better oral health EUROPEAN PLATFORM

The State of Oral Health in Europe

Report Commissioned by the Platform for Better Oral Health in Europe

Summary of Key Findings

Dr. Reena Patel, Dental Advisor

September 2012

The full report can be accessed at: www.oralhealthplatform.eu

Foreword

The news on Europe's oral health is both good and bad: the good news is that we have witnessed incredible progress in the last decades in the prevention of caries in children. The bad news is that having damaged, missing or filled teeth is still the norm rather than the exception in Europe, and oral diseases remain amongst the most important health burdens. Moreover, we still fail to realise that oral health is about much more than having good teeth. It is an integral part of our general health, and it impacts not only our quality of life, but also on society and health systems through the associated economic costs.

In a time of austerity measures and growing pressure on healthcare budgets, this report is a timely reminder that we have to tackle the persisting disparities in oral health across and within EU countries, with regards to socioeconomic status, age, gender, or indeed general health status.

In order to do so and to ensure that European citizens can all have healthier smiles in the future it is my belief that the EU can, and must, play a stronger role in the fight for better oral health.

This report clearly underlines the challenges that citizens and policymakers are confronted with when trying to improve oral health:

- Traditional curative dental care has a significant economic burden for many industrialized countries: the current EU 27 spending on all aspects of care and treatment is close to €79 billion, and if the trends continue, this figure could be as high as €93 billion in 2020.
- Demographic change presents a formidable challenge for oral health, since decreasing loss of teeth within the elderly population is expected to increase treatment needs significantly in the coming years.
- There are rising inequalities across Member States in terms of access to appropriate oral care, as low-income populations most in need of dental care face higher hurdles compared to high-income groups.

At the same time, this report also outlines a number of successful initiatives that can help reduce the social and individual burden of oral diseases through a number of measures such as: community-based prevention initiatives, reduction of the socioeconomic and environmental risk factors of chronic diseases, the promotion of routine oral hygiene practices and oral health awareness and the provision of better access to dental care.

Applying these successful models and sharing good practices across the EU can play a vital role in improving the oral health of European citizens. In that sense, this report provides the evidence-base for good policymaking. I encourage everyone to help in putting the report's recommendations into action.

Ms. Karin Kadenbach, Member of the European Parliament

Foreword

The “State of Oral Health in Europe” report has been commissioned by the Platform for Better Oral Health in Europe, a forum which brings together European organisations that work towards the promotion of oral health and improving the prevention of oral diseases in Europe.

Despite significant achievements in the prevention of caries in Europe, a lot remains to be done in a number of areas including: oral health awareness, tackling oral health inequalities and addressing common risk factors. In addition, the development of high quality, comparable oral health data in Europe and better cost-effectiveness studies, to assess the impact of prevention initiatives, are indispensable tools in the fight for better oral health in Europe.

The “State of Oral Health in Europe” report was born from the desire of the Platform to promote the evidence base and seek opportunities to deepen cooperation with European decision-makers to improve oral health policies in Europe and accelerate the sharing of good practice. The report has gathered the most reliable data available on the prevalence of oral diseases in Europe and presents new evidence of the economic and social impact of oral health. The report also aims to contrast and benchmark good practice initiatives in oral health across Europe, in order to identify priorities and define a set of key recommendations to improve oral health in Europe.

The report is published ahead of the 1st Pan-European Oral Health Summit, to be held on 5th September 2012, at the European Parliament, with the kind support of Ms. Karin Kadenbach MEP and Dr. Cristian Silviu Buşoi MEP and under the patronage of the Cypriot Presidency of the European Union. The Summit brings together policymakers and specialists in Brussels, at the occasion of World Oral Health Day, to discuss the current situation and engage policymakers to commit to developing and funding policies that will improve the prevention of oral diseases prevention and their treatment.

It is somewhat surprising and regrettable that – for years – there has been no concerted effort at an EU level to bring dental public health to the attention of the European Institutions, and to give policymakers a deeper understanding of what can and needs to be done about oral health in Europe, particularly its integral role for general health and well-being. The stakes on this issue are high and the time for change is now. With the Platform, the Report and the 1st Pan-European Oral Health Summit I hope and believe we finally have the adequate tools and procedures in place to work effectively together and foster policy decisions which will benefit the oral health of everyone in Europe in the years to come.

Professor Kenneth Eaton, Chair of the Platform for Better Oral Health in Europe

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The opinions and views expressed in this report are the sole responsibility of its author.

