

MINISTRY OF HEALTH OF UKRAINE
UKRAINIAN MEDICAL DENTAL
ACADEMY

DEPARTMENT OF SOCIAL MEDICINE,
PUBLIC HEALTH, ORGANIZATION AND
ECONOMICS OF HEALTH WITH DOCTOR
AND LABOR EXAMINATION



DENTAL HEALTH AND ORGANIZATION OF DENTAL CARE.

Dental care refers to one of the most popular types of health care.

In general morbidity structure of the population of our country oral cavity diseases rank third place.

At the same time 99% of the patients served by outpatient institutions.



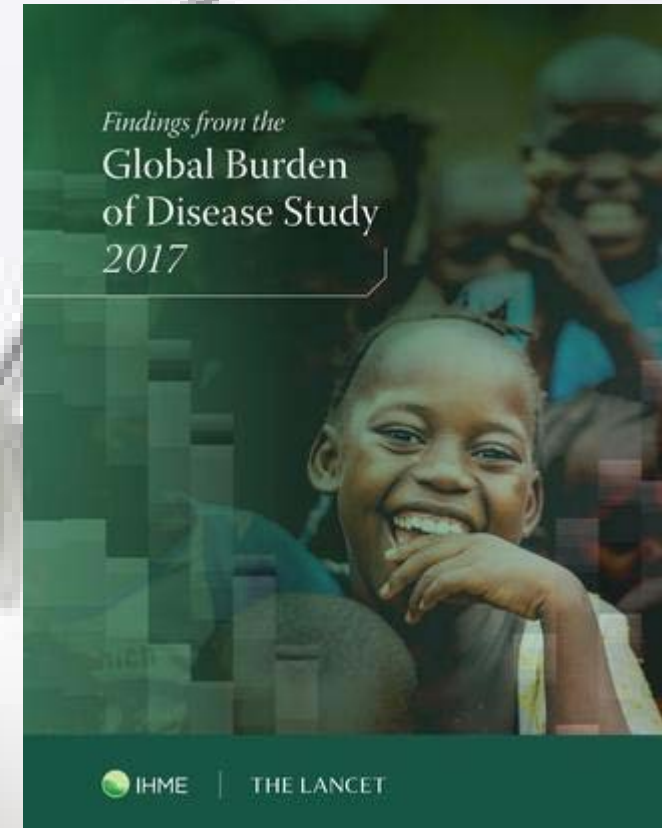
Oral health is a key indicator of overall health, well-being and quality of life.

It encompasses a range of diseases and conditions that include dental caries, Periodontal disease, Tooth loss, Oral cancer, Oral manifestations of HIV infection, Oro-dental trauma, Noma and birth defects such as cleft lip and palate.

The Global Burden of Disease Study 2017 estimated that oral diseases affect 3.5 billion people worldwide, with untreated dental caries being among the most prevalent noncommunicable diseases.

According to the International Agency for Research on Cancer, the incidence of oral cancer was within the top three of all cancers in some Asian-Pacific countries in 2018.

International Agency for Research on Cancer



Most oral diseases and conditions share modifiable risk factors with the leading **NCDs** (cardiovascular diseases, cancer, chronic respiratory diseases and diabetes).

These risk factors include tobacco use, alcohol consumption and unhealthy diets high in free sugars, all of which are increasing at the global level.



There is a proven relationship between oral and general health.

It is reported, for example, that diabetes mellitus is linked with the development and progression of periodontitis.

Moreover, there is a causal link between high sugars consumption and diabetes, obesity and dental caries.

ORAL HEALTH

- Oral diseases pose a major health burden for many countries and affect people throughout their lifetime, causing pain, discomfort, disfigurement and even death.
- These diseases share **common risk factors** with other major non-communicable diseases.
- It is estimated that oral diseases **affect nearly 3.5 billion people**.
- Untreated dental caries (tooth decay) in permanent teeth is the **most common health condition** according to the Global Burden of Disease 2017.
- More than **530 million children** suffer from dental caries of primary teeth (milk teeth).
- Severe periodontal (gum) disease, which may result in tooth loss, is also very common, with almost 10% of the global population affected.

