

Tobacco and Oral Health – the Role of the World Health Organization

Poul Erik Petersen^a

Abstract: In addition to several other chronic diseases, tobacco use is a primary cause of many oral diseases and adverse oral conditions. For example, tobacco is a risk factor for oral cancer, periodontal disease, and congenital defects in children whose mothers smoke during pregnancy. The epidemic of tobacco use is one of the greatest threats to global health; sadly the future appears worse because of the globalization of marketing. The World Health Organization (WHO) has strengthened the work for effective control of tobacco use. At the World Health Assembly in May 2003 the Member States agreed on a groundbreaking public health treaty to control tobacco supply and consumption. The treaty covers tobacco taxation, smoking prevention and treatment, illicit trade, advertising, sponsorship and promotion, and product regulation. Oral health professionals and dental associations worldwide should consider this platform for their future work for tobacco prevention since in several countries they play an important role in communication with patients and communities. The WHO Oral Health Programme gives priority to tobacco control in many ways through the development of national and community programmes which incorporates oral health and tobacco issues, tobacco prevention through schools, tobacco risk assessment in countries, and design of modern surveillance systems on risk factors and oral health. Systematic evaluation of coordinated efforts should be carried out at country and inter-country levels.

*Oral Health Prev Dent 2003; 1: 309–315. Submitted for publication: 15.09.03; accepted for publication: 15.09.03.**

The epidemic of tobacco use is one of the greatest threats to global health today. Approximately one-third of the adult population in the world use tobacco in some form and of whom half will die prematurely. According to the most recent estimate by the World Health Organization (WHO), 4.9 million people worldwide died in 2000 as a result of their addiction to nicotine (WHO, World Health Report,

2002). This huge death toll is rising rapidly, especially in low- and middle-income countries where most of the world's 1.2 billion tobacco users live. As shown in Fig 1 developing countries already account for half of all deaths attributable to tobacco (WHO, World Health Report, 2002). This proportion will rise to 7 out of 10 by 2025 because smoking prevalence has been increasing in many low- and middle-income countries even though it is decreasing in high-income countries. Developing countries also account for about half of the world's disease burden related to tobacco as measured by DALYs (Fig 2) (WHO, World Health Report, 2002).

Within countries the prevalence of tobacco use is highest amongst people of low educational background and among the poor and marginalized. In several developing countries there have been sharp increases in tobacco use especially among men and as the tobacco industry continues to target youth and women there are also concerns about rising prevalence rates in these groups.

^a *Oral Health Programme, Noncommunicable Disease Prevention and Health Promotion, World Health Organization, Geneva, Switzerland.*

* *It is WHO policy not to allow external scientific peer review, thus this article has been peer reviewed by WHO and not the editors.*

Reprint requests: Poul Erik Petersen, Chief, Oral Health Programme, Noncommunicable Disease Prevention and Health Promotion, World Health Organization, Avenue Appia 20, 1211 Geneva 27, Geneva, Switzerland.

