curative dental care is a significant economic burden for many industrialized countries where 5–10% of public health expenditure relates to oral health (29, 30). Over the past years, savings in dental expenditures have been noted in industrialized countries which have invested in preventive oral care and where positive trends have been observed in terms of reduction in the prevalence of oral disease (31, 32).

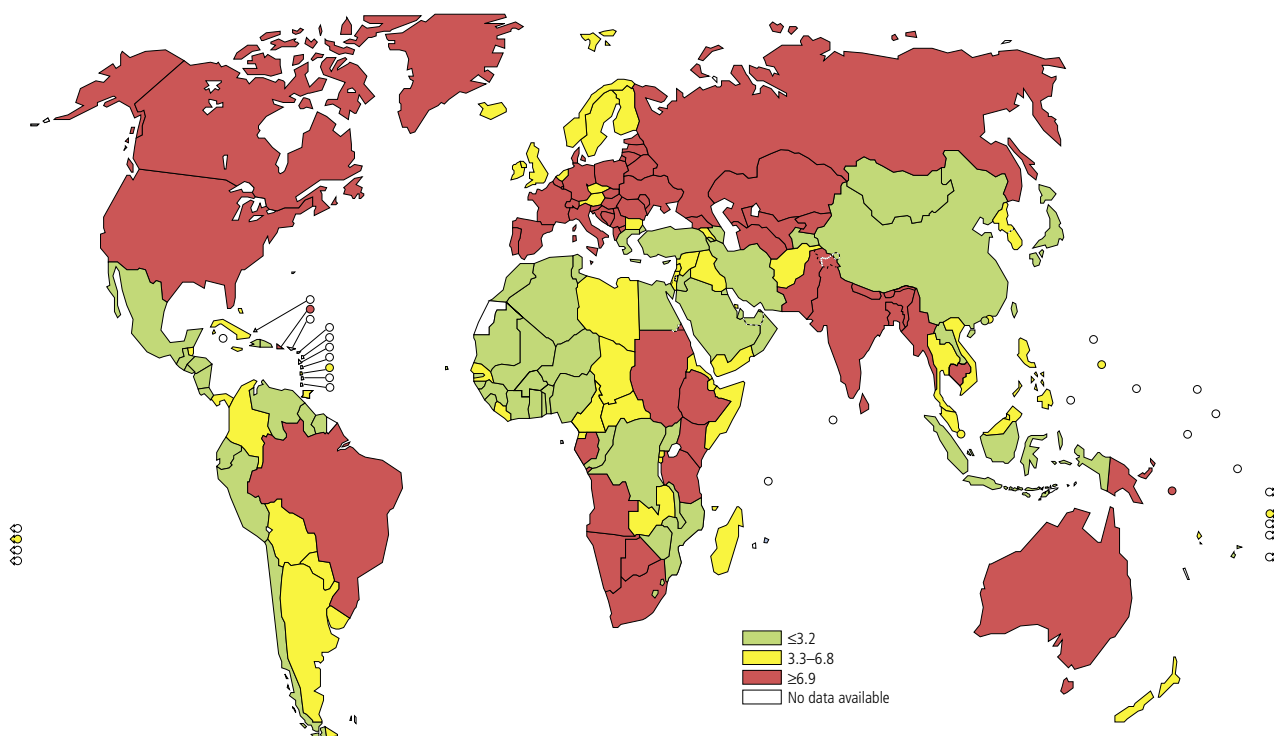
In most developing countries, investment in oral health care is low. In these countries, resources are primarily allocated to emergency oral care and pain relief; if treatment were available, the costs of dental caries in children alone would exceed the total health care budget for children (33).

Oral disease burdens and risk factors

The current global and regional patterns of oral disease largely reflect distinct risk profiles across countries, related to living conditions, lifestyles and the implementation of preventive oral health systems. The significant role of sociobehavioural and environmental factors in oral disease and health has been shown in numerous epidemiological surveys (34–36). Socio-epidemiological studies have been carried out particularly in

