



## Evaluation of simplified oral hygiene index of the elementary school students before fluoride mouthwash

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**ABSTRACT.** The State Program of fluoride mouthwashes for caries control was established in 1980 in elementary schools of Paraná State covering children 7-11 years old. Knowing the importance of removing bacterial plaque to reach the maximum desired effect of prevention, this study aimed to evaluate the Simplified Oral Hygiene Index, before applying the solution of Sodium Fluoride (NaF; 0.2%) in children from an elementary school in the city of Nova Aurora, Paraná State, by using disclosing dental plaque. This is a quantitative research, descriptive and exploratory whose data were obtained through a specific form, with 61 children and analyzed using descriptive statistics with distribution of absolute and percentage frequencies. Most children (60%) showed the worst results - regular and bad - with presence of plaque and risk of dental caries. Therefore, we should establish a prevention program in oral health that must involve parents and students. This program should be developed by health professionals inside the school, explaining about the etiologic factors, causes and consequences of plaque, the techniques of cleaning and maintenance of hygiene instruments, and the risks of the lack of proper hygiene in the oral cavity.

**Keywords:** disease prevention, fluorine, dental caries, school health, dental plaque.

### Avaliação do índice de higiene oral simplificado (iho-s) de alunos do ensino fundamental antes do bochecho com flúor

**RESUMO.** O Programa Estadual de Bochechos com Flúor nas escolas de ensino fundamental do Paraná abrange crianças do ensino fundamental I e foi instituído em 1980 para controlar a cárie. Sabendo-se da importância da remoção da placa bacteriana para que se atinja o máximo efeito de prevenção desejado, esse trabalho objetivou avaliar o Índice de Higiene Oral Simplificado, momentos antes da aplicação do bochecho com solução de Fluoreto de Sódio (NaF) a 0,2% nas crianças de uma escola de ensino fundamental da cidade de Nova Aurora/PR, por meio de evidenciador de placa bacteriana. Pesquisa quantitativa do tipo descritiva e exploratória, cujos dados foram obtidos por meio de um formulário específico, com 61 crianças, e analisados por meio de estatística descritiva com distribuição de frequências absolutas e percentuais. A maioria das crianças (60%) apresentou os piores resultados - 'Regular e Ruim' - com presença de placa bacteriana e risco à cárie. É preciso, então, estabelecer um programa de prevenção em saúde bucal, alcançando pais e alunos, sensibilizando-os dos fatores etiológicos, causas e consequências da placa bacteriana, das técnicas de higienização e manutenção dos instrumentos de higiene e dos riscos de não se higienizar adequadamente a cavidade oral, utilizando-se dos profissionais da unidade de saúde no espaço da escola.

**Palavras-chave:** prevenção de doenças, flúor, cárie dentária, saúde escolar, biofilme dentário.

### Introduction

The changes in sanitary practices are being consolidated as a result of the way the State respond, through actions in the area of public health, to social changes, to the needs and to the population health problems. In dentistry, the exclusion of the major part of the population to dental attendance had always been a problem, becoming evident the need to develop a low cost assistance, generalist which involves the prevention of oral diseases, in particular the caries and

the periodontal disease, during the early years, assuming that, if the teeth had been kept healthy during the childhood, during the following periods all people would have conditions to take better care of their teeth.

Considering these assumption, the State Decree 3,046 developed in 1980 the School Health Program, which created the Mouthwashes with Fluorine Solution Program, using 0.2% sodium fluoride (NaF) solution, with a weekly periodicity, in primary schools of the Paraná State, as a way to reach all the children

attending the first to fourth grade of elementary school (COSTA et al., 2006), a program that lasts until the present days.