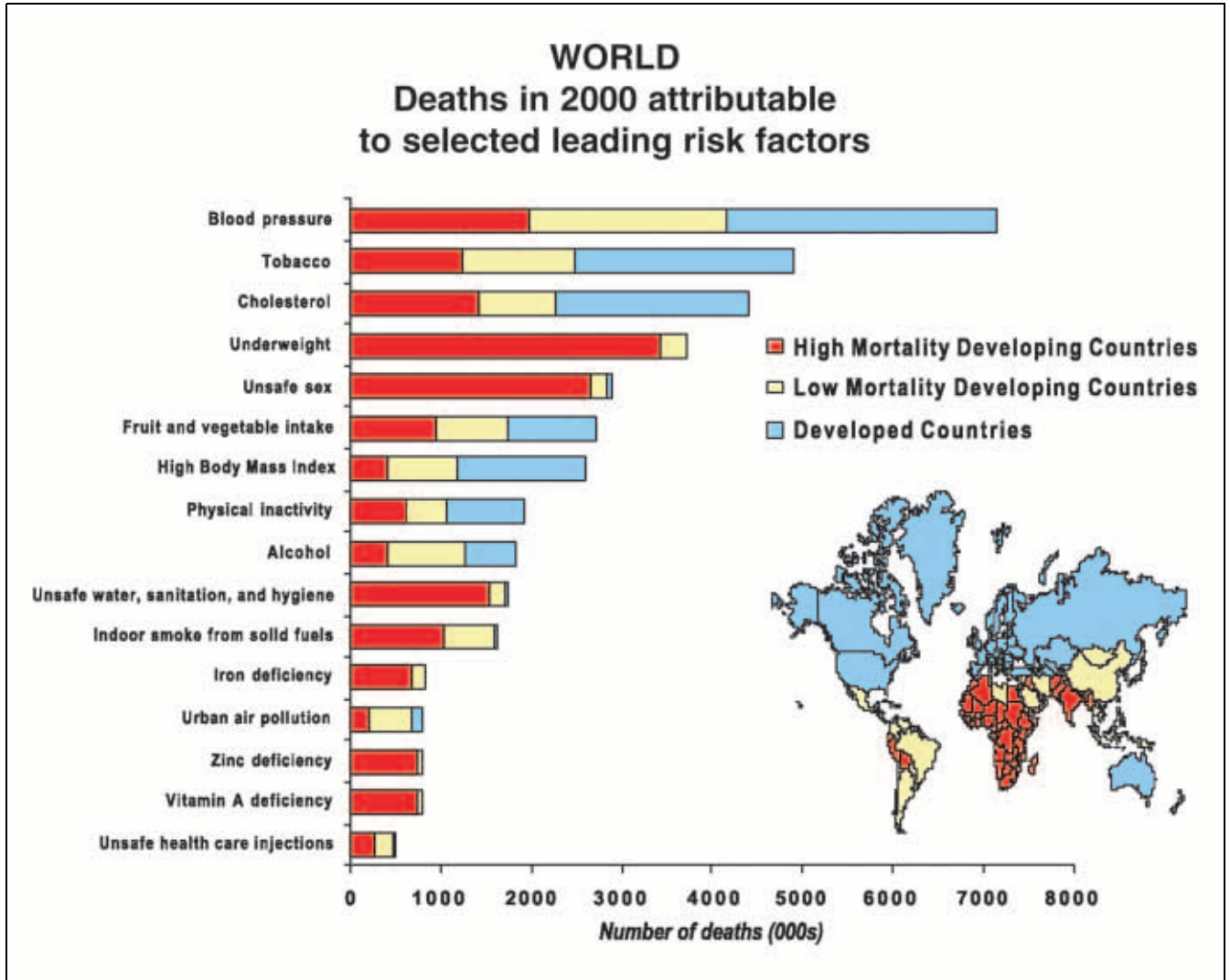


Fig 1 Number of deaths (000s) attributable to leading risk factors in the world (WHO, World Health Report, 2002).

The shift in the global pattern of tobacco use is reflected in the changing burden of disease and tobacco deaths. Sadly, the future appears worse. Because of the long time lapse between the onset of tobacco use and the inevitable wave of disease and deaths that follow, the full effect of today's globalization of tobacco marketing and increasing rates of usage in the developing world will be felt for decades to come. Tobacco use is a major preventable cause of premature death and also a common risk factor to several general chronic diseases and oral diseases. The negative impact relates not only to smoking but use of smokeless tobacco. In addition to smoking tobacco smokeless tobacco is widely used in a number of countries of the world depending on socio-cultural conditions. Chewing tobacco is known

as plug, loose leaf and twist. Pan masala or betel quid consists of tobacco, areca nuts and staked lime wrapped in a betel leaf. They can also contain other sweeteners and flavouring agents. Moist snuff is taken orally while dry snuff is powdered tobacco that is mostly inhaled through the nose. In comparison to smoking habits, the patterns of use of smokeless tobacco are less documented, particularly in developing countries (Gupta and Warnakulasuriya, 2002; Mackay and Eriksen, 2002).