ORAL HEALTH

- Oral cancer (cancer of the lip or mouth) is **one of the three most common cancers** in some countries of Asia and the Pacific.
- Treatment for oral health conditions is expensive and usually not part of universal health coverage (UHC). In most high-income countries, dental treatment averages **5% of total health expenditure and 20% of out-of-pocket health expenditure**.
- Most low- and middle-income countries are **unable to provide services to prevent** and treat oral health conditions.
- Factors contributing to oral diseases are **an unhealthy diet high in sugar, use of tobacco and harmful use of alcohol**.
- Most oral health **conditions are largely preventable** and can be treated in their early stages.

ORAL HEALTH CONDITIONS

The majority of oral health conditions are: dental caries (tooth decay), periodontal diseases, oral cancers, oral manifestations of HIV, oro-dental trauma, cleft lip and palate, and noma (severe gangrenous disease starting in the mouth mostly affecting children).

Most oral health conditions are largely preventable and can be treated in their early stages.



The Global Burden of Disease Study 2017 estimated that oral diseases affect close to **3.5 billion people worldwide**, with caries of permanent teeth being the most common condition. Globally, it is estimated that 2.3 billion people suffer from caries of permanent teeth and more than 530 million children suffer from caries of primary teeth.

ORAL HEALTH CONDITIONS

In most low- and middle-income countries, with increasing urbanization and changes in living conditions, the prevalence of oral diseases continues to increase.

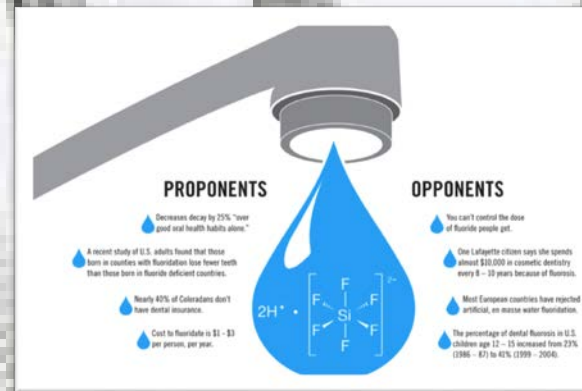
This is primarily due to inadequate exposure to fluoride (in the water supply and oral hygiene products such as toothpaste) and poor access to oral health care services in the community.

Marketing of food and beverages high in sugar, as well as tobacco and alcohol, has led to a growing consumption of products that contribute to oral health conditions and other noncommunicable diseases.

DENTAL CARIES (TOOTH DECAY)

Dental caries result when plaque forms on the surface of a tooth and converts the free sugars (all sugars added to foods by the manufacturer, cook, or consumer, plus sugars naturally present in honey, syrups, and fruit juices) contained in foods and drinks into acids that destroy the tooth over time.

A continued high intake of free sugars, inadequate exposure to fluoride and a lack of removal of plaque by toothbrushing can lead to caries, pain and sometimes tooth loss and infection.



PERIODONTAL (GUM) DISEASE

Periodontal disease affects the tissues that both surround and support the tooth.

The disease is characterized by bleeding or swollen gums (gingivitis), pain and sometimes bad breath.

In its more severe form, the gum can come away from the tooth and supporting bone, causing teeth to become loose and sometimes fall out.

Severe periodontal diseases are estimated to affect nearly 10% of the global population.

The main causes of periodontal disease are poor oral hygiene and tobacco use.