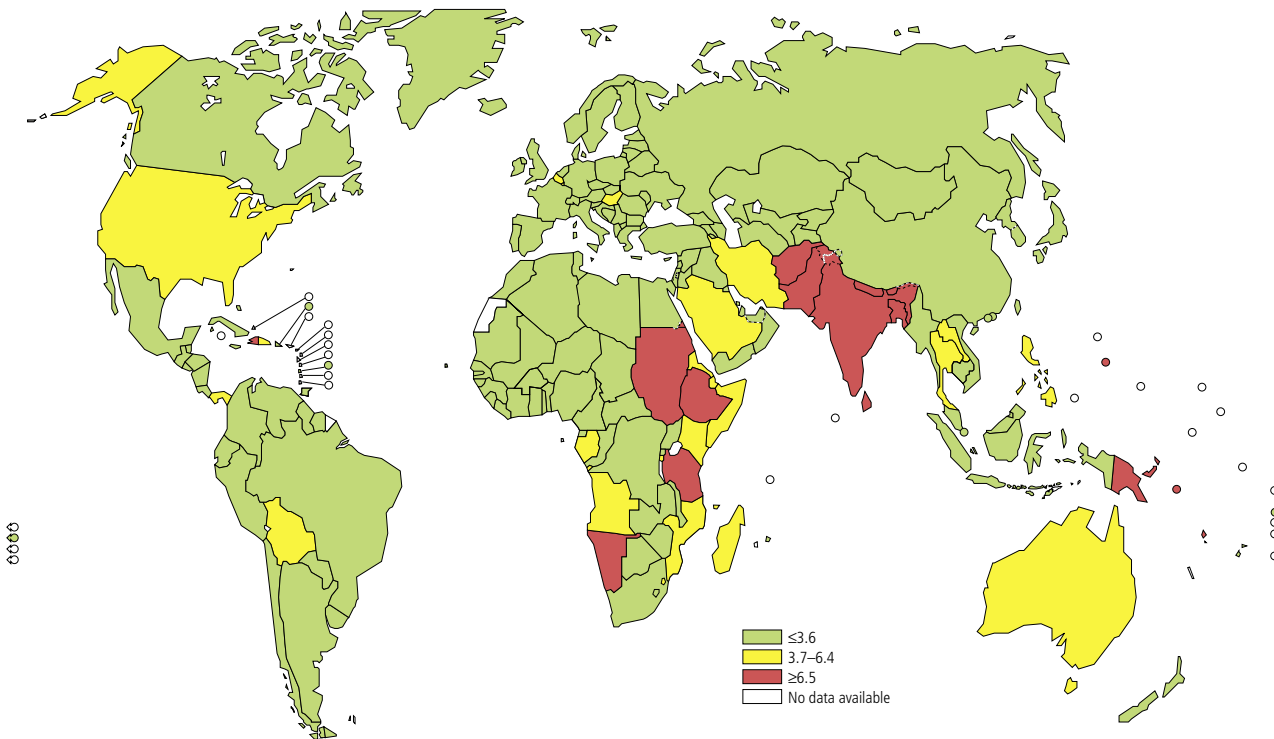
Fig. 5. Incidence of oral cavity cancer

a) Incidence of oral cavity cancer among males (age-standardized rate (ASR) per 100 000 world population), December 2004



Source: ref. 15.

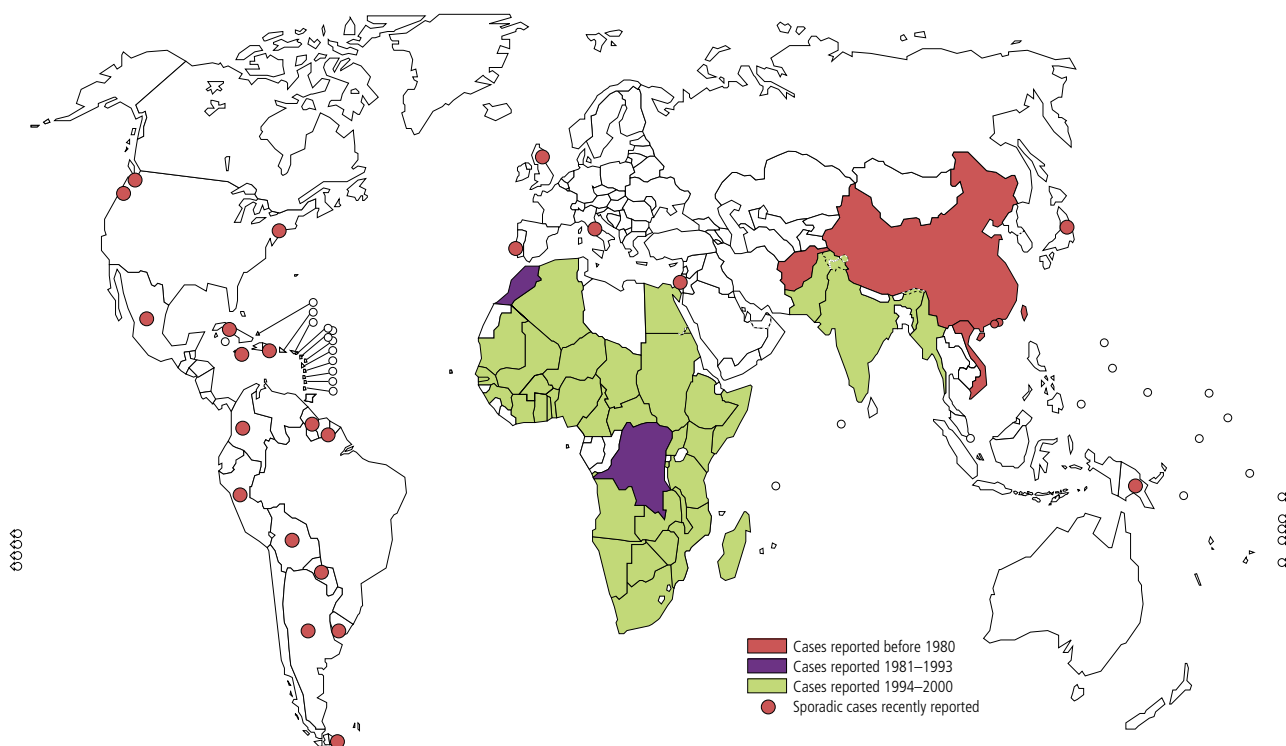
b) Incidence of oral cavity cancer among females (age-standardized rate (ASR) per 100 000 world population), December 2004



