NATIONAL PROGRAM FOR PREVENTION OF ORAL DISEASES EFFECT ON CARIES DISTRIBUTION IN POPULATION OF SERBIA 1996 – 2001

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Summary

The highest level of caries prevalence in 12 years old in Serbia was recorded in 1980's (DMFT 6,8) while in some regions was above DMFT 10,0 (Western Serbia). Such high DMFT gave the initiative idea for creating a National program for prevention of oral diseases in population of Serbia. Evaluation of program results indicates that the National Program for Prevention of Oral Diseases in Serbia yielded excellent results in improving oral health especially in decreasing of DMFT in twelve year olds (from 6.0 in 1986 to 3.5 in 1995) until the introduction of UN sanctions in Yugoslavia. Since its official commencement in 1996, due to well-known difficult economic and political situation in our country, the program suffered from lack of finical support, but in spite of all hardships, the program maintained the achieved level of oral health and even made slight improvement during its mandate period (1996 to 2001): Slight decrease of children with baby bottle caries (7% - 6.5% respectively) was recorded; increasement of caries free children in age of three (55.5% - 60.9%), six (35.5% - 38.7%) and twelve (19.4% - 21.2%); and slight decrease of DMFT in twelve years old (from 3.4 to 3.2 respectively) was recorded as well. According to the obtained data it is evident that the National Program for Prevention of Oral Diseases in Population of Serbia in spite of the all difficulties in past decade stood up against all challenges, maintaining the achieved level of oral health until introduction of UN sanctions and contributed even slight improvement of oral health in population of Serbia.

Key Words: caries, program, prevention

Epidemiological studies of oral pathology in inhabitants of Serbia in 1980's indicated an exceptionally high frequency of oral diseases occurrence, especially dental caries and periodontal diseases, in spite of rapidly improved level of curative dentistry [8,10].

Studies conducted in Serbia after World War II has shown that caries prevalence in 12 year old was considerable low [5,6]. Extensive and rapid urbanization and industrialization caused changes of living habits, which influenced rapid increase of oral diseases, primarily caries occurrence [7,8,9].

The highest level of caries prevalence in 12 years old in Serbia was recorded in 1980's (DMFT 6,8) while in some regions was above DMFT 10,0 (Western Serbia)[10]. At the some time dentistry in Serbia had its rapid development as well in manpower and equipment, but strictly oriented toward therapeutic dentistry. This argument and such high DMFT gave the initiative

idea for creating a National program for prevention of oral diseases in population of Serbia.

In the late eighties (1987-1988) the Program was completed and experimentally implemented in few regions in Serbia. At first in a few Public Health Care Centers in the Capital town - Belgrade, and by the end of 1990 it was implemented in the most of regional Public Health Care Centers across of Serbia.

Although from the beginning the Program yielded significant results, it was modified in early nineties in accordance with the gained experience. In 1994 the Serbian government recognized it as a National Program for Prevention of Oral Diseases in Population of Serbia and its official commencement was in 1996, with five years of implementing period.

The Program was based on the contemporary concept of prevention of oral diseases, similar to those existing in the Scandinavian countries, our own experience and the demands proposed by WHO for achieving the global goals "Health for all by the year 2000" [4].

The Program resembles joint activities of dentistry, pediatrics, gynecology, visiting-nurses and other members of health care services. Other community based services and intersectorial co-operation of education, mass media, food producers, water plants, etc., were recommended as well in targeting risk populations groups such as pregnant women, infants, small children, preschool and school children, handicaps and adult population over 65 years old [11].

Preventive models and activities recommended by this program were those for which there is clear evidence of their efficacy and effectiveness in implementation on community basis such as:

- Fluoride prevention: fluoridation of public water supplies (Water fluoridation low 1971, 1976, 1994), fluoride tablets, fluoride rinses, fluoridated toothpaste.

- Diet counseling: reduction of frequency of food and drinks intake and sugar consumption control.