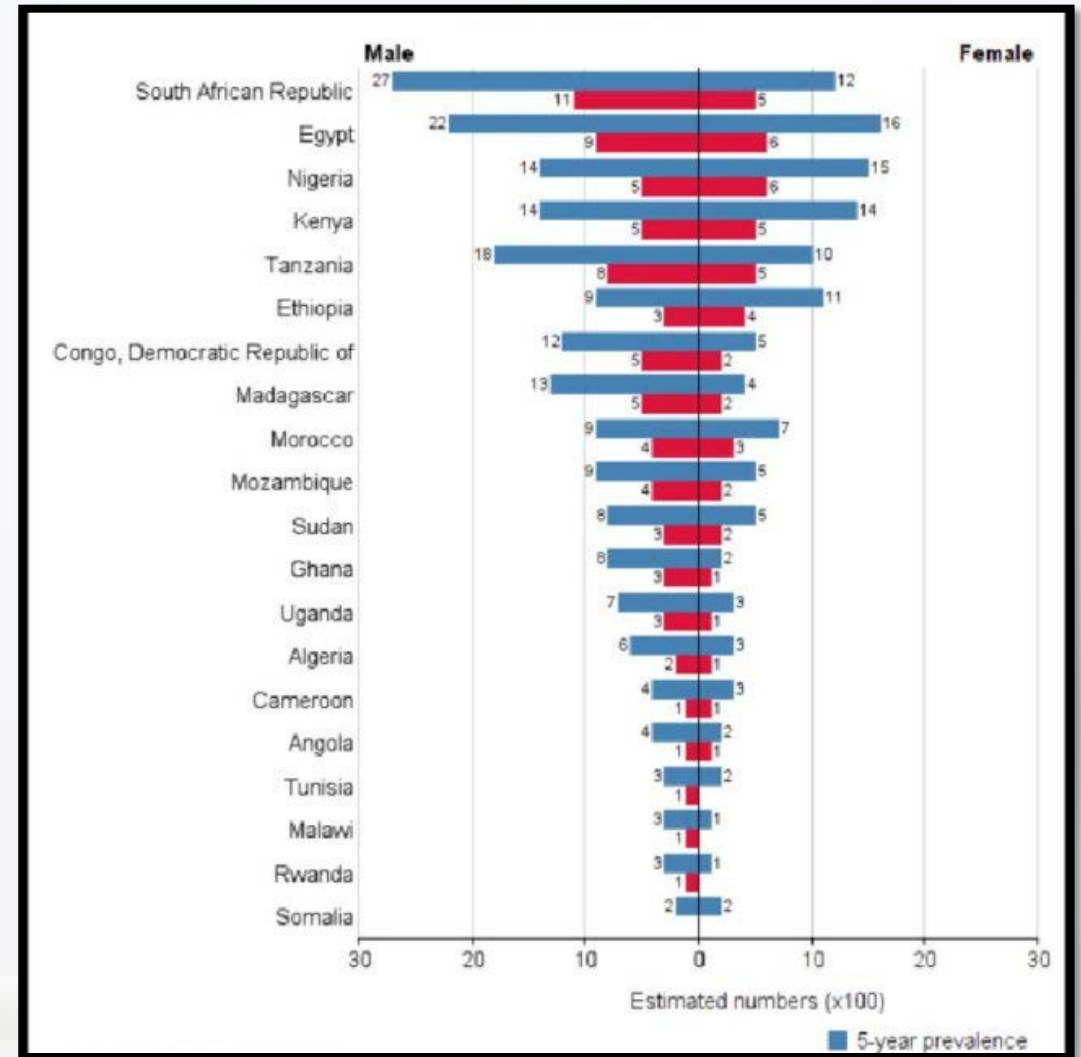


Oral cancer includes cancers of the lip, other parts of the mouth and the oropharynx.

The global incidence of cancers of the lip and oral cavity is estimated at 4 cases per 100 000 people. However, there is wide variation across the globe: from no recorded cases to around 20 cases per 100 000 people.