Source: ref. 15.

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Fig. 6. Distribution of cases of noma (cancrum oris) reported around the world, September 2003



Source: ref. 1.

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relation to dental diseases. In developed and increasingly in developing countries these studies have noted that the burden of disease and the need for care are highest amongst the poor or disadvantaged population groups. The sociobehavioural risk factors have been found to play significant roles in the occurrence of dental caries in both children and adults worldwide (34). Some countries report that tooth loss is higher in women than in men as women more often seek dental care (6).

A core group of modifiable risk factors is common to many chronic diseases and injuries. The four most prominent noncommunicable diseases — cardiovascular diseases, diabetes, cancer and chronic obstructive pulmonary diseases — share common risk factors with oral diseases; these are preventable risk factors that are related to lifestyles. For example, dietary habits are significant in the development of chronic diseases and influence the development of dental caries (37). Oral cavity bacteria are involved in the progression of dental diseases such as dental caries and periodontal disease. Most importantly, excessive amounts and frequent consumption of sugars are major causes of dental caries and the risk of caries is high if population exposure to fluorides is inadequate. In addition, tobacco use has been estimated to cause over 90% of cancers in the oral cavity, and is associated with aggravated periodontal breakdown, poorer standards of oral hygiene and thus with premature tooth loss. Smoking has been shown to be a major risk factor in periodontal disease, responsible for more than half of the cases of periodontitis among adults (38). The risk for oral cancer increases when tobacco is used in combination with alcohol or areca nut (39). In Asia, the incidences of oral cancer are high and relate directly to smoking, use of smokeless

tobacco and alcohol consumption. That smokeless tobacco causes oral cancer was confirmed recently by the International Agency for Research on Cancer (40).

The strong correlation between several oral diseases and noncommunicable chronic diseases is primarily a result of the common risk factors. Many general disease conditions also have oral manifestations that increase the risk of oral disease which, in turn, is a risk factor for a number of general health conditions. Severe periodontal disease, for example, is associated with diabetes mellitus and has been considered the sixth complication of diabetes (41).

Conclusion

Given the extent of the problem, oral diseases are major public health problems in all regions of the world. Their impact on individuals and communities as a result of the pain and suffering, impairment of function and reduced quality of life they cause, is considerable. Globally, the greatest burden of oral diseases is on the disadvantaged and poor population groups. The current pattern of oral disease reflects distinct risk profiles across countries related to living conditions, lifestyles and environmental factors, and the implementation of preventive oral health schemes. In several industrialized countries there have been positive trends in the reduction of dental caries in children and reduction of tooth loss among adults, but dental caries has not been eradicated in children although it has been brought under control in some countries. The burden of oral disease among older people is high and this has a negative effect on their quality of life (42). In several developing countries, the general population does not benefit from preventive oral health

programmes. It is expected that the incidence of dental caries will increase in the near future in many of these countries as a result of growing consumption of sugars and inadequate exposure to fluorides. With the growing consumption of tobacco in developing countries, the risk of periodontal disease, tooth loss and oral cancer is likely to increase. Periodontal disease and tooth loss are also linked to chronic diseases such as diabetes mellitus; the growing incidence of diabetes may have a negative

impact on the oral health of people in several countries. Thus, global strengthening of public health programmes through implementation of effective oral disease prevention measures and health promotion is urgently needed, and common risk factors approaches should be used to integrate oral health with national health programmes. ■

Competing interests: none declared.

