

Oral Health Promotion Programmes in the Balkan Countries: Part I

SUMMARY

Background/Aim: The aim of this study was to conduct a comparative analysis of the national oral health programmes in the Balkan countries, to compare key measures and activities in the implementation of the general and specific objectives of the programme, and to analyse the results achieved after the implementation of the programme. **Material and Methods:** The data were obtained through an electronic search of publicly available documents published by the relevant institutions in the field of dental health care in the Balkan countries. The search terms were: “national programme”, “strategy”, “action plan”, “project”, and “oral health”. The search was conducted in English and in the native languages of the Balkan Peninsula countries. A comparative analysis of valid documents and those whose validity period has expired was carried out.

Results: Bulgaria and the Republic of North Macedonia have valid national preventive programmes. In Cyprus, a strategic plan for the provision of dental services is described. An oral health promotion programme for elementary school children and universal preventive programme for children (“dentist pass”) have been implemented in Greece. Serbia has a national preventive programme that has expired, but the programme activities still apply. Albania, Bosnia and Herzegovina, Montenegro, Romania, and Turkey do not have national oral health preventive programmes. Countries in the region with no oral health promotion programmes have poorer oral health indicators compared to countries with existing programmes. **Conclusions:** While countries in the Balkan Peninsula have made progress in improving the oral health of their inhabitants, the absence of national oral health promotion programmes is striking in many countries in the region. Greater involvement of the community in activities to maintain and improve oral health is needed, as is more comprehensive dental care for vulnerable populations.

This paper (Part I) compares national oral health promotion programmes of the Balkan countries, the key measures and activities, and general and specific objectives of the programme.

Keywords: Oral Health, Prevention, National Programme, Balkan countries

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Introduction

In 2022, the World Health Organization (WHO) published the latest Global Report on the Oral Health Status¹ which shows the prevalence of oral diseases in the world. According to collected data, 45% of the world’s population (about 3.5 billion people) suffers from oral diseases, and three quarters belong to middle and low-income countries. In the WHO European Region,

466 out of 900 million people are affected (50,1% of the population). Oral diseases are the most dominant conditions, and their global burden exceeds that of other non-communicable diseases such as mental disorders, diabetes, and cancer. Caries, periodontitis, tooth loss, and oral cancer are the most common oral diseases, affecting the most vulnerable and poorest populations, i.e. low-income residents, people with disabilities, the elderly population, as well as people in remote and rural

areas. The report states that those most in need of dental care often have the least access to oral health services. It highlights the need to address common risk factors through access to public health, integrating oral health into national health strategies, redefining the workforce, and strengthening the oral health care system².

Health and quality of life in general are influenced by a complex network of interrelated social, environmental, economic and economic factors. This complex connection requires the health and non-health sectors to be involved in mutual cooperation in the efforts for the prevention of oral and other non-communicable diseases. Together with America, the Balkan region has the highest mortality rate from non-communicable diseases². In relation to risk factors, residents of Balkan countries have the highest smoking rate, alcohol consumption per capita, the highest prevalence of overweight and obesity. In addition to similar lifestyle habits, the inhabitants of the Balkans have similar socio-economic statuses, political, cultural and traditional understandings.

WHO emphasizes the importance of control and prevention of non-communicable diseases, suggesting the adoption of the Common Risk Factors Approach in prevention and management of both non-communicable and oral diseases. Recommendations for the design of key actions related to the health network of Southeast Europe, which is mostly made up of the countries of the Balkan Peninsula, have been made³. The plans, seemingly simple, are very complex in implementation and require the existence of clearly defined guidelines that state authorities should regulate by appropriate legal regulations.

Dental health care of the population of the Balkan countries is similarly organized. In most of the countries, primary dental care, which makes up the bulk of dental care, is mainly performed by the private sector. The public sector covers the treatment of patients up to 18 years of age and the management of dental emergencies in adults, with the exception of Cyprus where public sector covers the treatment needs of the entire population that fulfils certain economic criteria (low income population), and Greece where the entire population is legally eligible to receive free dental care from the National Health System, but the system's limited capacity restricts the provision of dental care to the population⁴. Primary dental care services within the public sector are financed from state funds of compulsory health insurance, while in some countries these funds also partially finance the private sector in the field of primary dental care³. It seems that an insufficient number and territorial distribution of dentists and specialist dentists in the provision of dental services is a common problem of all Balkan countries. In addition, the number of dentists per 100.000 inhabitants varies a lot across the Balkan countries. Greece and Cyprus are recording the highest number of dentists *per capita*, while Serbia and Montenegro have one of the lowest⁵.

The aim of the paper was to perform a comparative analysis of the national oral health promotion programmes of the Balkan countries, compare the key measures and activities in the implementation of the general and specific

objectives of the programme and analyse the results achieved after the implementation of the programme.