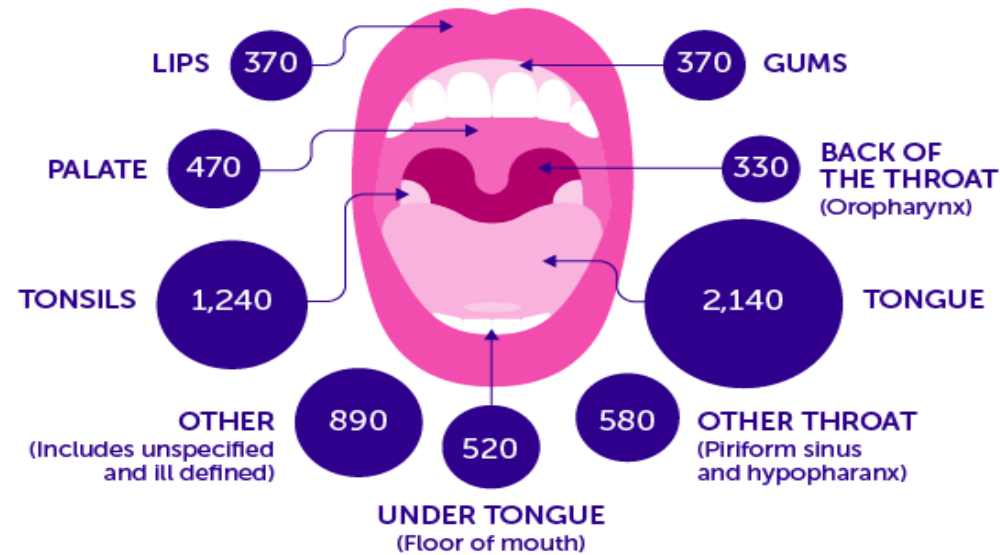
Oral cancer is more common in men and in older people, and varies strongly by socio-economic condition.

ORAL CANCER



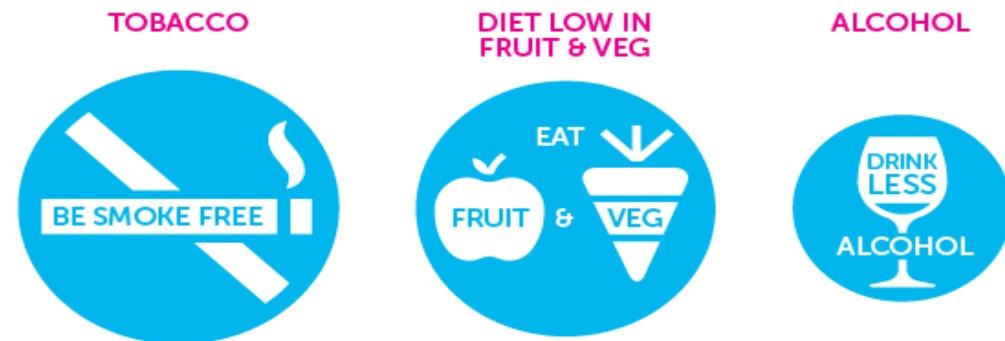
MOUTH CANCER AND THE THREE MAIN PREVENTABLE RISK FACTORS

MOUTH CANCERS AND THE AVERAGE NUMBER OF CASES PER YEAR
UK, 2010-2012



THE THREE MAIN PREVENTABLE RISK FACTORS

Proportion of mouth cancer cases that could be prevented each year in the UK, by avoiding each risk factor



