Review

Views on oral health care strategies

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الخلاصة: يمثّل برنامج صحة الفم مبادرةً لتعزيز الصحة ولمكافحة الأمراض، ومن ثَمَّ ينبغي إدماج هذا البرنامج في برامج الرعاية الصحية الأولية، من خلال بناء السياسات الملائمة لكل بلد والتي ترتكز على أسلوب عامل الاختطار الشائع. ونظراً للانتشار الكبير لتسوس الأسنان وأمراض دواعم السن في إقليم شرق المتوسط، ولاسيما بين الأطفال، فإن الباحث يوصي بالبرامج المدرسيَّة المُرْتَكَز. كما يوصي بالفلوريدات الموضعية لأن فَلْوَرَة الماء والملح كثيراً ما تصعب إتاحتها ولو أنها مُجْزية من الناحية المادية. فعلى الحكومات والمصانع أن تضمن توافر معجون الأسنان بالفلوريد، علماً بأنه يستخدم كذلك لمكافحة أمراض دواعم السن. وينبغي استخدام أسلوب المعالجة الترميمية غير الراضحة atraumatic لمعالجة تسوس الأسنان. ولقد أوضحت المضمومة الأساسية لرعاية الفم (BPOC) للمجتمعات المحرومة هذا الأسلوب بالتفصيل. ويوصي الباحث بمواصلة البحث والتدريب لمواكبة التغيرات في طرق المكافحة وإجراءات المعالجة.

ABSTRACT The Oral Health Programme (ORH) is a health promotion and disease prevention initiative. ORH should be integrated into primary health care programmes by building policies suited to each country and based on the common risk factor approach. Dental caries and periodontal diseases are highly prevalent in the Eastern Mediterranean Region, especially among children; therefore, school-based programmes are recommended. Although cost-effective, water and salt fluoridation are often unavailable and topical fluorides are recommended. Governments and industry must ensure availability of affordable fluoride toothpaste. Fluoride toothpaste should also be used to control periodontal diseases. The atraumatic restorative treatment approach should be used to treat dental caries. The Basic Package of Oral Care (BPOC) for deprived communities outlines this approach in detail. Continuous training and research are recommended for personnel to keep pace with changes in methods of prevention and treatment procedures.

Point de vue sur les stratégies de soins de santé bucco-dentaire

RÉSUMÉ Le programme de santé bucco-dentaire est une initiative de prévention de la maladie et de promotion de la santé. La santé bucco-dentaire devrait être intégrée aux programmes de soins de santé primaires en établissant des politiques adaptées à chaque pays et basées sur l'approche des facteurs de risque communs. Les caries dentaires et les parodontopathies sont très répandues dans la Région de la Méditerranée orientale, notamment chez l'enfant ; des programmes scolaires sont donc recommandés. Bien que rentable, la fluoruration de l'eau et du sel est souvent inexistante et les fluorures topiques sont recommandés. Les pouvoirs publics et l'industrie doivent assurer la disponibilité de dentifrices au fluor abordables. Les dentifrices au fluor devraient être aussi utilisés dans la lutte contre les parodontopathies. La méthode de restauration non traumatique devrait être utilisée pour le traitement des caries dentaires. Cette méthode figure dans les éléments de base pour soins bucco-dentaires (BPOC) destinés aux communautés défavorisées. La formation continue et la recherche sont recommandées pour permettre au personnel de suivre l'évolution des méthodes de prévention et des procédures de traitement.

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Introduction

This paper is for oral health, health and non-health personnel in the Eastern Mediterranean Region of the World Health Organization (WHO) who are involved in planning, re-planning and evaluating oral health programmes. The following views and guidelines could be useful in establishing oral health strategies for the next 2 decades.

In most countries, populations of very young and school-age children receive considerable benefit from preventive health measures such as vaccinations and examinations of hearing, sight and physical development in addition to other curative procedures. Oral health care is not delivered to the same extent and is not given the same priority, perhaps because oral diseases are not as life-threatening as some other diseases are. Oral diseases are important public health problems, nonetheless, because of their high prevalence, public demand for treatment, their effect on individuals and society in terms of pain, discomfort, social and functional limitations and handicaps, and their effect on general health and quality of life. In addition, the financial effect on the individual and the community is very high [*1,2*].