When the program was established there were not so many forms and means of contact with the fluorine as currently. From 1970, the decline in the caries prevalence can be related to the free commercialization of dentifrices and other products containing fluorine and a better level of schooling of the parents. Hence, the cost-benefit of the rinse programs has been questioned, particularly in areas of low prevalence of caries. In general, the mouth rinses with fluorine are effective in areas with insufficient concentrations of fluorine in the water, and for children who receive inappropriate therapies of fluorine (IWAKURA; MORITA, 2004).

Brazil has – in almost its totality of drinkable water supply – the addition of fluorine in its composition (BRASIL, 2008). The fluoridation of the public water supply represents one of the main and most important actions in public health to control dental caries (RAMIRES; BUZALAF, 2007). The extension of the dental services, mainly in public system also has been growing since the creation of the Unified Public Health System – SUS, expanding the population access to dental care. In this sense, it is important the reflection on the need to keep the fluoride treatment at schools. Some consider that there may be exaggerated exposure to this element that despite all the goods promoted to teeth both in the topical and systemic use, it also has toxicity as side effect.

In a study comparing the use of fluorinated solution in the form of mouth rinse only, brushing the teeth only, and associating brushing and rinsing, it was found that the most effective method against the caries was the association of brushing and rinsing, in which the option mouth rinse only was the option which presented the worst results in terms of prevention (CASTELLANOS, 1983). Tenuta and Cury (2009) argue that the individuals that do not control the caries process, as in the case of children, object of the present study, whether because of a high frequency of exposure or because of the difficulty to remove the dental biofilm, need additional resources of fluorine.

On the other hand, a previous study of Coutinho and Bosco (1998), examining the mouth rinse pre-brushing to remove plaque in children, showed that the use of fluorinated solution before brushing did not present significantly greater effect in the removal of the bacterial plaque in children. Thus, it is recommended that the fluorinated solution for mouth rinse stay in contact with the clean surface of the teeth to reach the maximum effect of the desired prevention, trying to

remove the bacterial biofilm before the mouth rinse, as this may reduce the fluorine preventive action in relation to the caries attack.

Thus, the aim of the present study encompasses the action of the mouthwashes with fluorine at schools and its efficacy to reduce the caries in children of primary school, considering: the expansion of the access to public dental services; the offering of fluorine in collective programs, such as the water fluoridation; the increase of access to products with fluorine in the formulation, such as the dentifrices. These actions have extended the coverage and protection against the dental caries, even in children that are more sensitive to develop health problems due to the age.

Given the above and considering the Guidelines of the National Policy to Oral Health Promotion (BRASIL, 2008), which propose that the actions and services must result from an adequate knowledge of the health reality of each location, to construct then an effective resolution practice, this study evaluated the Simplified Oral Hygiene Index (SOHI), a few moments before applying the mouth rinse with NaF at 0.2% in children of a primary school in the city of Nova Aurora, Paraná State, by means of disclosing bacterial plaque, taking into account the presence of bacterial biofilm on the teeth.

## Material and methods

The present study is characterized as a quantitative research, with explanatory and descriptive character, whereby the SOHI evaluation was performed according to Greene and Vermillion (1964), i.e., a few moments before applying the mouth rinse with NaF at 0.2% in children of a primary school in the city of Nova Aurora, Paraná State, during the 2007 school year, by means of disclosing bacterial plaque, correlating it to the protocol and the efficacy of the mouth rinse application.

The subjects of the study were students of the morning and afternoon of basic education, within age range from 06 to 13 years, consisting of a total of 61 pupils. To that end, was chosen a class of each grade level of the referred school, being two of the morning shift (third and fourth grade) and two of the afternoon shift (first and second grade), chosen at random to participate in the process.

It was only included in the study those children who brought the informed consent form signed by parents or legal guardians, delivered in date preceding the data collection, together with the research explanation, as well as only those present at school in both days in which were performed the procedures with the disclosing agent. The study was approved by the Ethics Committee on Human Research of the State University of Western Paraná, under legal opinion no. 249/2007-CEP.