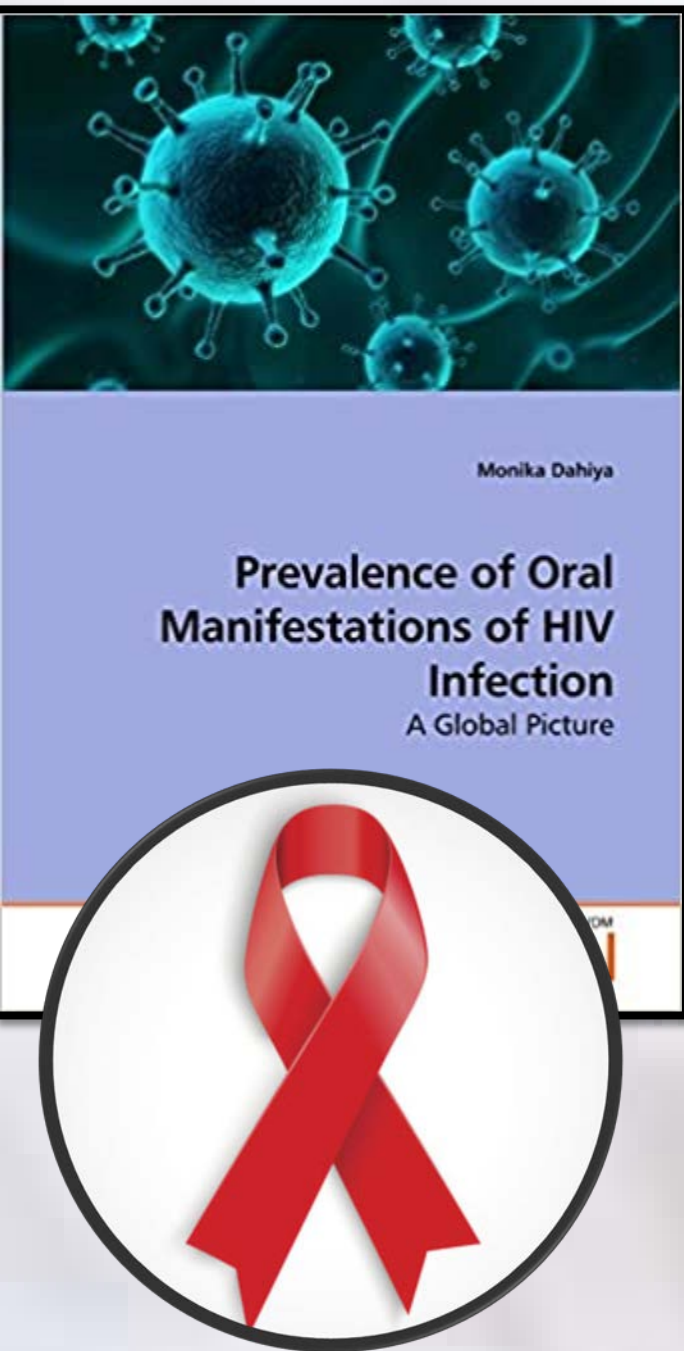
ORAL CANCER

In some Asian-Pacific countries, the incidence of oral cancer ranks among the three top cancers.

Tobacco, alcohol and areca nut (betel quid) use are among the leading causes of oral cancer.

In North America and Europe, human papillomavirus infections are responsible for a growing percentage of oral cancers among young people.