TOBACCO-INDUCED ORAL DISEASE

It is firmly established that tobacco use is a primary cause of many oral diseases and adverse oral

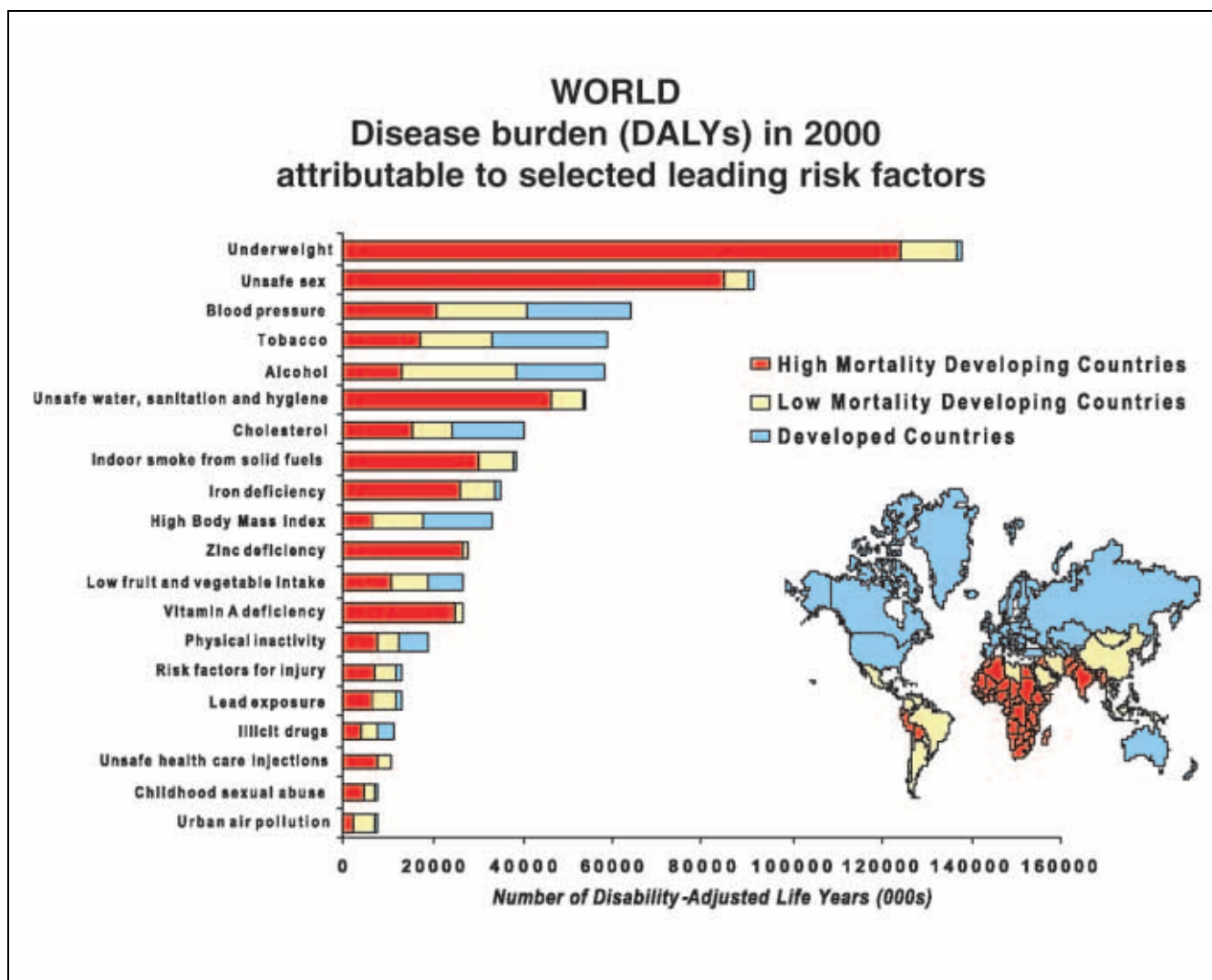


Fig 2 Number of Disability-Adjusted Life Years (000s) attributable to leading risk factors in the world (WHO, World Health Report, 2002).

conditions (Reibel, 2003; Johnson and Bain, 2000). Tobacco is a risk factor for oral cancer, oral cancer recurrence, adult periodontal diseases, and congenital defects such as cleft lip and palate in children whose mother smokes during pregnancy. Tobacco use suppresses the immune system's response to oral infection, retards healing following oral surgical and accidental wounding, promotes periodontal degeneration in diabetics and adversely affects the cardiovascular system. These risks increase when tobacco is used in combination with alcohol or areca nut. Most oral consequences of tobacco use impair quality of life be they as simple as halitosis, as complex as oral birth defects, as common as periodontal disease or as troublesome as complications during healing.