As protocol for the application of fluorine, there was a person responsible to conduct these mouth rinses, named monitor that scheduled the hour and the day of the week to perform the applications. Thus, the data collection has occurred on the day of the week, in which the mouth rinse procedure with fluorine was being performed, and at the exact moment prior the procedure, was performed the identification of bacterial plaque with disclosing agent of plaque to classify the SOHI of each child. This protocol was repeated twice, with an interval of two weeks, for each participant. The children were previously instructed about the procedure, for the purpose to solve any remaining doubts and to do not expose them at any risks.

The disclosure process with the disclosing agent occurred as follows: each class was separated into small groups in a maximum of 10 per turn and each student received a tablet of disclosing agent of bacterial plaque, which was crushed with the teeth and spread with the tongue all over the teeth, vestibular and lingual/palatal, upper and lower surface, for a minute, being after that, discarded the remaining agent. The pupils were accompanied all the time by the researcher – dental surgeon – and by a dental surgery assistant that helped to coordinate and supervise the pupils.

The disclosing tablets of bacterial plaque used were composed of alkaline fuchsin 2%, sodium saccharin, lactose, sodium cyclamate and excipients, whose function is to stain the bacterial plaque on the teeth apparently clean, with a contrasting color (bright red), facilitating to localize the bacterial plaque on the teeth surface.

After this, the teeth of the children were analyzed and classified with the help of a previously created form, according to the oral hygiene level established for this study. The form fields were filled with the SOHI results of each child. The clinical examinations were performed with the help of flat mouth mirrors no. 5, explorer probes no. 5 and natural light. A model of the instrument is following presented (Figure 1).

Instrument of Data Collection for Simplified Oral Hygiene Index			
Name:		Date: / /	
Grade:	Shift:	Age:	Sex:
Simplified Oral Hygiene Index			
Tooth	Coating (0-3)		
16V		Result: _____	
11V			
26V			
36L			
31V			
46L			

**Figure 1.** Instrument of Data Collection. Legend with the names of the teeth: buccal of the first upper right molar (16V); buccal of the upper right central incisor (11V); buccal of the first upper left molar (26V); lingual of the first lower left molar (36L); buccal of the lower left central incisor (31V); lingual of the first lower right molar (46L).

The disclosing results were evaluated by the researcher and dictated to the assistant that transcribed the data in the form, whereby six surfaces were used to represent the whole mouth: the buccal of the first upper right and left molars; the lingual of the first lower right and left molars; and the buccal surface of the upper right and left central incisors. The codes for each tooth selected were determined as follows (Figure 2):

Scores	Description
Level 0	Clean tooth and total absence of bacterial biofilm
Level 1	1/3 of tooth surface with bacterial biofilm
Level 2	Up to ½ of tooth surface with biofilm
Level 3	Over than ½ of tooth surface with biofilm

**Figure 2.** Codes for tooth (GREENE; VERMILLION, 1964).

The obtained values were added and divided by the number of counted surfaces, establishing then a final code. The average between 0 and 1.5 represents a good oral hygiene, between 1.6 and 2.5, a regular oral hygiene, and higher than 2.6, a bad oral hygiene.

The data were transcribed into tables, separated by age range, from younger to older, in order to analyze the SOHI according to age and education level, being not considered the individual results separately. With the scores of each collection and with the average of both, arranged to allow descriptive statistical analysis, were established the numerical data in absolute frequency distribution and percentages, whose results were commented according to the theoretical reference.

## Results

Importantly, for this study, only the ‘Good’ aspect of bacterial biofilm would represent a condition of less susceptibility to diseases caused by bacterial plaque, once a child that presents any other score will have more than 1/3 of bacterial biofilm on tooth surface.

The Table 1 lists the indices of bacterial biofilm found in children of six and seven years old. The results show that 25% of the children presented the ‘Good’ aspect of bacterial biofilm a few moments before the mouth rinse, 75% were considered within the ‘Regular’ score and it was not found a single ‘Bad’ result, that is, only a part of the teeth was free of plaque.