The author: Dr. Reena Patel, Dental Advisor

Reena graduated as a dentist from the University of Wales, College of Medicine. She gained her Diploma of Membership of the Faculty of Dental Surgery at the Royal College of Surgeons of England, and then went on to complete an MSc in International Health management at Imperial College, London.

Reena has worked in a variety of clinical roles within the National Health Service in the UK, and in voluntary placements abroad, in India and Nepal. In recent years, she has expanded her knowledge and corporate experience by working as a Management Consultant at Deloitte, in the Healthcare and Lifesciences Division. Reena has undertaken several independent commissions for a variety of organisations. She has also presented the findings of her work at national and European scientific conferences, and published in the British Dental Journal and Oral Health and Dental Medicine.

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Introduction and context

Across Europe, oral diseases constitute a major public health burden, and significant oral health inequalities exist both within and between individual Member States in terms of severity and prevalence. The burden is attributable principally to dental caries, periodontal diseases, and oral cancer.

Oral diseases not only impact on the individual through pain and discomfort, and the broader impact on their general health and quality of life, but also on the wider community, through the health system and associated economic costs.

Expenditure on treatment of oral conditions often exceeds that for other diseases, including cancer, heart disease, stroke, and dementia. This is disturbing, given that much of the oral disease burden in high-income countries is due to dental caries and its complications, and this is preventable through the use of fluoride and other cost-effective measures.

There is a distinct lack of policy emphasis placed on prevention within oral health in Europe. This is compounded by the dearth of routinely available and comparable epidemiological and economic data, which describe the current situation in Europe. Robust data is of supreme importance in the planning, implementation and evaluation of community preventive activities and oral health promotion, and as a result there are thus challenges in identifying best-practice initiatives, and allocating resources to where they are most needed.

In light of this situation, the Platform for Better Oral Health in Europe commissioned Dr Reena Patel, Dental Advisor, to examine some of the key issues relating to oral health. These include:

- Prevalence and trends of oral diseases in Europe;
- Assessment of the economic impact of oral diseases in Europe;
- Identification of best practice initiatives in oral health promotion across Europe;
- Development of a set of key recommendations for decision-makers to improve oral health in Europe.

This Section contains a summary of the key findings of the report, which assesses the burden caused by oral diseases in Europe, and identifies policy orientations to address it.

In order to provide a representative view of the situation across Europe, while reflecting the most reliable data available, the author focused on the following countries: Austria, Cyprus, Denmark, France, Germany, Ireland, Italy, Lithuania, Poland, Romania, Spain and the UK.

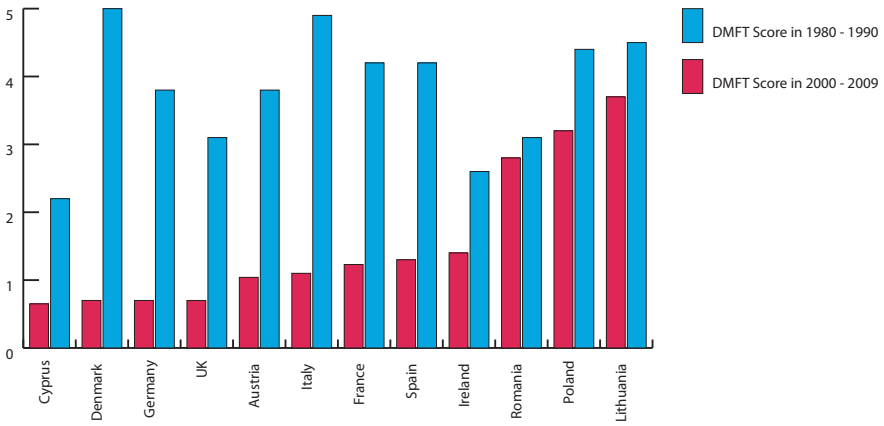
Prevalence and trends of oral diseases in EU Member States

Chronic non-communicable diseases and conditions such as obesity, heart disease, stroke, cancer, diabetes, and oral diseases all share a set of common risk factors which include diet, smoking and alcohol use.

Despite being largely preventable, oral diseases and inequalities, constitute a significant public health problem alongside the inequalities in the prevalence of the major diseases of the 21st century.

