

**Broadening the Mission of I.A.D.R.
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I would like to express my concern about a problem confronting dentistry and dental research which appears to be of international proportions. The problem is underutilization of caries preventive measures. Although we have known for three decades how caries may be drastically reduced, a high prevalence of caries continues to plague most industrial countries; moreover, caries is increasing and creating an additional health problem in developing countries. The question is: what should we do to improve this situation? I believe the answer lies partly in having dental scientists assume a more active role in fostering greater public awareness of the benefits of preventive programs. Consider how our social usefulness may be extended if we succeed in helping to make clear to the people and to their governing bodies that the most expensive way to deal with dental disease is treatment, while the least expensive and superior way is prevention.

The problem of implementation is largely a political question. Although the practitioner can contribute greatly to the field of preventive dentistry, it appears that full utilization of preventive measures requires government involvement, and democratic governments will act only if there is a considerable public demand. In referring to the present day scientist, Jacob Bronowski¹ has said: "Outside his laboratory, his task is to educate us in what goes on inside it, and to give it a meaning for us. In a world in which statesmen, as much as voters, are ignorant of the simplest implications in science, this is a formidable responsibility. There is no alternative to an informed public opinion." It is evident then that the public must be made aware of what prevention can accomplish. It can be argued that implementation is failing because more pressing social needs are given higher priority. However, I believe there has been a breakdown of communication with the public and that I.A.D.R. and its divisions have an obligation to consider if they can contribute in this area of public relations.

Perhaps some of you will think that the problem of informing the public is a diversion, beyond the scope of our task of searching for truth. Unquestionably, research

in every field needs to be protected from pressures of expediency, but this does not mean that the question of the usefulness of research to the public should be ignored. Although many dental research activities may seem to be only remotely related to disease, they contribute to the knowledge on which more effective therapeutic and preventive procedures will be based. Thus all dental research, whether basic or applied, is in reality mission-oriented toward the solution of oral health problems. If this point can be made understandable to the public, the whole field of dental research gains meaning and stature in the public mind. In addition, public education programs can help to develop a grass roots constituency for the future. I believe, therefore, that the strength of I.A.D.R. lies not only in fostering scientific excellence but also in improving the public's understanding of the link between research and the realization of societal expectations in respect to oral health. As pointed out by Dr. Fredrickson, Director of N.I.H.:² "In the next decades the research community must demonstrate its ability to improve the health of the population. This carries with it a degree of responsibility never previously sought or accepted by the research community."

Let us look at what is actually happening in caries prevention programs in countries where prevention has made significant progress. The programs adopted in the three Scandinavian countries are of particular interest because they show a conspicuous trend of caries reduction by using various methods of supplying fluoride without fluoridating the water supplies. Moreover, unlike water fluoridation, these programs are applicable to the entire child population. The programs include fluoride supplements from infancy, supervised fluoride mouth rinses given weekly or bi-weekly during the school year, use of fluoride dentifrices and oral health education. An important feature is yearly evaluation of the performance of the programs.

During the less than 10 years that the programs have been in operation in Norway the number of filled tooth surfaces per child has been reduced by nearly 50%.³ The graph in figure 1 shows the mean number of filled surfaces per child per year

from 1970 to and including 1976. The data represent more than 325,000 children in the age range 6 to 17 years, corresponding to 90% of the school population participating in the public dental service program. There was a decrease from six filled surfaces in 1970 to 3.4 in 1976, and the trend still continues. Extraction of carious teeth and root canal treatments have been virtually eliminated. Similar trends have been observed in Sweden and Denmark. The preventive programs in Scandinavia are successful in many respects: they are effective, and the annual evaluation of performance stimulates motivation at the local level and provides data for policy making at regional and national levels. However, it should be noted that the effectiveness of the programs would be even greater if, in addition, water fluoridation were adopted wherever practicable.

Effective preventive programs have also been developed in Switzerland, Australia and New Zealand, but statistical data representing large populations are not yet available from these countries.

It is clear from the findings in all these countries that national preventive programs are practical and that great savings in the cost of restorative dentistry have already been achieved. I should mention that national organized dental care delivery programs do not in themselves lead to caries inhibition, as seen in England and West Germany. In these countries, where little or no attention has been given to prevention, there has been no decrease in caries.

In the U.S., in spite of the U.S. Public Health Service and organized dentistry's support for fluoridation, the situation could be greatly improved. Nearly half the population consumes fluoridated water, but the other half, over 100 million people, is almost totally without the benefits of preventive programs. There is a crying need for organized action. According to the most recent national survey in 1974,⁴ 40% of the entire population either had not seen a dentist at all or had not received regular dental care; 31% of children under 17 years of age had never visited a dentist. Another survey showed that the unmet needs of approximately 24 million children aged 6 to 11 included 47 million untreated carious teeth.⁵ One can only conclude that a large segment of the population is suffering from life long dental neglect. The situation in

the U.S. represents an immense and complex challenge to both public health dentistry and the private enterprise system. It appears that the U.S. would benefit greatly by adopting a system of preventive programs such as that in Scandinavia. With respect to many other countries it is clear that adoption of water fluoridation as well as supplementary preventive programs would be advantageous.