In the interval between the first and the second verification of the SOHI, only two children had a reduction of bacterial biofilm on the teeth, three had no alteration in the score, and seven had an increase of bacterial biofilm in this period.

**Table 1.** SOHI of children between six and seven years old of primary school, few moments before the mouth rinse with 0.2% fluorinated solution. Nova Aurora, Paraná State, Brazil, 2007.

SOHI Index						
Nº	Sex	Age	1º	2º	Average	Score
1	M	6	0.5	0.8	0.7	Good
2	F	7	2.3	2.2	2.2	Regular
3	M	7	1.3	2.2	1.7	Regular
4	M	7	1.2	2.3	1.7	Regular
5	F	7	1.2	1.8	1.5	Good
6	M	7	2.3	2.3	2.3	Regular
7	M	7	1.7	2.3	2.0	Regular
8	F	7	1.8	2.0	1.9	Regular
9	F	7	1.7	1.7	1.7	Regular
10	M	7	1.3	1.5	1.4	Good
11	M	7	2.2	2.0	2.1	Regular
12	F	7	1.7	1.7	1.7	Regular
AVERAGE			1.6	1.9	1.7	
Score		Frequency		Percentage		
Good		3		25%		
Regular		9		75%		
TOTAL		12		100		

Source: Research database.

In the age range of eight and nine years, 35.3% obtained score 'Good', 61.8% obtained the 'Regular' result, and 2.9% presented the 'Bad' result (Table 2).

**Table 2.** SOHI of children between eight and nine years old of primary school, few moments before the mouth rinse with 0.2% fluorinated solution. Nova Aurora, Paraná State, Brazil, 2007.

SOHI Index						
Nº	Sex	Age	1º	2º	Average	Score
1	F	8	1.3	1.0	1.2	Good
2	F	8	1.5	2.0	1.8	Regular
3	M	8	2.3	2.7	2.5	Regular
4	F	8	1.2	1.0	1.1	Good
5	M	8	1.8	2.0	1.9	Regular
6	M	8	1.7	2.3	2.0	Regular
7	F	8	1.8	1.2	1.5	Good
8	M	8	1.8	2.0	1.9	Regular
9	F	8	1.2	2.0	1.6	Regular
10	M	8	2.5	1.5	2.0	Good
11	M	8	2.2	2.2	2.2	Regular
12	F	8	1.8	2.0	1.9	Regular
13	M	8	0.8	1.7	1.2	Good
14	M	8	1.7	1.2	1.4	Good
15	F	8	2.3	2.5	2.4	Regular
16	M	8	1.8	2.8	2.3	Regular
17	M	8	2.7	2.5	2.6	Bad
18	F	9	1.3	2.0	1.7	Regular
19	F	9	2.7	2.3	2.5	Regular
20	F	9	1.8	2.0	1.9	Regular
21	F	9	2.2	2.0	2.1	Regular
22	M	9	2.0	2.2	2.1	Regular
23	F	9	1.5	1.8	1.7	Regular
24	M	9	1.5	1.5	1.5	Good
25	F	9	1.7	2.2	1.9	Regular
26	M	9	1.3	1.7	1.5	Good
27	F	9	2.0	1.5	1.8	Regular
28	M	9	2.2	2.0	2.1	Regular
29	M	9	1.0	1.3	1.2	Good
30	M	9	1.7	1.8	1.7	Regular
31	M	9	1.8	0.8	1.3	Good
32	F	9	2.0	0.7	1.3	Good
33	F	9	0.7	0.8	0.7	Good
34	F	9	2.8	2.7	2.7	Regular
AVERAGE			1.7		1.8	
Score		Frequency		Percentage		
Good		12		35.3%		
Regular		21		61.8%		
Bad		1		2.9%		
TOTAL		34		100		

Source: Research database.