A range of health conditions are associated with oral disease. Poorly controlled diabetes is a well-established risk factor for developing periodontal breakdown and recent research shows how chronic gum diseases can increase diabetic complications. Gum diseases are also associated with rheumatoid arthritis, adverse pregnancy outcomes, and coronary heart disease.

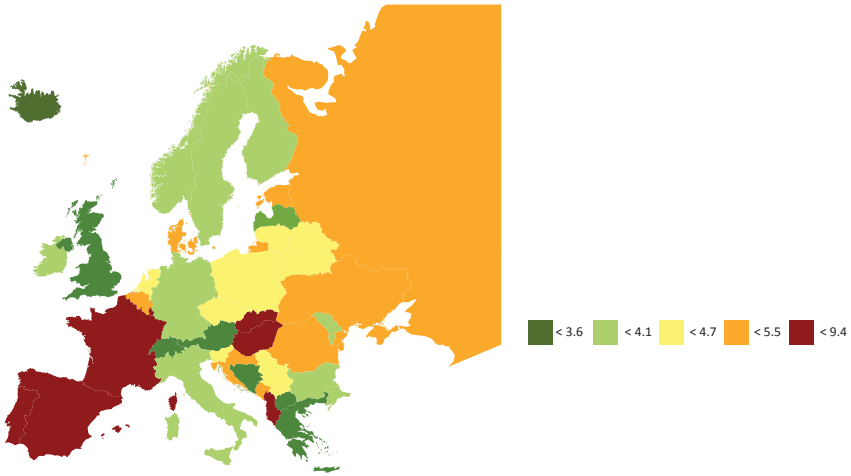
Figure 1: Changes in mean national Decayed Missing Filled Teeth (DMFT) scores for 12 year olds from profiled Member States between the 1980s and first decade of 2000 (WHO 2012b)



Notes:

- Ireland: DMFT score for children receiving fluoridated water at home since birth
- DMFT score for Poland in 2003 was ascertained from examination of 180 children in Gdansk region
- DMFT score in UK in 2008-2009 is for England only

Estimated age-standardised incidence rate (IR) per 100,000 of cancer in the lip, oral cavity, both sexes and all ages across Europe (IARC 2012b: GLOBOCAN 2008)



Key points

- *Despite a global decline in caries, the disease still remains a problem for many groups of people in Eastern Europe, and for those from socio-economically deprived groups in all European Union Member States.*
- *Over 50% of the European population may suffer from some form of periodontitis and over 10% have severe disease, with prevalence increasing to 70-85% of the population aged 60-65 years of age. Periodontal health may be deteriorating within the population of the EU. This is principally due to a larger number of people that are retaining some of their teeth into old age, and an increase in the prevalence of diabetes. Epidemiologic data on periodontal diseases are of very poor quality.*
- *Oral cancer is the eighth most common cancer worldwide. In the EU, lip and oral cavity cancer is the 12th most common cancer in men. In 2008, there were approximately 132,000 cases of head and neck cancer across Europe, resulting in 62,800 deaths. Highest prevalence rates are found in Spain and Hungary. Trends in oral cancer are now showing an increasing incidence in women, and young adults. Mortality rates have continued to increase in several Eastern European Member States.*

Economic impact of oral diseases in Europe

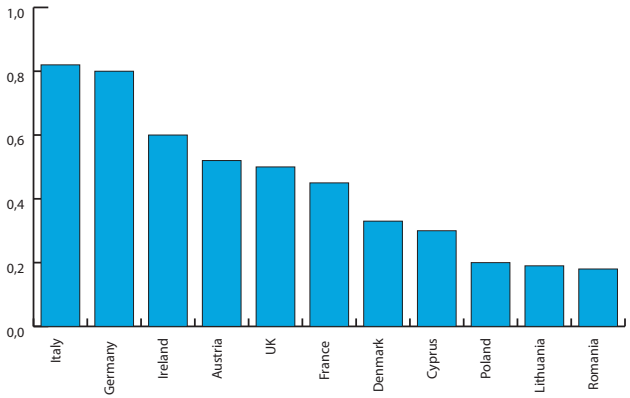
Dental disease and its complications can impose a significant financial burden to the individual and society. This is disturbing, given that much of the oral disease burden in high-income countries is due to dental caries and its complications, and this is preventable through the use of fluoride and other cost-effective measures.

However, there are challenges in estimating the expenditure on the provision of oral healthcare due to a lack of data, and difficulties in quantifying out-of-pocket expenditure and indirect costs arising from the social burdens of poor oral health, and its interaction with systemic diseases.

