

# Foreword

## Prediction of Dental Caries Risk Factors within the European Union

The aim of this editorial, written by an author outside the borders of the E.U. is to make the practitioners in the Black Sea countries (few of which are candidates for joining the E.U.) aware about the evolution of dental caries in Europe and its involvement within dental medicine.

The inauspicious situation that was present in the E.U. countries during the 70s has been corrected; at this point it is satisfactory in both children and adults.

The majority of European epidemiologic studies discuss the following age groups: under 5 years, 5 to 7 years, 12 years, 35 to 44 years and 65 to 74 years. Children, adolescents, persons suffering of systemic diseases, handicapped and disfavored social groups are the most vulnerable categories.

The DMF index among 12 year-old children is around 1-1.5.

As for adults, the actual dates compared to older studies reveal a stable cariogenic or carious prevalence. In Germany, for example, 20% of the adult population is represented by partial denture wearers (the percentage is higher in the eastern than the western part of the country).

A very distinct situation is found within the senior population. These significant differences are due to the different historical, cultural and sanitary conditions. These differences will disappear among new senior generations.

The E.U. oral health condition is maintained by 245.169 dentists and 13.295 dental hygienists (1998).

The group strategies of oral medical prevention are based on the principle of 80%-20%, meaning that 80% results must be achieved using 20% expenses (Veer Kamp J.P. - 2004). This way, a preventive campaign must have an 80% favorable effect, at very low costs. The costs for assisting the rest of 20% vulnerable persons will be much higher and 80% expenses may be needed for a 20% effect.

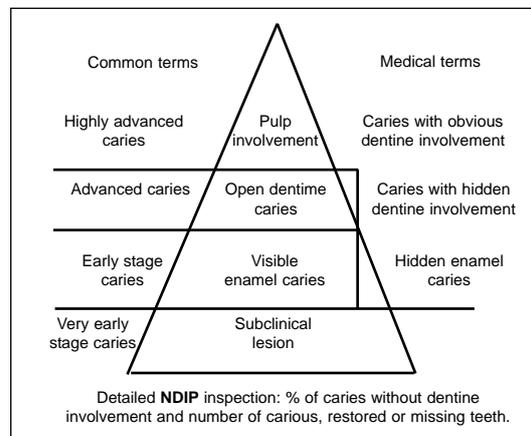
In the UK, the NDIP 2003 (National Dental Inspection Program) divides all the children in the first and last primary school form into three categories (Pitts 2003):

A - high caries risk - medical assistance is to be provided immediately;

B - average caries risk - the child should soon search for medical assistance;

C - low caries risk - medical assistance is to be provided within an oral health program.

Recently (2004) Pitts N.B. draws dentists' attention on the necessity of using the term patient with high caries risk and of analyzing the high risk factors especially among very young children. The term is inadequately used, especially by non-specialists and decision taking persons. NDIP recommends the following schema, in order to point out the percentage of caries without dentine involvement and the number of carious, restored or missing teeth.



<sup>1</sup> NDIP – program known as "basic examination" (<http://www.dundee.ac.uk-dhsru>).

In the E.U. the main attention is directed upon the age group of 1 to 5 years and especially on children 1 to 2 years old. What are the risk factors of this group?

- The infection with streptococcus mutans occurs at 19 to 30 months of age, the bacteria colonize the enamel surfaces as teeth grow;

- Saliva (secretion rate, mineral contents, buffer capacity, transport of therapeutic agents, immune factors);

- Plaque presence;

- Food habits (type, amount of fermentative carbohydrates);

- Fluoride intake (tendency of widening topic fluoridation and limiting the systemic one).

Axelson (1998) taking into account three factors among the methods (most close to the practitioner) of evaluation of the cariogenic risk, divides the patients into four categories:

- (1) C - 0 - null caries risk;

- (2) C - 1 - low caries risk;

- (3) C - 2 - average caries risk;

- (4) C - 3 - high caries risk.

Factors	Risk C-0	Risk C-1	Risk C-2	Risk C-3	
Etiological factors	Streptococcus mutans	Negative CFU/ml	<100 000 CFU/ml	>100 000	> 1 million CFU/ml
	Lactobacillus	<<10 000 CFU/ml	<<10 000 CFU/ml	10 000 to 100 000 CFU/ml	> 100 000 CFU/ml
	Plaque growth rate	1-2	1-2	3-4	4-5
Caries factors	Prevalence	0	Without dentine involvement	Caries / approximal restorations	Caries / approximal and occlusal restorations. Active lesions of smooth dental surfaces
	Incidence	0	0	1-2 new lesions per year	>2 new lesions per year External modifiers
	Sweets Social and economic status	Very rare High	Very rare Average to high	Frequent Low to average	Very frequent Low and very low
Internal modifiers	Saliva buffer capacity	Good	Good	Poor	Very poor
Prevention factors	Oral hygiene	Excellent	Good	Poor	Very poor
	Fluoride toothpaste	Steadily	Steadily	Irregular	Irregular or non-existent
	Food habits	Excellent	Good	Harmful	Very harmful
	Medical dental care	Cyclic follow-up	Cyclic follow-up	Irregular prevention	Non-existent prevention tion, irregular therapeutic calls

In conclusion, what should dentists in the Black Sea countries do, in order to reduce the gap between them and their colleagues in the E.U.?

1. to train oral health specialists;
2. to develop sanitary policies regarding prevention programs;
3. to make epidemiological studies and also studies evaluating the efficiency of the prevention

programs regarding specific age groups and risk evaluation methods, just like their colleagues in the E.U.;

4. to reduce the inequalities that dental caries deals with.

Editor in Chief  
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## *Letters of appreciation*

*To the Founder of the "Oral Health and Dental Management in the Black Sea Countries" journal  
Dean of the Faculty of Dental Medicine and Pharmacy, Constanta, Romania  
Professor Corneliu Amariei, PhD*

Dear Professor Corneliu Amariei,

We feel honored to apprise you that by resolution of the meeting of December 7, 2004, the Scientific Board of the Faculty of Dentistry of the "Nicolae Testemitanu" State University of Chisinau, Republic of Moldova, the vote of support has been granted to the "Oral Health and Dental Management in the Black Sea Countries" journal.

The topical issues tackled, the scientific and practical value of the papers along with the accurateness of imagery highlight the journal as a high standard of originality and complexity, worth being held through many others forthcoming issues as the journal rises to the high requirements of international scientific journals.

Chairman of Scientific Board meeting of the Faculty of Dentistry  
DHSM, Prof. Pavel Godoroja

Secretary,  
Assist. Prof. Diana Uncuta

### **Association of Dental Surgeons of the Republic of Moldova**

*To the Founder of the "Oral Health and Dental Management in the Black Sea Countries" journal  
Dean of the Faculty of Dental Medicine and Pharmacy, Constanta, Romania  
Professor Corneliu Amariei, PhD*

Dear Professor Corneliu Amariei,

The topicality and the complexity of the scientific papers displayed in the "Oral Health and Dental Management in the Black Sea Countries" journal, motivate the need of carrying on the publication of the results of scientific and clinical surveys performed by the most skilled specialists in the art of dental medicine.

The journal is of special consequence not only to scientific researchers but also to the physicians involved in dental practice in the Republic of Moldova.

Chairman of the Association of Dental Surgeons of the Republic of Moldova  
DHSM, Ion Lupan