Another issue of vast importance in dealing with the caries problem is the high consumption of sucrose in industrial countries. The diet is controlled by industry to a much greater extent than ever before. It is significant that 70% of the sucrose consumed in this country is contained in processed food.⁶ In 1977 the U.S. Senate Select Committee on Nutrition and Human Needs concluded that the every day diet of the average American was detrimental to health and recommended a drastic change in the diet, including a 40% reduction in sugar consumption.⁷ The American proposal, admirable as it is, aims only at changing individual dietary habits by requiring stricter labeling of processed food and by emphasizing health education.

It is pertinent to mention here the plan in Norway⁸ where there is a national food and nutrition policy dating from 1976 which has been termed somewhat of a milestone.⁹ The aims are similar to the American recommendations, but the Norwegian policy goes further and emphasizes implementation through changes in the food system. The production and consumption of desirable foodstuffs will be encouraged by the use of subsidies aimed at making these products competitively advantageous in the market place. Thus, specific dietary goals and overall public policy have been linked. Among other measures, a tax of 20% has been levied on chocolate and sweets. Dr. Winikoff of the Rockefeller Foundation who has made an in depth analysis of the Norwegian Nutrition Policy states that the Norwegian government does not "reject the principles of free choice by consumers and the free market system but views its policy as a means of influencing life styles and making the better choices also the easier choices."¹⁰ There are differing views on this issue. Should governments be concerned with the nutritional quality of food? Should scientific understanding of nutrition-disease relationships guide national food policies? Should

governments intervene in the market place in order to influence consumer behavior? There are no simple answers to questions involving such vast changes. Each country must eventually deal with these problems within the context of its own society. But I believe that scientists must explore these questions in order to have a stake in education as well as research. Since it is public opinion which will decide the answers, it is incumbent on us to bring our knowledge to the public for evaluation and judgment.

It is important to keep in mind that significant changes are often produced through the efforts of relatively few individuals, in spite of the fact that their views are frequently opposite to those held by large majorities. For example, a small group of U.S. citizens, called Action for Children's Television, has had success out of all proportion to its numbers in influencing and improving children's television programs. Their efforts include a petition which the Federal Trade Commission is now considering which would ban or curtail advertising on children's television programs of candy, sugary snacks and sugared cereal. Without knowing what the ruling may be, it is already evident that the publicity connected with this activity has brought great support to the group and increased awareness among many segments of the population of the dangers of excess sugar consumption.

It is clear that public opinion can influence policy making. Our association and its divisions are losing the great opportunity of informing and arousing the interest of intelligent people of all countries who want to be informed. The press, radio, television, and the various agencies for the dissemination of information in all nations welcome news of scientific developments concerned with the welfare of humanity. The idea that I.A.D.R. has an obligation to communicate with the public is not new. It has been alluded to in previous presidential addresses, and last year President Beagrie suggested that I.A.D.R. should enlarge its central function and provide a public relations service on behalf of its members. I would like to see this idea implemented and expanded to include distribution to the media of newsworthy material related to the status of dental health and prevention in different countries and to breakthroughs in prevention wherever they may occur.

It would be useful for I.A.D.R. to cooperate with appropriate groups to help make the public more aware of significant activities and developments in these areas. We already have certain cooperative arrangements with the American Dental Association, the International Dental Federation, and the World Health Organization; and a broadened cooperation to include public relations should be a matter of mutual interest.

Dentistry is in a state of transition. The traditional approach of focusing on the treatment of dental disease is outmoded. Adoption of simple preventive procedures in a dental care delivery system would decrease the need for reparative service and help provide adequate care to more people at less cost.

However, it would be naive to assume that dramatic changes involving new programs and services can be brought about overnight. The significance of preventive measures will filter imperceptibly into the public consciousness over varying periods of time. We should not be discouraged by the lag in application of knowledge, but knowing the magnitude of the benefits to be obtained by utilization of preventive methods, we should consider the problem a challenge and a cry to action.

When I.A.D.R. was formed nearly 60 years ago there was little prospect for prevention or control of dental disease. Seldom, if ever, was a dental health problem a public issue. The primary objective of I.A.D.R. was to promote the advancement of science, but our founders had in mind a broader objective which was, and I quote from the constitution: "To encourage mutual helpfulness among investigators in all nations in every division of stomatology to the end that dentistry may render cumulatively more perfect service to humanity." I believe that it would be in the spirit of the constitution of I.A.D.R. to assume international leadership in fostering communication with the public and in giving more thought to the point at which science and politics meet. It is an inescapable fact that with our specialized knowledge in the field of prevention we have a larger share of responsibility in influencing public opinion than our numbers would indicate. Although our organization includes members who have given literally hundreds of hours of their time working in this direction, there are not

enough of such dedicated individuals to make an impact. We cannot all have the same inclination to participate in public affairs, but I am hopeful that there are more of you with a sense of responsibility for human welfare which will induce you to brave the common ground of science and politics in order to help bring the benefits of dental research to the public.

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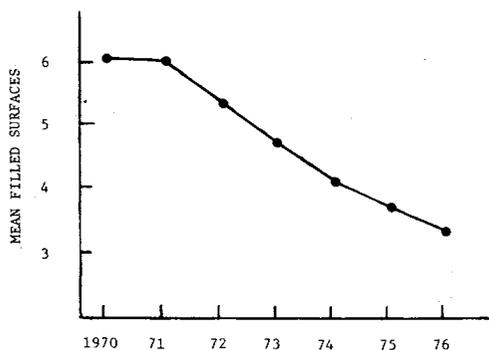


Fig. 1 - Mean filled surfaces per child. 325,000 school children aged 6-17 years, Norway, 1970-1976. (Baerum, 1976)