It was observed that with increasing age range the percentage of 'Good' score also increased, i.e., the index of oral hygiene was better than for the younger students. Besides, no average discrepancy was found between the first and second indices. In the same way, comparing the teeth impairment by bacterial biofilm, from a disclosing to another, 19 children had impairment increase by bacterial plaque, 02 remained without alteration and 13 had reduction of impaired surfaces.

The Table 3 shows that 60% of the pupils between 10 and 13 years old presented 'Good' result, 40%, 'Regular' result, and none, 'Bad' result, also, the scores average of the first and second collection in this age range was the same (1.46), indicating that the brushing frequency and quality of these pupils is more frequent than in younger children.

In this age range, seven children had a decreased score of biofilm during the second disclosing in relation to the first, three remained with the same index and five had increase of biofilm.

**Table 3.** SOHI of children between 10 and 13 years old of primary school, few moments before the mouth rinse with 0.2% fluorinated solution. Nova Aurora, Paraná State, Brazil, 2007.

SOHI Index						
Nº	Sex	Age	1º	2º	Average	Score
1	F	10	1.2	1.0	1.1	Good
2	M	10	0.7	1.5	1.1	Good
3	F	10	1.8	1.8	1.8	Regular
4	F	10	2.2	1.7	1.9	Regular
5	M	10	1.2	1.7	1.4	Good
6	F	10	1.7	2.0	1.8	Regular
7	F	10	0.8	1.5	1.2	Good
8	F	10	1.2	0.7	0.9	Good
9	F	11	1.5	1.5	1.5	Good
10	F	11	1.0	1.5	1.3	Good
11	M	11	2.0	1.7	1.8	Regular
12	F	11	1.7	1.5	1.6	Regular
13	F	11	1.7	0.7	1.2	Good
14	M	12	1.5	1.3	1.4	Good
15	M	13	1.8	1.8	1.8	Regular
AVERAGE			1.46	1.46	1.46	
Score		Frequency		Percentage		
Good		9		60%		
Regular		6		40%		
TOTAL		15		100		

Source: Research database.

In the Table 4 is presented the score for all students without distinction of age range, demonstrating that 39.4% obtained 'Good' result and the majority, 60.6%, obtained 'Regular' and 'Bad' results, therefore, more susceptible to diseases related to the bacterial biofilm.

**Table 4.** Score classification for the set of pupils in the study. Nova Aurora, Paraná State, Brazil, 2007.

Score	Frequency	Percentage
Good	24	39.4%
Regular	36	59%
Bad	1	1.6%
TOTAL	61	100

Source: Research database.

The Table 5 lists the average of the simplified oral hygiene index obtained for each tooth surface analyzed in order to identify the most impaired ones and to guide the prevention work by dentists at schools. It was verified that the surfaces with the largest amount of bacterial biofilm were the buccal of the teeth 16 and 26 (first upper right and left molars respectively), with the scores average of 2.1 and 2.0 respectively, while the surfaces which presented lower index of bacterial biofilm were the lingual of the teeth 36 and 46 (first lower left and right molars respectively), with the scores average of 1.4 for each.

**Table 5.** Average of the Simplified Oral Hygiene Index obtained for each tooth surface analyzed according to the pupils age. Nova Aurora, Paraná State, Brazil, 2007.

Age	6 and 7 Years		8 and 9 Years		10 and 13 Years		Average
Tooth	1° Mouth rinse	2° Mouth rinse	1° Mouth rinse	2° Mouth rinse	1° Mouth rinse	2° Mouth rinse	
16V	2.1	2.3	2.1	2.2	1.7	1.9	2.1
11V	1.3	1.8	2.2	2.1	1.5	1.6	1.8
26V	1.7	2.3	2.0	2.2	1.9	1.8	2.0
36L	1.9	1.6	1.3	1.3	1.2	1.4	1.4
31V	1.3	1.8	1.7	1.7	1.4	1.3	1.5
46L	1.4	1.9	1.4	1.4	1.1	1.2	1.4

Source: Research database.