Oral health is related to well-being and quality of life as measured along functional, psychosocial and economic dimensions. Diet, nutrition, sleep, psychological status, social interaction, school and work are affected by impaired oral and craniofacial health. Reduced oral health-related quality of life is associated with poor clinical status and reduced access to care [*3*].

Dental caries and periodontal diseases are the most widespread conditions among populations, especially children, in developing countries. The WHO data confirm that dental caries prevalence continues to increase and periodontal disease prevalence remain high, while in developed countries, dental caries rates have been reduced and periodontal disease prevalence has decreased to moderate or low levels [*4,5*].

Oral health and primary health care

In 1981, the WHO adopted a global strategy of Health for All by the Year 2000. This effectively established an agenda for a primary health care approach based on practical, scientifically sound and socially accepted methods and technology. It was to be made universally accessible to all individuals and families in the community at a cost that each community and each country, in the spirit of self-reliance and self-determination, could afford to maintain as it developed [*6*].

Oral health is an integral part of primary health care based on community participation and self-reliance with emphasis on the promotion of health and the prevention of diseases [*7*].

Global oral health goals by the year 2000

In 1979, in the context of Health for All by the Year 2000, the WHO Global Oral Health Programme set the first global goal that 12-year-old children should not have more than 3 decayed, missing or filled teeth (DMFT) by the year 2000. This goal was modified at the WHO Eastern Mediterranean Regional Office (EMRO) Meeting on Strengthening Oral Health in Primary Health Care, 1993, in Nicosia, Cyprus, to be 1.5 DMFT in the Eastern Mediterranean Region. Then, in 1981, the Fédération Dentaire Internationale (FDI) and the WHO

formulated these global goals for other age groups [*8*]:

- Ages 5–6 years: 50% caries-free.
- Age 18 years: 85% retain all teeth.
- Ages 35–44 years: 50% reduction in the number of persons with no teeth.
- Ages 65 years and over: 25% reduction in the number of persons with no teeth.

During the last 20 years, most EMR countries have established National Oral Health Plans and the WHO EMRO has helped to develop the Oral Health Programme (ORH) in the Region to achieve these goals. Dental caries and periodontal diseases are still the most prevalent conditions among populations. Oral health care in most countries is difficult to obtain even if available and tooth extraction is the predominant mode of treatment. Conventional oral care usually emphasizes technical and curative solutions that are expensive and are an option only for the affluent sector of the population. Often traditional dentistry has overlooked the importance of community-oriented prevention, as exemplified by the improvement in oral health in developing countries [*9,10*].

Oral Health by the year 2020

All countries in the Region should review the oral health situation to assess their achievements and the problems that they face. The planning or re-planning process should be done in the next two decades and must take into account new concepts in delivering oral health care.

The WHO has adopted the renewal of the Health for All strategy for the 21st century. The ORH should be integrated with general health into the frame of primary health care. Recently, the WHO reoriented the ORH initiative towards health promotion and disease prevention [*11*]. It emphasizes building oral health policies that lead to the effective control of risks to oral health based on the common risk factor approach [*12*].

The common risk factor approach addresses risk factors common to many chronic conditions such as heart disease, cancer, obesity, diabetes, stroke, injury and oral disease within the context of the wider socio-environmental milieu. The major risk factors for those chronic diseases are smoking, diets high in saturated fats and sugars and low in fibre, fruit and vegetables, stress, alcohol abuse, environmental hygiene, injury and sedentary lifestyle. The common risk factor approach is a health promotion approach. It is more likely to be effective because it tackles causes common to a number of chronic diseases and incorporates oral health into general health strategies [*13*].

Oral health promotion

Oral health promotion should have the highest priority and should follow the principles defined in the Ottawa Charter for Health Promotion [*14*]. Health promotion means building healthy public policies, creating supportive environments, strengthening community action, developing coping skills and re-orienting dental services. Health promotion policy must take into consideration the uneven distribution of health and disease, the uneven distribution of health hazards in the physical and social environment, personal behavioural risk factors, personal opportunities to adopt healthier lifestyles, and the uneven distribution and quality of health care [*14*]. In addition, the Jakarta Declaration advocated health promotion strategies that could develop and change lifestyles and social, economic and environmental conditions that determine health [*15*].