ORAL MANIFESTATIONS OF HIV INFECTION

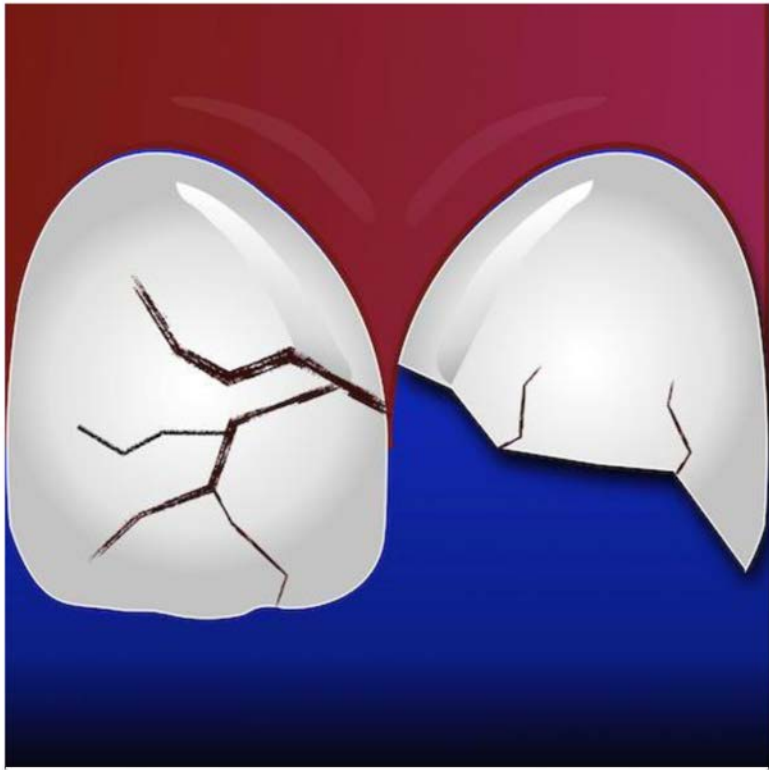


Oral manifestations occur in 30-80% of people with HIV, with considerable variations depending on the affordability of standard antiretroviral therapy (ART).

Oral manifestations include fungal, bacterial or viral infections of which oral candidiasis is the most common and often the first symptom. Oral HIV lesions cause pain, discomfort, dry mouth, and difficulties swallowing.

Early detection of HIV-related oral lesions can be used to diagnose HIV infection and monitor the disease's progression. Early detection is also important for timely treatment.

ORO-DENTAL TRAUMA



Oro-dental trauma results from injury to the teeth, mouth and oral cavity. Around 20% of people suffer from trauma to teeth at some point in their life.

Oro-dental trauma can be caused by oral factors such as lack of alignment of teeth and environmental factors (such as unsafe playgrounds, risk-taking behaviour and violence).

Treatment is costly and lengthy and sometimes can even lead to tooth loss, resulting in complications for facial and psychological development and quality of life.

NOMA



Noma is a severe gangrenous disease of the mouth and the face. It mostly affects children between the ages of 2 and 6 years suffering from malnutrition, affected by infectious disease, living in extreme poverty with poor oral hygiene and/or with weakened immune systems.

Noma is mostly found in sub-Saharan Africa, although cases have also been reported in Latin America and Asia. Noma starts as a soft tissue lesion (a sore) of the gums, inside the mouth. The initial gum lesion then develops into an acute necrotizing gingivitis that progresses rapidly, destroying the soft tissues and further progressing to involve the hard tissues and skin of the face.



In 1998, WHO estimated that there were **140 000 new cases of noma annually**.

Without treatment, noma is fatal in 90% of cases.

Survivors suffer from severe facial disfigurement, have difficulty speaking and eating, face social stigma, and require complex surgery and rehabilitation.

Where noma is detected at an early stage, its progression can be rapidly halted, through basic hygiene, antibiotics and improved nutrition.

CLEFT LIP AND PALATE

Clefts of the lip or palate affect more than 1 in 1000 newborns worldwide. Genetic predisposition is a major cause.

However, poor maternal nutrition, tobacco consumption, alcohol and obesity during pregnancy also play a role.

In low-income settings, there is a high mortality rate in the neonatal period.

If lip and palate clefts are properly treated by surgery, complete rehabilitation is possible.