## Discussion

At firstly, it is highlighted that the analysis of information generated under descriptive statistics with reduced sampling requires that the readers consider the data as solely applicable for the studied population, without statistical inferences to an entire population. The data concern a specific group and do not permit generalization.

With regard to the methodology, the index used as reference to evaluate the oral hygiene, from Greene and Vermillion (1964), was adopted by its simplicity and despite of being a reference with more than forty years, it is still considered applicable and remains current in its proposition, not being, however, replaced by a more recent reference.

Our results stress the importance to remove mechanically the dental biofilm by means of brushing the teeth, before the application of fluorine, because even performing the mouth rinse with fluorine, when the mechanical cleaning of the teeth is not efficient, the application of fluorinated solution may have its efficacy reduced, because the teeth surface is not free of bacterial plaque.

Also, as the pupil age increases the quality of the brushing gets better. Moreover, the average of scores of the first and the second collection for the age range from 10 to 13 years of age was the same (1.46), demonstrating that the frequency and the quality of brushing of these pupils is more regular than in younger children.

In relation to the teeth surface and to the analogue teeth, there was no relevant disparity in the results between the sides of the dental arch, but rather when is analyzed the upper and lower arch, once the upper analogue teeth presented index of biofilm relatively higher than the respective lower, even in different faces of the teeth.

Studies, such as the Lemos et al. (2000) and Almeida and Bastos (2001) pointed out the importance of brushing the teeth in children. Therefore, the effectiveness of the mouth rinse with fluorine program at the studied school can be compromised given the way in which is worked its application, because after the snacks, without previously mechanical cleaning of the teeth, the pupils were invited to perform only the mouth rinse, without prior brushing, thus with the presence of bacterial plaque on the teeth, possibly reducing the efficacy of the applied product.

The fact that 75% of pupils have had plaque in more than 1/3 of the tooth surface may have caused the decrease in the potential of caries prevention estimated for this topical usage form of fluorine, according to Manowicz (2003). Furthermore, the age range of six and seven years old presented the highest divergence between the first and the second collected indices – 1.6 and 1.9 respectively –, demonstrating that in this age range the frequency and the quality of brushing were more variable comparing to the others, which may turn into a problem, because the accumulation of plaque can evolve into incipient injuries of caries, as in the study of Lemos et al. (2000).

In a study carried out to investigate the dental caries and fluorosis in municipalities with water fluoridation, the authors have found that, for the deciduous teeth, there was a predominance of decayed teeth in all age groups. For the permanent dentition, it was verified that the proportion of decayed teeth was high for all age groups, and the lower percentage was observed for the 12 years age group (57.8%) (CYPRIANO et al., 2003), evidencing that, regardless of the water fluoridation, the mouth rinse with fluorine application can be enough, because the caries continues to be an oral health problem, mainly in younger children. However, this practice needs to be monitored in order to avoid complications.

As for the gender, in the age range of eight and nine years old, the number of boys and girls was equally distributed, but the girls presented the 'Good' index lower than the boys and the 'Regular' index higher, showing a need for more orientation in the mechanical control of the bacterial biofilm in this age range for girls. Although psychologist authors (VIGOTSKY, 2003; ENGEL, 2002) have indicated a better psychomotor development of girls until the adolescence; this does not ensure a better

performance in caring the body hygiene, including the oral hygiene.

The results of the pre-adolescents from 10 to 13 years old showed that there was no disparity between the 'Good' and the 'Regular' scores when considering the gender, also revealing increase of the 'Good' aspect in these pupils and indicating that the intervention on health can be applied disregarding the gender, in which the education on health should be focused on the continuity of the oral hygiene actions, once this age range obtained more efficacy than the previous age ranges.