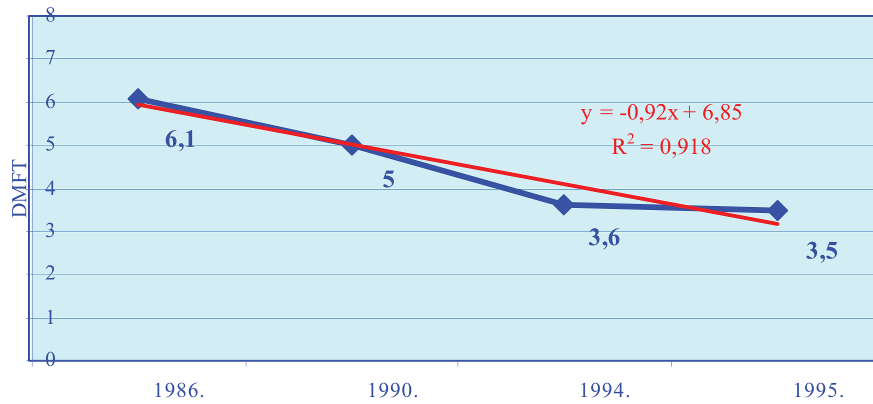
- Oral hygiene: supervised (school, kindergarten) and unsupervised (home) brushing and flossing.

- Fissure sealing: permanent molars (ages 6-7 and 10-12).

The basic activity given by the Program was dental health education with purpose to promote oral health and to raise individual responsibility for health in general, as well oral health[11,12,13]. With that purpose many publications were published and distributed (booklets, posters, slides, videos, etc.).

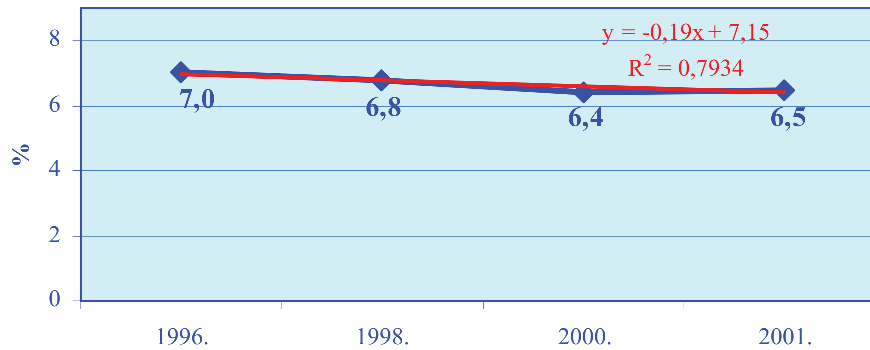
Evaluation of the Program effect on oral health status of targeted population groups was based on collected data from the annual reports from the Public Dental Health Services, guided by uniform criteria according to the main goals of the Program.

Fig. 1. *DMFT of 12-year-olds in Serbia - 1986-1995*
(trendline)



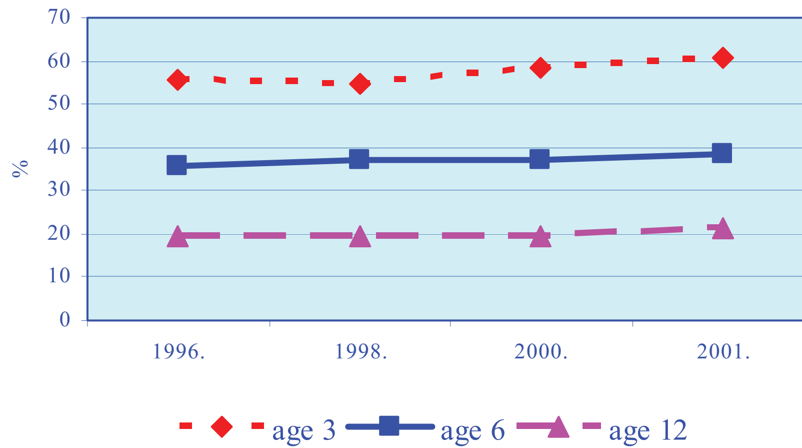
Looking at the present data it is evident that oral health status in general is better then ten years ago. Evaluation of program results indicates that the National Program for Prevention of Oral Diseases in Serbia yielded excellent results in improving oral health especially in decreasing of DMFT in twelve year olds (from 6.0 in 1986 to 3.5 in 1995) until the introduction of UN sanctions in Yugoslavia. (Fig.1)