Guiding principles for planning

The WHO report on Oral Health for the 21st Century suggested the following guiding principles for oral health planning in the next two decades [*7*]:

1. Oral health is an essential part of general health, human function and quality of life.
2. Oral health status should be improved and maintained in the most economical manner consistent with quality and access.
3. Prevention is preferable to treatment as a general rule.
4. Individuals should be motivated to do as much as possible for themselves to achieve and maintain oral health.
5. Caries and periodontal diseases can be prevented and controlled.
6. Community methods of prevention should be supportive of individual and personal care and in some situations are more efficient.
7. Oral health care should be provided in the context of comprehensive care.
8. Oral health care providers should be prepared and motivated to consider general health and should participate in the provision of general health care.
9. The type, number and distribution of oral health care personnel should be maintained at levels consistent with need, quality, cost and access necessary to achieve the desired oral health status.
10. Planning, health care practices and educational programmes should be appropriate for the population or situation in question.
11. Research, evaluation and education are essential for the continued advancement of oral health.
12. Learning must continue throughout the career of the health professional.

Oral health strategy

Oral health strategy should be based on establishing a national oral health plan as part of the general health plan with measurable goals that are suited to the country. Very young children and schoolchildren are the most important target groups in a society for delivering oral health care because:

- The community has a social responsibility for its children.
- If the children are maintained in a state of good oral health, it will be easy to maintain their oral health in adult life.
- Regular dental attendance patterns in early life may be continued after school age.
- Most children regularly attend schools, which are logical places for administering the ORH.
- Health education at school age can bring about changes of behaviour and can easily be disseminated to the family.

School-based oral health programmes must be implemented in all EMR countries in the health promotion, or common risk factor, approach. The specific oral health care strategy includes health education and health promotion, integration of health promotion activities, prevention of oral diseases and supportive curative procedures.

Health education and promotion

Health education and health promotion should be the basis of any programme to improve oral health and must be shared by individuals, families, health professionals, institutions and local and national authorities. Health education can increase knowledge and reinforce desired behaviours, but

to be successful it must be integrated with other economic, social, legal and environmental influences on health, all of which affect public access to and acceptance of preventive programmes. Health promotion provides preventive procedures while simultaneously offering the opportunity to educate individuals, communities and other health professionals about the value of the measure introduced. It aims to put preventive-oriented decisions into practice [*16*].

The Action-Oriented Health Education Programme in primary schools, which was developed by the WHO EMRO, the United Nations Children's Fund (UNICEF), the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the Islamic Education, Scientific and Cultural Organization (ISESCO), was an alternative method to increase awareness of school children towards health and oral health. This method depended mainly on the participation of children in preparing and presenting health knowledge and skills. This approach was further developed into what is known as the "community school" and the "health promoting school". It calls for parents, teachers, children and health personnel to work together and to take action to improve general and oral health as part of the society's development [*17*].

Integration of health promotion activities

Oral health messages and activities must be included in general health messages and actions. The new concept of health promotion should replace the traditional dental care model that primarily emphasizes curative services and individual responsibility. The integration of oral health in general health could be implemented by tackling causes that are common to a number of chronic diseases, including oral hygiene as part of general hygiene and developing population policies rather than high-risk strategies [*18*].

Prevention of oral diseases

Dental caries and periodontal diseases are highly prevalent in all EMR countries, especially among children. Health and education authorities should cooperate to apply simple, economic, effective and efficient preventive programmes. The choice of preventive measures will depend upon oral disease prevalence, existing legislative regulations, attitudes of health authorities, cost–effectiveness and acceptance by the beneficiaries [*16*].

For dental caries prevention, fluoride use is the most effective measure. Water fluoridation and salt fluoridation are very cost-effective methods and provide substantial protection against caries for the whole community. But because they are not available in most developing countries, effective alternative means need to be introduced for populations, especially for schoolchildren. The most common methods are to apply topical fluorides in the form of solutions, gels, varnishes and toothpastes [*19*].