Tobacco-induced oral diseases contribute significantly to the global oral disease burden. In some industrialized countries studies show that smoking is responsible for more than half of the periodontitis cases among adults (Tomar and Asma, 2000). Oral and pharyngeal cancers pose a special challenge to oral health programmes particularly in developing countries. Cancer of the oral cavity is high among men, where oral cancer is the eighth most common cancer in the world (Fig 3) (Steward and Kleihues, 2003). Incidence rates of oral cancer are high in developing countries, particularly in areas of South Central Asia where cancer of the oral cavity is among the three most frequent types of cancer (Steward and Kleihues, 2003). Meanwhile, dramatic increases in incidence rates of oral/pharyngeal

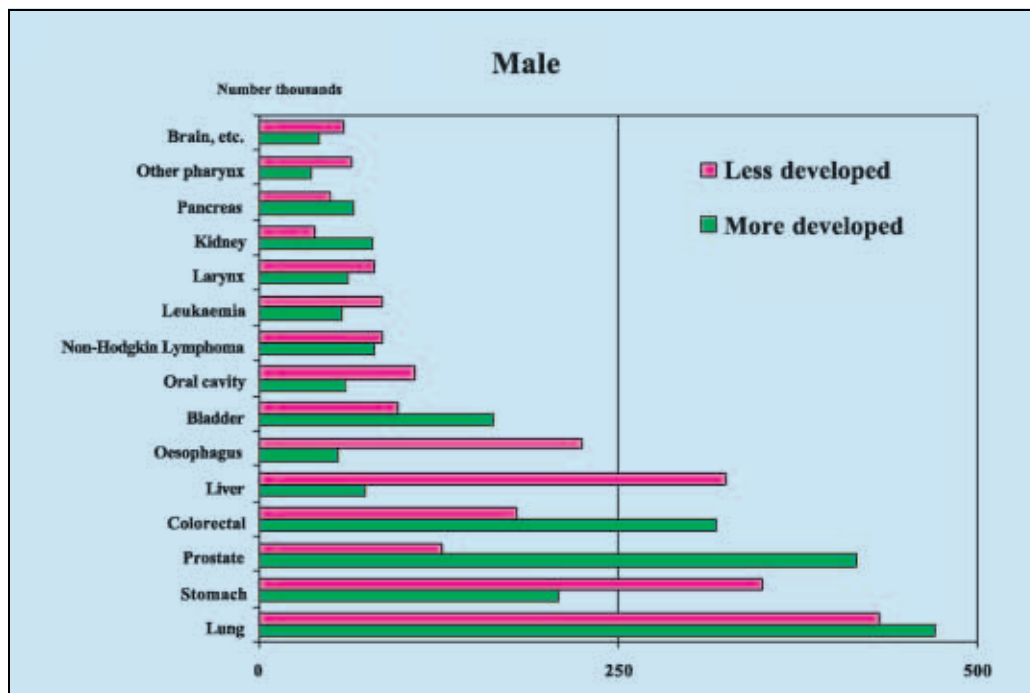


Fig 3 Comparison of the most common cancers in more or less developed countries in 2000 (Steward and Kleihues, 2003).

cancers have been reported in countries such as Germany, Denmark, Scotland, Central and Eastern Europe, and rates are on the increase in Japan, Australia, New Zealand and in the USA among non-whites (Steward and Kleihues, 2003).

WHO AND THE PREVENTION OF TOBACCO-INDUCED DISEASE

WHO’s approach to noncommunicable disease prevention and control places emphasis on the rising impact of tobacco-related diseases in low-income and middle-income countries and the disproportionate suffering it causes in poor and disadvantaged populations. Several public health actions have been initiated by WHO. In 2002, WHO stimulated the process for promoting and reinforcing the development of national cancer control programmes as the best known strategy to address the cancer problem worldwide (WHO, National Cancer Control Programmes, 2002). Updating and disseminating effective policies and guidelines on national cancer control programmes are key components of this strategy which focuses on several risk factors for cancer. In addition to strong comprehensive tobacco control measures, dietary modification is another approach to cancer control. A national cancer

control programme is a public health programme designed to reduce cancer incidence and mortality and improve quality of life of cancer patients, through the systematic and equitable implementation of evidence-based strategies for prevention, early detection, diagnosis, treatment and palliation, making the best use of available resources. Thus, conducting a cancer prevention programme, within the context of an integrated noncommunicable disease prevention programme, is an effective national strategy. Tobacco use, alcohol, nutrition, physical activity and obesity are risk factors common to other non-communicable diseases such as cardiovascular disease, diabetes and respiratory diseases. As emphasized by the World Health Report 2002 (WHO, World Health Report, 2002), on reducing risks and promoting healthy life, chronic disease prevention programmes can efficiently use the same surveillance and health promotion mechanisms.