Out-of-pocket expenditure is an important, and often underestimated, aspect of oral healthcare delivery. In Member States where oral health services are mainly provided by private practitioners, there may be a significant impact on low income groups, which may not be captured by decision-makers.

The lack of robust data on the economic burden of oral diseases and the cost-efficiency of preventative measures is a major public health issue in Europe. This may lead to an underestimation of the true costs of oral healthcare provision, thus limiting the ability to assess the impact of existing public health measures, and invest in the most effective initiatives.

Estimated percentage of GNP spent on oral health in 2010 (unpublished data from CECDO 2012)*



*No data available for Spain

Estimated percentage of GNP spent on oral health in 2010 (unpublished data from CECDO 2012)*

Country	GNI 2010 ($)*	GNI (€)**	% of GNP spent on OH in 2010***	Spend on oral health care services (€)			
				2010	2012	2015	2020
Austria	377	308	0.52	1.60	1.67	1.77	1.95
Belgium	478	390	0.5	1.95	2.03	2.15	2.38
Bulgaria	46	38	0.18	0.07	0.07	0.07	0.08
Cyprus	23	19	0.3	0.06	0.06	0.06	0.07
C. Repub	179	146	0.3	0.44	0.46	0.48	0.53
Denmark	319	260	0.33	0.86	0.89	0.95	1.05
Estonia	18	15	0.39	0.06	0.06	0.06	0.07
Finland	242	198	0.4	0.79	0.82	0.87	0.96
France	2607	2128	0.45	9.58	9.96	10.57	11.67
Germany	3341	2728	0.8	21.82	22.70	24.09	26.60
Greece	293	239	1.1	2.63	2.74	2.91	3.21
Hungary	122	100	0.16	0.16	0.17	0.18	0.19
Ireland	171	140	0.6	0.84	0.87	0.92	1.02
Italy	2051	1674	0.82	13.73	14.28	15.16	16.74
Latvia	24	20	0.24	0.05	0.05	0.05	0.06
Lithuania	36	29	0.19	0.06	0.06	0.06	0.07
Luxembourg	38	31	0.29	0.09	0.09	0.10	0.11
Malta	8	7	0.4	0.03	0.03	0.03	0.03
Netherlands	773	631	0.5	3.16	3.28	3.48	3.85
Poland	452	369	0.2	0.74	0.77	0.81	0.90
Portugal	221	180	0.4	0.72	0.75	0.80	0.88
Romania	159	130	0.18	0.23	0.24	0.26	0.28
Slovak Rep.	86	70	0.15	0.11	0.11	0.12	0.13
Slovenia	46	38	0.36	0.14	0.14	0.15	0.16
Spain	1389	1134	0.4	4.54	4.72	5.01	5.53
Sweden	467	381	0.68	2.59	2.70	2.86	3.16
UK	2272	1855	0.5	9.27	9.65	10.24	11.31
TOTAL (billion)				€ 76	€ 79	€ 84	€ 93

Notes and explanation

* GNI (Gross National Income in current USD) in Billions 2010 (World Bank 2012)

** GNI 2010 converted to Euro at a rate of 1 USD = 0.816510 on 08/07/2012

*** % GNP spent on the provision of oral health care services in 2010 (unpublished CECDO data 2012). The % GNP estimates for several former Eastern Bloc Member States may not include private expenditure
Data for Spain, the Czech Republic and Bulgaria are estimates.
A predicted annual 2% increase in expenditure on oral health was utilised to calculate predicted expenditures up to 2020.
It is important to note that these figures are estimates, as it is extremely difficult to collect data for Member States in which there is very little public or insurance funding of oral health.
Although these data may well be inaccurate for some Member States, they do give an overall picture of the level of the cost of oral health across the EU.

Key points

- *Delivering oral health services is costly, accounting for 5% of total health expenditure and 16% of private health expenditure across OECD countries in 2009.*
- *The current EU 27 spending is close to €79 billion, and if the trends continue, this figure could be as high as €93 billion in 2020.*
- *Studies have also shown that the mouth is the most expensive part of the body to treat. Expenditure is likely to exceed that for cancer, heart disease, stroke or dementia.*
- *There is strong evidence that the benefits of preventing tooth decay exceed the costs of treatment. This is particularly evident in Member States such as Denmark and Sweden, which have invested heavily in the provision of preventative oral health services, with a significant reduction in the prevalence of oral disease.*

Inequalities relating to the treatment of oral diseases in Europe

Inequalities in health between people in higher and lower educational, occupational and income groups have been found in all Member States. Lower socioeconomic groups are more susceptible to poor nutrition and to tobacco and alcohol dependency, all of which are major contributory factors in many diseases and conditions. There are also profound oral health disparities across EU countries, related to socio-economic status, age, gender, and general health status.