Material and Methods

Data for the analysis were obtained by electronic search of publicly available documents published by the relevant institutions in the field of dental health care of the Balkan countries. The following were used as search keywords: "national programme", "strategy", "action plan", "project", and "oral health". The search was performed in the Google search engine in English and native languages of the Balkan Peninsula countries (Albanian, Bosnian, Bulgarian, Greek, Macedonian, Romanian, Serbian, and Turkish). The comparative analysis included valid documents, as well as documents whose validity period has expired. All programmes that have ever existed up to the time of the search have been taken into account. In cases where no data on the prevalence of caries in children and adolescents of a more recent date were found by electronic search, experts in the field of dental health care of those countries were contacted by e-mail.

The following data were extracted from the published documents: name of the country, name of the document (programme, plan, strategy), time of validity of the document, target group (age) of patients to whom the document refers, general and specific objectives of the programme, key activities and measures for the implementation of the programme, monitoring indicators in the implementation of the programme.

Results

Among the Balkan countries, Bulgaria and North Macedonia have valid national preventive oral health programmes. In the Republic of Cyprus, within the strategic plan of the Ministry of Health, a strategic plan for the provision of dental services is described, and includes activities organised by the Public Dental Services. In Greece, information regarding preventive dental services reimbursed by the New Health Care System is provided through an oral health promotion program for elementary schoolchildren implemented since 2017. Additionally, a one-year prevention program for children aged 6-12 years ("dentists pass") was introduced in 2023, but without any guarantee for the future⁶. Serbia has preventive programme whose validity period has expired, but the programme activities still apply. In other countries of the Balkan Peninsula: Albania, Bosnia and Herzegovina, Montenegro, Romania, and Turkey, there are no national preventive oral health programmes. The tables show: the validity period and target group of the programme (Table 1), general and specific objectives (Table 2), and key measures and activities of the programme (Table 3).

Table 1. Basic characteristics of national oral health promotion programmes

	Name of the national programme	Validity year	Target group
Bulgaria	National Oral Disease Prevention Programme ⁷	2021 - 2025	children up to 18 years, parents, teachers, pregnant women, medical workers
Cyprus	Strategic Plan 2024-2026 (Dental Services) ⁸	2024 - 2026	entire population
Greece	Oral Health Promotion Programme for Primary Schools ⁹	2017 - onwards	pupils in kindergartens, 1 st grade, and 2 nd grade of elementary school
	Dentist Pass ¹⁰	2023	children aged 6-12 years
North Macedonia	National Strategy for the Prevention of Oral Diseases in Children and Adolescents ¹¹	2018 - 2028	children aged 0-14 years
Serbia	National Programme of Preventive Dental Health Care for the Population of the Republic of Serbia ¹²	2009 - 2015	children, youth, pregnant women

Table 2. General and specific objectives of national oral health promotion programmes

	Name of the national programme	General objectives of the programme	Specific objectives of the programme
Bulgaria	National Oral Disease Prevention Programme ⁷	Improving the oral health of children under the age of 18	<ul style="list-style-type: none"> • Raising awareness of the population – children, parents • Health education of children, students, parents and teachers on the proper preservation of oral health, oral hygiene, fluoride prophylaxis, proper nutrition, sugar-free chewing gum • Reducing the intensity of caries on the first permanent molars (sealing the fissures of the first permanent molars in children 5 to 8 years of age) • Epidemiological assessment of caries in children (8, 9, 10 years) with sealed fissures compared to a control group of the same age without sealants • Limit and reduce fluorosis incidence • Support and assist the implementation of municipal – regional prophylactic oral prevention programmes
Cyprus	Strategic Plan 2024-2026 (Dental Services) ⁸	Ensuring a high level of oral health among people living in Cyprus, as well as quality of dental services	<ul style="list-style-type: none"> • Providing high quality dental services in hospitals, urban and rural centers health and other institutions • Conducting epidemiological and other research • Implementing Preventive programs for school and preschool children and other groups of the population as well as actions aimed at promotion of oral health
Greece	Oral Health Promotion Programme for Primary Schools ⁹ Dentist Pass ¹⁰	Oral health promotion for pupils in kindergartens, 1 st grade, and 2 nd grade of elementary school <ul style="list-style-type: none"> • Providing preventive dental services, free of charge, universally (to all children) aged 6-12 years in private dental practices 	