FRAMEWORK CONVENTION FOR TOBACCO CONTROL

At the World Health Assembly in May 2003 the Member States have agreed on a groundbreaking public health treaty to control tobacco supply and consumption. The text of the WHO Framework Con-

vention on Tobacco Control (FCTC) covers tobacco taxation, smoking prevention and treatment, illicit trade, advertising, sponsorship and promotion, and product regulation (WHO, Framework Convention on Tobacco Control, 2003). The negotiations, concluded four years of work to produce an international tobacco control treaty and the agreement is part of a global strategy to reduce tobacco-related deaths and disease around the world. The convention is a real milestone in the history of global public health and in international collaboration. It means nations will be working systematically together to protect the lives of present and future generations, and take on shared responsibilities to make this world a better and healthier place. The final text was presented in May 2003 to the World Health Assembly in Geneva. After its agreement, the FCTC will be opened for signature by Member States. The treaty will come into force shortly after it has been ratified by 40 countries (WHO, Framework Convention on Tobacco Control, 2003).

The text requires signatory parties to implement comprehensive tobacco control programmes and strategies at the national, regional and local levels. In its preamble, the text explicitly recognizes the need to protect public health, the unique nature of tobacco products and the harm that companies that produce them cause. Some of the key elements of the final text include:

Taxes – The text formally recognizes that tax and price measures are an important way of reducing tobacco consumption, particularly in young people, and requires signatories to consider public health objectives when implementing tax and price policies on tobacco products.

Labelling – The text requires that at least 30 per cent – but ideally 50 per cent or more – of the display area on tobacco product packaging is taken up by clear health warnings in the form of text, pictures or a combination of the two. Packaging and labelling requirements also prohibit misleading language that gives the false impression that the product is less harmful than others. This may include the use of terms such as ‘light’, ‘mild’, or ‘low tar’.

Advertising – While all countries agreed that a comprehensive ban would have a significant impact on reducing the consumption of tobacco products, some countries have constitutional provisions – for example, those covering free speech for commercial purposes – that will not allow them to implement a complete ban in all media. The final text requires parties to move towards a comprehensive

ban within five years of the convention entering into force. It also contains provisions for countries that cannot implement a complete ban by requiring them to restrict tobacco advertising, promotion and sponsorship within the limits of their laws.

The text also explicitly requires signatories to the convention to look at the possibility of a protocol to provide a greater level of detail on cross-border advertising. This could include the technical aspects of preventing or blocking advertising in areas such as satellite television and the Internet.

Liability – Parties to the convention are encouraged to pursue legislative action to hold the tobacco industry liable for costs related to tobacco use.

Financing – Parties are required to provide financial support to their national tobacco control programmes. In addition, the text encourages the use and promotion of existing development funding for tobacco control. A number of countries and development agencies have already pledged their commitment to include tobacco control as a development priority. The text also requires countries to promote treatment programmes to help people stop smoking and education to prevent people from starting, to prohibit sales of tobacco products to minors, and to limit public exposure to second-hand smoke.

The elements of the treaty reflect WHO and World Bank policies on a comprehensive plan to reduce global tobacco consumption. While there have been nearly 20 World Health Assembly resolutions to support tobacco control since 1970, the difference with this treaty is that these obligations will become legally binding for Parties to the convention once it has come into force.

IMPLICATIONS OF FCTC FOR ORAL HEALTH

There are several ethical, moral and practical reasons why oral health professionals should strengthen their contributions to tobacco-cessation programmes, for example:

- They are especially concerned about the adverse effects in the oropharyngeal area of the body that are caused by tobacco practices.
- They typically have access to children, youths and their caregivers, thus providing opportunities to influence individuals to avoid all together, postpone initiation or quit using tobacco before they become strongly dependent.