Caries still remain a major health problem for many groups of people in Eastern Europe, and in all European Member States, for those from socio-economically deprived or vulnerable groups. The incidence of oral cancer and periodontal diseases is also strongly related to social and economic deprivation.

A factor which impacts on dental attendance is the structure for the delivery of oral healthcare services, which varies significantly between individual Member States. A far lower percentage of the population appear to attend the dentist in socially and economically less well developed EU Member States, where there is little or no publically funded dentistry, than in those which provide publicly subsidised oral health care.

Key points

- *Ensuring access to oral healthcare services remains a major health problem among vulnerable and low income groups. These individuals generally attend services less frequently than the general population, for primary care or emergency treatment when in pain, rather than for preventive indications.*
- *Eurobarometer survey data (2010) suggest that of those who responded to the survey, the respondents most likely to have visited a dentist in the last twelve months were inhabitants of Northern EU Member States.*
- *The association between education and attendance at the dentist varies significantly between Member States. Europeans who are in full time education the longest appear to be more likely to visit a dentist for a check-up, rather than only attending when in pain.*

Oral health policies, the promotion of oral health and the prevention of oral diseases in Europe

Frequent exposure to fluoride, regular brushing, a healthy diet and routine oral care all contribute to improved oral health outcomes and a reduction in oral health inequalities.

Most of the evidence in oral health promotion relates to dental caries prevention and control of periodontal diseases. Strong evidence exists that topical fluorides (fluoride toothpaste, fluoride varnish and fluoride mouth rinses) can prevent tooth decay.

Gum diseases can be prevented by good personal oral hygiene practices, including brushing and cleaning between teeth, which are important for the control of advanced periodontal conditions as shown by successful programmes e.g. in Sweden.

Limited evidence exists for the effectiveness of screening for early detection of oral cancer on a population basis, but assessment of the oral soft tissues should be a routine part of an oral examination, especially for groups at higher risk of oral cancer, such as smokers and heavy drinkers.

Across the EU, a variety of successful community-based public oral health programmes exist. These focus on the delivery of preventative treatments, increasing awareness and enhancing patient education to encourage healthy routines and self-care. However, there is a consistent lack of coordination between public authorities in identifying and sharing good practices. In particular, cost-effectiveness studies of preventative initiatives are lacking.

Good practice: Denmark's preventative oral health care model

Approximately 40 years ago, Danish children's oral health was among the poorest in Europe. However, a targeted and proactive approach to deliver preventive care within the public oral health care service has had significant results. Between 1974 and 2000, the average DMFT scores in 12-year-old Danish children fell by 78% from 4.5 to 0.98. By 1997, more than 99% of Danish children received oral health care every year.

All municipalities in Denmark are obliged to establish local clinical facilities to provide all children and adolescents residing in the municipality with free and comprehensive oral health care, including health education and prevention, from newborn to 18-year-old children. Clinics are often located in, or nearby primary schools.

A sophisticated register of all children residing in the municipality is utilised to monitor attendance to the clinic. The initial visit to the clinic is organised by the local oral health service. A letter is posted home to inform parents that their child is now entitled to free dental care.

Preventative efforts are directed at the individual through tailored advice and guidance. However, significant emphasis is also placed upon reinforcing these messages within other health, social and education environments through staff in day-care centres, teachers, health visitors and paediatricians (Association of Public Health Dentists in Denmark 1997).

Good practice: An evidence-based toolkit for prevention

In the UK, the Department of Health and the British Association for the Study of Community Dentistry have jointly produced an evidence-based toolkit for the prevention of oral disease by primary care dental teams "Delivering Better Oral Health: An evidence-based toolkit for prevention" (DH 2009). This toolkit provides easy to use advice on the prevention of dental caries, periodontal diseases and oral cancer. The third revised edition is due to be released shortly, and the tool is currently being translated into Spanish.