The WHO report on fluorides and oral health states that fluoride toothpaste is one of the most important delivery systems for fluoride [*19*]. The caries-reducing effect of fluoride is almost exclusively topical, which explains the anti-caries efficacy of fluoride toothpaste. The toothpaste is often too expensive and many people cannot afford to use it regularly; therefore, governments and the toothpaste industry should ensure the availability of fluoride toothpaste at an affordable cost to consumers, especially for schoolchildren [*4*].

The application of fissure sealants to the occlusal surfaces of teeth significantly reduces the onset of carious lesions at these

sites. Sealants are well-documented aids for the retention of teeth and for caries prevention and there is ample evidence of their long-term efficacy [*16,20*]. Because of their high cost and sensitive application, however, they are not used as a public health measure for children in most countries.

Another goal is to prevent periodontal diseases. The aim is to keep the mouth free of long-term plaque accumulations and to restrict periodontal diseases to no more than the earliest and reversible stages of gingivitis. Oral hygiene is fundamental to the control of periodontal diseases and fluoride toothpaste should be used as a cleaning agent, as well as for caries prevention.

Preventing other oral conditions should also be considered when planning oral health strategies. These conditions include oral cancer, oral injuries, fluorosis, oral mucosal diseases, acquired defects of dental hard tissues and dentofacial anomalies.

Supportive curative procedures

For many reasons, most EMR countries face difficulties in treating decayed teeth among schoolchildren with the conventional approach. These reasons include the limited number of dental units, the high cost of establishing new dental units, lack of maintenance and spare parts, problems with electricity and water supplies, schools scattered throughout urban and rural areas and controversy concerning amalgam fillings [*9*].

The atraumatic restorative treatment (ART) approach for dental caries has been developed in the last 10 years and is the least invasive of the minimal intervention approaches among preventive and curative procedures. It does not involve drills, water or electricity. It depends on the use of hand instruments to remove soft decayed tissues and to fill the clean cavity with glass ionomer cements. The WHO supports this approach as part of primary oral health care [*21,22*]. Clinical research has shown that this approach is effective in treating caries in both primary and permanent dentitions when compared with the conventional approach [*23,24*]. The adoption of this approach in oral health strategies in EMR countries will improve the oral health status.

Basic package of oral care

In 2001, the WHO/ORH in cooperation with the WHO Collaborating Centre for oral health in Nijmegen, The Netherlands, developed an integrated community-based programme, the Basic Package of Oral Care (BPOC) for deprived communities [*10*]. It meets the principles of primary health care, based on proven and effective oral health measures, and it is applicable for developing and developed countries. The package has three essential components of oral health service, i.e. Oral Urgent Treatment (OUT), Affordable Fluoride Toothpaste (AFT) and Atraumatic Restorative Treatment (ART). Oral health promotion is considered an integral part of BPOC. EMR countries could develop a BPOC based on the perceived needs of local populations and on existing supporting environmental conditions [*4,22*].

Training and research

Continuous training activities for oral health, health and non-health personnel should be considered in oral health plans to keep up with the rapid pace of change in scientific knowledge, methods of prevention and treatment procedures, in addition to introducing evaluation and research methods. Oral health research should be encouraged to develop oral health care in the community.

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The objectives of the WHO Global Oral Health Programme

The objectives of the WHO Global Oral Health Programme, one of the technical programmes within the Department of Chronic Diseases and Health Promotion, have been reoriented according to the new strategy of disease prevention and promotion of health. Greater emphasis is put on developing global policies in oral health promotion and oral disease prevention, coordinated more effectively with other priority programmes of the Department of Chronic Diseases and Health Promotion and other clusters and with external partners. Several principles form the basis for the work carried out. The WHO Oral Health Programme works towards building oral health policies on effective control of risks to oral health, based on the common risk factors approach. The focus is on modifiable risk behaviours related to diet, nutrition, use of tobacco and excessive consumption of alcohol, and hygiene. Further information on the WHO Global Oral Health Programme is available at: http://www.who.int/oral_health/en/