Table 1 WHO Oral Health Programme objectives and activities carried out in relation to tobacco control

State-of-the-science and new knowledge	<ul style="list-style-type: none"> • Analysis of existing knowledge about oral health – general health and relationships to tobacco use • Update of the WHO Global Oral Health Data Bank, including periodontal disease data (CPI) • Integration of oral health data bank into other WHO databanks on general health and tobacco use • Update of the WHO Oral Health Surveys Basic Methods, including guidelines for recording risk factors/tobacco use and tobacco-induced oral diseases and conditions
Assistance to countries in risk behaviour analysis and risk surveillance	<ul style="list-style-type: none"> • Development of indicators and tools for assessment of tobacco use and their impact on oral health, as part of national health programmes • Tests of instruments in selected countries
Translation of knowledge into action programmes in countries/communities	<ul style="list-style-type: none"> • Analysis of policy and analysis for policy in relation to tobacco use and oral health • Effective use of schools in tobacco prevention among children and adolescents, based on Health Promoting Schools principles • Guidelines on tobacco prevention and oral health for pregnant women and young mothers at MCH level • Effective involvement of oral health professionals in tobacco cessation programmes – analysis of barriers and constraints
Evaluation, monitoring and surveillance	<ul style="list-style-type: none"> • Operational research in tobacco behaviour modification • Development of community/country specific goals for tobacco prevention, incorporating oral health • Development of models for evaluation of community-based oral health promotion programmes, including tobacco control • Outcome and process evaluation of community demonstration projects for sharing experiences • Development of tools for surveillance and monitoring tobacco control programmes

- They often have more time with patients than many other clinicians, providing opportunities to integrate education and intervention methods into practice.
- They often treat women of childbearing age, thus are able to inform such patients about the potential harm to their babies from tobacco use.
- They are as effective as other clinicians in helping tobacco users quit and results are improved when more than one discipline assists individuals during the quitting process.
- They can build their patient's interest in discontinuing tobacco use by showing actual tobacco effects in the mouth.

Oral health professionals and dental associations worldwide should consider this platform for their future work and design national project(s) jointly with health authorities. Tobacco prevention activities can be translated through existing oral health services or new community programmes targeted at different population groups. In particular, Health Promoting Schools provide an effective setting for tobacco prevention amongst children and youth.

TOBACCO PREVENTION AND THE WHO GLOBAL ORAL HEALTH PROGRAMME

The WHO Oral Health Programme aims to control tobacco-related oral diseases and adverse conditions through several strategies (Petersen, 2003). Within WHO, the Programme forms part of the WHO tobacco-free initiatives, with fully integrated oral health-related programmes. Externally, the Programme encourages the adoption and use of WHO tobacco-cessation and control policies by international and national oral health organizations. Primary partners are WHO Collaborating Centres and NGOs who are in official relations with WHO, i.e. the International Association for Dental Research (IADR) and the FDI World Dental Federation.

The priority areas in relation to tobacco control given by the WHO Global Oral Health Programme are outlined in Table 1. *Firstly*, state-of-the-science analysis and development of modern, integrated information systems will provide an important new platform for public health initiatives in tobacco control. *Secondly*, the Programme provides assistance to countries in risk behaviour analysis and surveillance in order to help countries include oral health

aspects in tobacco prevention programmes. *Thirdly*, the WHO Oral Health Programme supports the translation of knowledge into action programmes, e.g. tobacco prevention activities in schools or by involving oral health professionals in national or community-based tobacco control. *Fourthly*, the WHO Oral Health Programme has intensified the work towards development of surveillance, monitoring and evaluation systems.

Operational research may provide for outcome and process evaluation of community approaches for tobacco control and such research may then help sharing experiences across countries. In particular, emphasis is given by the WHO Oral Health Programme to development of national tobacco programmes in low- and middle-income countries. Worldwide activities may be facilitated by a strong network and capacity of the WHO Collaborating Centres in Oral Health, and the constructive collaboration with NGOs such as the FDI and IADR.

A number of projects have been initiated in Canada, European Union countries, Japan, New Zealand and the USA and more programmes are being considered in India and China. The WHO Oral Health Programme will strengthen work for tobacco control in the future, particularly through support to countries having them incorporate oral health in their tobacco prevention policies. Evaluation and sharing experiences from tobacco-cessation programmes are important for such global initiatives and the WHO Oral Health Programme looks forward to effective collaboration with the oral health science community in this activity.

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