Name of the national programme	General objectives of the programme	Specific objectives of the programme
North Macedonia	National Strategy for the Prevention of Oral Diseases in Children and Adolescents ¹¹	<p>Short Term Objectives</p> <ul style="list-style-type: none"> • Activation of preventive teams for records: dental health, periodontal and orthodontic anomalies • Development of the Programme for the Prevention of Oral Diseases in Children with Special Needs within the National Strategy • Development of the Programme for Education of Pregnant Women and Maternity within the National Strategy • Development of the Early Childhood Caries Prevention Programme within the National Programme • Amendment to the Dental Education Programme for preschool and school-age children. • Amendment to the Programme for the Prevention of Oral and Dental Diseases in Children of Pre-school and School Age. <p>Mid-term objectives:</p> <ul style="list-style-type: none"> • Improving the oral health of children with special needs • Improving the awareness of pregnant women and young mothers about the importance of preserving their own and children's oral health • Increase in the percentage of children without cavities at the age of 6 by 20% after five years of implementation of the programme. • Reduction of the DMFT index in 12-year-old children by 20% after 5 years of implementation of the programme. • Reduction in the number of sextants with gingival bleeding by up to 15 years of age by 30% after 5 years of implementation of the programme. <p>Long-term objectives:</p> <ul style="list-style-type: none"> • Approximation of the values of oral health of children 0-14 years to the values in the countries of the European Union.
Serbia	National Programme of Preventive Dental Health Care of the Population of the Republic of Serbia ¹²	<p>Regarding the promotion of oral and dental health:</p> <ul style="list-style-type: none"> • Increase the recognition of oral and dental health at the community and individual levels • Strengthening partnership relations between local self-government units and all other institutions and organizations <p>Regarding the improvement of the oral and dental health of children and young people up to 18 years of age:</p> <ul style="list-style-type: none"> • Improving the knowledge, attitudes and behaviour of parents and guardians • Improving the knowledge, attitudes and behaviour of children and youth up to 18 years of age • Improving dental health care of children and youth up to 18 years old • Strengthening staff and spatial capacities in dental health care of children and youth up to 18 years of age <p>Regarding the improvement of oral and dental health in relation to pregnancy:</p> <ul style="list-style-type: none"> • Improving women's knowledge, attitudes and behaviours in relation to pregnancy • Improving the dental health care of women in relation to pregnancy • Strengthening the capacity of dental health care related to pregnancy

Table 3. Key measures and activities of national oral health promotion programmes

	Name of the national programme	Key measures and activities of the programme
Bulgaria	National Oral Disease Prevention Programme ⁷	<ul style="list-style-type: none"> • Raising the awareness of the population about oral diseases • Sealing the fissures of the first permanent molars during the first two years after emergence • Epidemiological assessment of caries in children aged 8, 9 and 10 years with sealed fissures and control group • Risk assessment of fluorosis in places with fluoridated water
Cyprus	Strategic Plan 2024-2026 (Dental Services) ⁸	<p>Activities in the provision of preventive services:</p> <ul style="list-style-type: none"> • Oral health lectures for children, parents, school teachers, and various organized groups to improve their knowledge, attitudes and practices related to oral health and oral hygiene. • Distribution of informative leaflets, as well as toothbrushes and fluoride toothpastes • Free provision of preventive care and dental treatment to pupils in elementary schools and other institutions through 4 mobile dental units • In cooperation with the Cyprus Dental Association, treatment of all pupils up to 11 years of age • Raising the awareness in the population about oral diseases. Organising information campaigns on oral diseases (Oral cancer, World Oral Health Day) • Preparation of epidemiological and other research • Daily supervised tooth brushing programme in selected primary schools <p>As of December 1st, 2020, preventive dental care (one visit per year for oral examination and scaling, and additionally one topical fluoride application for children aged 6-12 years), has been included in the package of health care services reimbursed by the Health Insurance Organisation¹³</p> <p>* The strategic planning of the Public Dental Services in Cyprus, except from oral health promotion programmes, includes actions aimed at providing high quality therapeutic services to eligible patients which will be elaborated in Part II.</p>
Greece	Oral Health Promotion Programme for Primary Schools ⁹	<ul style="list-style-type: none"> • Dentists from the public sector visit schools and inform children on oral health, hygiene, prevention of oral diseases, and oral health promotion • Oral examinations • Distribution of informative leaflets produced by the Ministry in collaboration with the National Dental Association • Oral health education for teachers and parents
	Dentist Pass ¹⁰	<ul style="list-style-type: none"> • A 40 Euro voucher was introduced for each child aged 6-12 years to reimburse services provided by private dental practitioners • The preventive package included examination of oral hygiene, tartar and dental plaque removal, topical fluoride application, and recommendations for improving children's oral hygiene
North Macedonia	National Strategy for the Prevention of Oral Diseases in Children and Adolescents ¹¹	<ul style="list-style-type: none"> • Mechanical and chemical plaque control • Fluorine prophylaxis • Control of sugar intake • Fissure sealing • Education and motivation in maintaining oral hygiene • Registration of the gingival bleeding index • Early detection of orthodontic anomalies and application of the interceptive method of orthodontic therapy
Serbia	National Programme of Preventive Dental Health Care of the Population of the Republic of Serbia ¹²	<ul style="list-style-type: none"> • Increasing the recognition of oral and dental health at the community and individual levels • Strengthening partnership relations between local self-government units and all other institutions and organizations • Improving the knowledge, attitudes and behaviour of parents and guardians • Improving the knowledge, attitudes and behaviour of children and youth up to 18 years of age • Improving dental health care for children and youth up to 18 years of age • Strengthening staff and spatial capacities in dental health care of children and youth up to 18 years of age • Improving women's knowledge, attitudes and behaviours in relation to pregnancy • Improving the dental health care of women in relation to pregnancy • Strengthening the capacity of dental health care in relation to pregnancy

Conclusions

This paper (Part I) compares national oral health promotion programmes of the Balkan countries, the key measures and activities, and general and specific objectives of the programme. Specifics of oral health promotion programmes in each Balkan country will be described in Part II.

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