Résumé

Charge mondiale de morbidité et risques dans le domaine bucco-dentaire

Le présent article décrit la charge d'affections bucco-dentaires dans le monde et l'influence des principaux facteurs de risque socio-comportementaux sur la santé bucco-dentaire. Malgré des améliorations considérables de la santé bucco-dentaire des populations de plusieurs pays, des problèmes persistent encore au niveau mondial. La charge d'affections bucco-dentaires pèse particulièrement sur les groupes de population pauvres et défavorisés dans les pays en développement, comme dans les pays développés. Des pathologies bucco-dentaires telles que les caries, la parodontolyse, la perte dentaire, les lésions oromucosiques et les cancers oro-pharyngés, les affections bucco-dentaires liées au VIH/SIDA et les traumatismes bucco-dentaires représentent des problèmes de santé publique majeurs dans le monde entier et une mauvaise santé bucco-dentaire a des répercussions profondes sur la santé et la qualité de vie en général. La diversité des schémas pathologiques bucco-dentaires et des tendances évolutives selon les pays et les régions reflète des profils de risques distincts et la mise en place de programmes de santé buccodentaire

préventifs. Un grand nombre d'enquêtes socio-épidémiologiques ont mis en évidence l'influence conséquente des facteurs socio-comportementaux et environnementaux sur la santé. En dehors des conditions de vie défavorables, les principaux facteurs de risque sont la pratique d'un mode de vie nuisible à la santé (à savoir mauvaise alimentation ou hygiène buccale déficiente et consommation de tabac ou d'alcool) et une disponibilité et une accessibilité insuffisantes des services de soins bucco-dentaires. Il existe des liens entre plusieurs affections bucco-dentaires et des pathologies chroniques non transmissibles en raison principalement de facteurs de risque communs. En outre, les pathologies générales (comme les diabètes ou le VIH/SIDA par exemple) présentent souvent des manifestations orales. Il est urgent de renforcer les programmes de santé publique dans l'ensemble du monde à travers la mise en œuvre de mesures efficaces de prévention des pathologies et de promotion de la santé dans le domaine bucco-dentaire. L'amélioration de la santé bucco-dentaire constituera une mission particulièrement ardue dans les pays en développement.

Resumen

Carga mundial de enfermedades bucodentales y riesgos para la salud bucodental

En este artículo se presenta a grandes rasgos la carga mundial de morbilidad bucodental y se describe la influencia de los principales factores de riesgo comportamentales en la salud bucodental. A pesar de las grandes mejoras experimentadas por la salud bucodental de las poblaciones en varios países, a nivel mundial sigue habiendo problemas. La carga de enfermedades bucodentales es particularmente alta en los grupos de población desfavorecidos y pobres, tanto en los países en desarrollo como en los desarrollados. Enfermedades bucodentales como la caries dental, las periodontopatías, la pérdida de dientes, las lesiones de la mucosa oral y los cánceres orofaríngeos, las enfermedades bucodentales relacionadas con el virus de la inmunodeficiencia humana/síndrome de inmunodeficiencia adquirida (VIH/SIDA) y los traumatismos orodentales son importantes problemas de salud pública en todo el mundo, y una mala salud bucodental tiene profundos efectos en la salud y la calidad de vida general. La diversidad de las pautas de morbilidad bucodental y las distintas tendencias según el país y la región reflejan los diferentes perfiles de riesgo y la influencia

de los programas preventivos de atención bucodental. Un gran número de estudios socioepidemiológicos muestran el importante papel que tienen los factores sociocomportamentales y ambientales en la salud bucodental. Además de las malas condiciones de vida, los principales factores de riesgo guardan relación con el modo de vida (una dieta, nutrición e higiene bucodental deficientes, y el consumo de tabaco y alcohol) y con una escasa disponibilidad y accesibilidad a los servicios de salud bucodental. Varias enfermedades bucodentales se asocian a enfermedades crónicas no transmisibles, debido principalmente a la existencia de factores de riesgo comunes. Además, hay enfermedades sistémicas (por ejemplo la diabetes o el VIH/SIDA) que causan a menudo problemas bucodentales. El fortalecimiento mundial de los programas de salud pública mediante la aplicación de medidas eficaces de prevención de las enfermedades bucodentales y la promoción de la salud bucodental constituye una necesidad urgente. Los retos que hay que superar para mejorar la salud bucodental son especialmente importantes en los países en desarrollo.

Arabic

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