Cleft palate



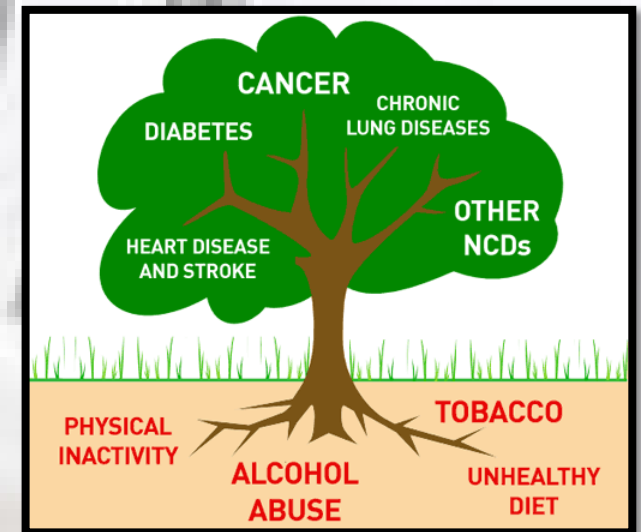
Cleft lip and cleft palate



NONCOMMUNICABLE DISEASES AND COMMON RISK FACTORS

Most oral diseases and conditions share modifiable risk factors (such as tobacco use, alcohol consumption and an unhealthy diet high in free sugars) common to the four leading noncommunicable diseases (cardiovascular disease, cancer, chronic respiratory disease and diabetes).

In addition, it is reported that diabetes is linked in a reciprocal way with the development and progression of periodontal disease. Moreover, there is a causal link between the high consumption of sugar and diabetes, obesity and dental caries.



ORAL HEALTH INEQUALITIES

Oral diseases disproportionately affect the poor and socially-disadvantaged members of society.

There is a very strong and consistent association between socioeconomic status (income, occupation and educational level) and the prevalence and severity of oral diseases.

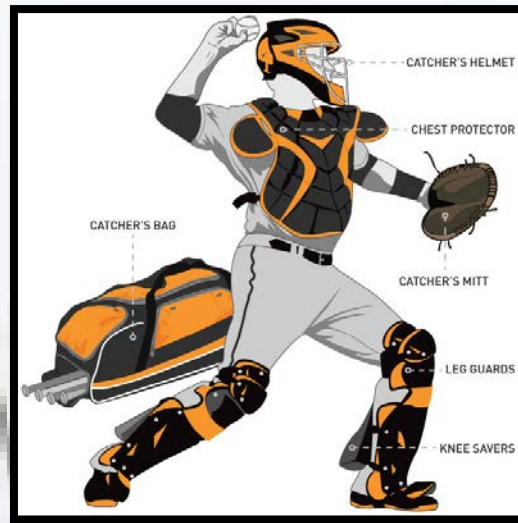
This association exists from early childhood to older age, and across populations in high-, middle- and low-income countries.





PREVENTION

- The burden of oral diseases and other noncommunicable diseases **can be reduced through public health interventions by addressing common risk factors.**
- These include:
- promoting a well-balanced diet low in free sugars and high in fruit and vegetables, and favouring water as the main drink;
- stopping use of all forms of tobacco, including chewing of areca nuts.



PREVENTION



- reducing alcohol consumption; and
- encouraging use of protective equipment when doing sports and travelling on bicycles and motorcycles (to reduce the risk of facial injuries).
- Adequate exposure to fluoride is an essential factor in the prevention of dental caries.
- An optimal level of fluoride can be obtained from different sources such as fluoridated drinking water, salt, milk and toothpaste. Twice-daily tooth brushing with fluoride-containing toothpaste (1000 to 1500 ppm) should be encouraged.

ACCESS TO ORAL HEALTH SERVICES

Unequal distribution of oral health professionals and a lack of appropriate health facilities in most countries means that access to primary oral health services is often low.

Overall, according to a survey of adults expressing a need for oral health services, access ranges from 35% in low-income countries to 60% in lower-middle-income countries, 75% in upper-middle income countries and 82% in high-income countries.

Moreover, even in high income settings, dental treatment is costly, averaging 5% of total health expenditure and 20% of out-of-pocket health expenditure.

Efforts in support of UHC can help frame policy dialogue to address weak primary oral health services, and address substantial out-of-pocket expenses associated with oral health care in many countries.