Fig. 2. ***Baby bottle caries in Serbia - 1996-2001***



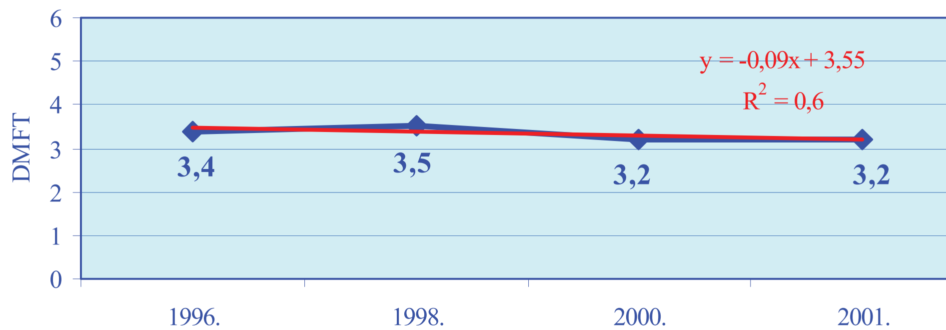
Since its official commencement in 1996, due to well-known difficult economic and political situation in our country, the program suffered from lack of finical support, but in spite of all hardships, the program maintained the achieved level of oral health and even made slight improvement during its mandate period (1996 to 2001); Slight decrease of children with baby bottle caries (7% - 6.5% respectively) was recorded (Fig.2)

Fig. 3. ***Caries free children in age of 3, 6, 12***



Increasement of caries free children in age of three (55.5% - 60.9%), six (35.5% - 38.7%) and twelve (19.4% - 21.2%) (Fig.3); and slight decrease of DMFT in twelve years old (from 3.4 to 3.2 respectively) was recorded as well (Fig.4).

Fig. 4. ***DMFT of 12-year-olds in Serbia - 1996-2001***
(trendline)



According to the present data it is evident that the designed National Program for Prevention of Oral Diseases in Population of Serbia has shown its efficiency in depressing caries prevalence for relatively short time after its implementation.

The promising concept of the oral health preventive program was disturbed by the poor economic ability of the country, especially affected by UN sanctions in 1992, culminating with NATO bombardment of Yugoslavia in 1999.

Great number of refugees (over 700.000) had additional impact on oral health in Serbia. A number of targeted pilot studies among refugees show that their DMFT was higher than their schoolmates who were born and breaded at the examined locations. The data about their oral health was not separated from the annual reports (they have equal rights in getting Health Care as regular inhabitants of Serbia), and were included in general data of oral health status of inhabitants of Serbia.

All of the above mentioned hardships had a bad effect on the health care system, but the worse on dental health care, and as well on the Program of Prevention of Oral Diseases. Government was forced to give the priorities to the urgent medical care, while some segments of medical health care, especially dental health care, as a "non vital part", was left a side for better days to come. Even thaw that Government gave the priority to the Program as well, there was no money left for its implementation because of the drastic reduction in financing dental health care.

It can be concluded that National Program for Prevention of Oral Diseases in Population of Serbia in spite of the all difficulties in past decade stood up against all challenges, maintaining the achieved level of oral health until introduction of UN sanctions and contributed even slight improvement of oral health in youngest population of Serbia.

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