Key points

- *A range of effective population-based preventative initiatives have been implemented across Europe. These include water fluoridation programmes (Ireland, Poland, Serbia, Spain, UK); fluoridated salt programmes (Switzerland, Slovakia, France, Germany and the Czech Republic) and fluoridated milk programmes targeting children (Bulgaria, UK).*
- *Oral health education programmes delivered in a school setting have demonstrated improvements in child dental health, especially when delivered alongside additional home support and community interventions (France, Germany, Ireland and UK).*
- *A targeted and proactive approach to deliver preventive care within the public oral health care service in Denmark has had significant results. Local clinical facilities provide children and adolescents with free and comprehensive oral health care, using a sophisticated register to monitor attendance.*
- *Evidence-based toolkits for the prevention of oral disease can be developed by Ministries of Health to provide dentists and the public with accessible and accurate information (UK).*
- *Several countries (Finland, Germany and Switzerland) actively promote sugar-free products*
- *Restricting marketing, and improving the labelling of certain food products, as part of broader initiatives to tackle the socio-behavioural and environmental factors of oral diseases, has shown some effect.*
- *An international example of good practice includes the online Canadian Best Practices Portal which showcases effective "best" practices models, methods, and research evidence in the fields of community based health promotion and disease prevention interventions.*

Conclusions and recommendations for European decision-makers

In the last 30 years, despite major improvements in the prevalence of dental caries in children and young adults who live in Western Europe, it is evident that oral diseases, and oral health inequalities, remain a significant public health problem in Europe.

In many EU Member States, oral health care is not fully integrated into national or community health programmes. There is a clear lack of research in oral health promotion, and very few high quality outcome measures exist for use in the evaluation of oral health policy and environmental interventions. This problem is compounded by the lack of routinely available and comparable EU oral health data.

There are also challenges in identifying best practice measures, and sharing learning outcomes from oral health promotion activities. A more progressive health promotion approach that recognises the importance of tackling the underlying social, political and environmental determinants of oral health is required. However, across Europe, there is a lack of suitably trained advisors with the ability to develop oral health epidemiological infrastructures and assist in oral health strategy and policy development.

To address the burden of disease, the following actions should be considered by European decision-makers:

- Making a commitment to improving oral health as part of EU policies by 2020;
- Addressing increasing oral health inequalities;
- Encouraging good practice sharing;
- Improving the data and knowledge base, bridging the research gap in oral health promotion and developing common methodologies in data collection processes;
- Supporting the development of the dental workforce in Europe.

Key policy recommendations

- *Recognise the common risk factors for oral diseases and other chronic diseases, and work towards linking oral health policies across other EU policies.*
- *Better integrate oral health into relevant national and EU health programmes and policies.*
- *Develop a coherent European strategy for the promotion of oral health and the prevention of oral diseases.*
- *Address the major oral health challenges of children and adolescents, socio and economically deprived groups, an increasing elderly population and other vulnerable populations in Europe.*
- *Employ an approach that focusses on the wider political, environmental, social and economic drivers that create oral health inequalities. A multi-strategy approach is needed that considers further measures such as legislation, fiscal policy and community development. This radical policy reorientation is principally the remit of national policy makers and professional organisations.*
- *Develop supportive oral health environments in local settings such as schools, colleges, hospitals, workplaces and care organisations.*
- *Encourage and promote policies to ensure access to fluoride for the whole population.*
- *Guarantee availability and access to high quality and affordable oral health care, including free basic treatment for individuals under 18 years of age*
- *Ensure access to relevant and evidence based oral health information to encourage patient empowerment and self-care.*
- *Maximise the potential of the dental team (dentists, hygienists, therapists, nurses, technicians, oral health promoters and educators) to ensure an appropriate use of skill mix in undertaking preventative interventions.*
- *Develop the role of oral health professionals in generic health promotion to address risk factors such as cigarette smoking, poor diet, high alcohol consumption, and sedentary lifestyles.*
- *Support the training and education of dentists to develop robust oral health epidemiological infrastructures and assist in oral health strategy and policy development.*
- *Make oral health and the prevention of oral diseases a priority under the European health and research programmes to specifically focus on community-based research on the social determinants of general and oral health, and inequalities in health.*
- *Improve the collection of validated oral health data, align methodologies between EU countries, and frequently collect reliable and comparable data. This may involve creating and financing European infrastructures such as a database or a registry.*
- *Disseminate all major research outcomes, best practice measures and learning experiences*

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