WHO RESPONSE

- Eight years after the United Nations High-Level Meeting on Noncommunicable Diseases recognized that oral diseases pose a major health burden for many countries, 2019 saw the inclusion of oral health in the Political Declaration on Universal Health Coverage. During the same period, Member States, with the support of the WHO, developed and endorsed strong regional strategies and calls for action in favour of oral health in the African, East Mediterranean, South-East Asia and Western Pacific regions.
- In such a context, WHO is committed to ensuring promotion of oral health and quality, essential treatment for oral health conditions for all people in all countries without individual financial hardship.
- Reducing oral health conditions calls for a reform of oral health systems to shift the focus from invasive dental treatment to prevention and more minor treatment.
- WHO has identified key strategies for improving oral health, with a focus on low-income and marginalized populations where access to oral health care is most limited. These include strengthening both cost-effective population-wide prevention and patient-centred primary health care.

WHO RESPONSE

- This work is being implemented through a three-year roadmap (2019-2021) that comprises a mix of normative work and practical support to countries. A top priority is the development of a global oral health report, which will provide information about the status of oral health globally. The report will serve as the evidence base for the development of a global oral health action plan.
- WHO also supports countries in this area by:
- supporting interventions to accelerate the phase-down of dental amalgam in the context of the Minamata Convention on Mercury;
- building capacity and providing technical assistance to countries to support a life-course approach and population-based strategies to reduce sugar consumption, control tobacco use, and promote fluoride-containing toothpaste and other vehicles of fluoride;
- providing assistance to strengthen oral health systems such that they are an integral part of primary health care and do not cause financial hardship; and
- reinforcing oral health information systems and integrated surveillance with other noncommunicable diseases to demonstrate the scale and impact of the problem and to monitor progress achieved in countries.

- Poor oral health causes millions of people to suffer from devastating pain and increases the out-of-pocket financial burden for society. Oral diseases can affect an individual's effectiveness in school and work settings and can cause social and personal problems. The psychosocial impact of many oral diseases significantly reduces the quality of life.
- While the global burden of untreated dental caries for primary and permanent dentition has remained relatively unchanged over the past 30 years, the overall burden of oral conditions on services is likely to keep increasing because of population growth and ageing.
- Oral diseases disproportionately affect the poor and socially-disadvantaged members of society. There is a very strong and consistent association between socioeconomic status (income, occupation and educational level) and the prevalence and severity of oral diseases. This association remains across the life course, from early childhood to older age, and across populations in high-, middle- and low-income countries.
- Oral care treatment is costly, averaging 20% of out-of-pocket health expenditure in most high-income countries. The demand for oral health care is beyond the capacity of health care systems in most low- and middle-income countries, and many people in some high-income countries lack financial means to access proper care.

PREVENTION

- In 2015, the Tokyo declaration on dental care and oral health for healthy longevity was adopted. This calls upon health policy makers and professionals to significantly reduce the global burden of disease related to oral health, to promote greater access and equity in oral health services, and to integrate oral health programs into the larger development agenda.
- Advocacy is needed to give greater prominence of oral health on the global health agenda and therefore contributing to prevention and control of NCDs and achievement of UHC. Reducing oral health issues calls for a reform of dental care systems to shift the focus from invasive dental treatment, which has failed to combat the global challenge of oral diseases, to minimal invasive treatment and oral diseases prevention. Stronger policies are needed to address the determinants of oral diseases and NCDs and to tackle inequalities through inclusive universal health care access.
- WHO has identified key strategies for increasing oral health, with a focus on poor and marginalized populations where access to oral health care is most limited. These include strengthening both cost-effective population-wide prevention and patient centred primary care, common risk factors reduction and oral health promotion.
- The WHO Oral Health Programme is currently implementing a three-year roadmap (2019–2021) comprising a mix of normative work and practical support to countries over five priority activities aligned to the GPW13. One of the top priority is to develop the WHO Global Oral Health Report (one of a WHO Global Public Health Goods) as a robust advocacy document to reinforce the commitment to oral health among policymakers, and to pave the way for the further development of a global oral health action plan towards 2030.