Comparing all the data, it was observed that in Table 1 and 2, the average of SOHI was of 1.7 and 1.8 respectively, while in Table 3 was obtained an average of 1.46, showing that the oldest pupils presented an oral hygiene index better than the others. A study of Chaves and Silva (2002) indicated that the better the oral hygiene, the better the preventive power of the mouth rinse with fluorine, which led us to consider the fact that the children of lower age range presented a worse index of oral hygiene, exhibiting thus a potentially higher risk to develop carious lesions and, also, to obtain a low power of caries reduction with the mouth rinse of fluorinated solution.

In this way, it is necessary to prioritize the oral health attention to these younger children; in order to control and reduce the incidence of caries in this phase more susceptible to develop oral diseases caused by the bacterial biofilm, in particular the caries. Besides that, in this age range initiates the deciduous teeth replacement and the respective emergence of the first permanent teeth, consisting of an age critical in relation to investments to prevention, in view of the objective to avoid the permanent teeth impairment in such an early age.

This demonstrated that there are still some problems with the oral hygiene in this age, probably due to a number of factors, concerning, for example, the motor difficulty, motivation, adequacy of cleaning devices, instruction in oral hygiene, lack of incentive by parents/guardians, lack of maturity to understand the consequences of the cause/disease relationship and the lack of continued education regarding the oral health (STUANI et al., 2007), made by qualified professionals, such as the odontologist or technician in dental hygiene (THD), professionals that are part of the strategic reality of the family health program (ESF) in many municipalities, and need to focus their actions also on the students health, prioritizing them whenever possible.

Other aspect to be analyzed is the result that the buccal region of the upper teeth is being sanitized with lower quality than the lower lingual regions,

probably due to a better hygiene index by a better brushing in these regions or by the tongue mechanical action, making, however, necessary further studies to better clarify this fact.

It is recommended to carry out a work on education and hygiene with the pupils in order to develop the necessary ability to obtain a better quality mechanical cleaning in these areas most affected, because a study proved that the mouth rinse cost is more expensive than a educational program for the self care, with distribution of a dentifrice tube with fluorine and a toothbrush for each child, considering a same period (IWAKURA; MORITA, 2004).

A study carried out with adolescents to test the efficacy of the focal group technique on the education about oral health showed that the approach was of great value for the adolescents' understanding about oral health and was able to identify the attitudes and behaviors in relation to the subject, showing the importance to work on prevention of oral health problems in a collective way (FRANCISCO et al., 2009).

The odontologist can also, together with the oral health staff and equipped with resources of the health unit office, establish a planning of prevention for these teeth under greater risk, if necessary. In this sense, it must be reinforced the idea that the oral health team of the family health program needs to include the oral health of students in their daily work, with a systematic routine of assessments and a consistent project of education to the mechanical cleaning of the teeth and the mouth. Only with continuous investments in prevention and with the continued education of children is possible to reduce the risks and, consequently, the harms to the oral health.

## Conclusion

In conclusion, according to this experiment conditions, the prevention program by means of a previous brushing associated with the mouth rinse with fluorine, adopted by the school, could have its effectiveness impaired by the lack of proper removal of the bacterial plaque in children of earlier ages (6 to 7 years old).

Thus, the dental care in the public health services must involve this age group, including the school as priority of attention, because concentrates a great number of children in the same space and time, allowing collective actions by the oral health team, such as the systematic verifications of mouth and teeth seeking to prevent problems, sanitization, and application of fluorine, scheduling and referencing to

dental office of the detected problems, creating a flow of attention not requiring spontaneous demand to health unit, but performing the active search for problems to solve them in the shortest time possible.

Moreover, by establishing a program of continued education on oral health, reaching parents and students, can be a good start to maintain the work initiated at school and to approximate the odontology, as part of the basic health network, to the population from the area of influence of the basic health unit, thus allowing the real prevention of the oral diseases or the control of those already installed.

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Received on April 19, 2011.

Accepted on August 22, 2011.

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