Diet, Nutrition and Dental Caries

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Recommendations at the Plenary Session

Dr. Moller: Ladies and Gentlemen, I would like to thank the members of group C for having participated so excellently in the discussion and in the formulation of our report. In addition I would particularly like to thank our co-chairman and rapporteur Mrs. Williams and the author of the original paper, Prof. Holm.

We started out by considering the title of the background paper. The original title was ‘Diet and Caries High-Risk Groups in Developed and Developing Countries’. We looked at this title as formulated last year in Angers and we were in some degree of jeopardy, in that we do not know very much about diet and caries in the two types of countries, developed and developing. So we reformulated the title to be, as you can see in the consensus report, ‘Diet and Associated Risk Factors in High-Caries Groups in Industrialized and Non-Industrialized Countries’.

With this as the starting point, we tried to look at what is high risk or a high-risk group, as Dr. Newbrun said, we tried to make a definition of what we should understand by this expression. Because in the past, when talking about high-risk groups, it is normally related to already experienced disease or past experience of dental caries. Recognizing then that dental caries is a multifactorial disease, of course the set of predictors that would forecast the event of caries experience in a population would also be multifactorial. It would relate to all the expected predictors as a group and you can see from our document that we are trying to put up a hypothetical equation for that. We comment that there might be some predictors related to diet in terms of its content of fermentable carbohydrate or sugars, with special recognition as to the type of carbohydrate, the frequency, pattern and mode of consumption.

We went on to look at the nutritional aspects. We also considered saliva, oral hygiene, genetic factors, and finally social indicators, but we also recognized the fact that we need to look first of all at the possibility of finding such predictors, this means more research for reliable predictors. We could then see which of these predictors would be feasible to employ in a practicable clinical setting. It is obvious if it is too cumbersome or too complicated to determine a predictor from a cost benefit point of view, it would not be feasible to look into the situation of developing countries. A country like Tanzania could not spend 50% of its total health budget to make predictions of dental caries in its population. In the industrial countries, caries is now so low that it might be a waste of money to try to chase this small group by employing expensive predictors. In developing countries or in non-industrialized countries, we have a completely different situation. We do not really know how dental caries starts in some of these countries where there has been practically no caries at all. Suddenly caries starts to develop, but does it start in a small group getting a little bit of caries and gradually a little more or does it start with a large percentage of the population getting a little caries? Is the total population at risk and is it then worthwhile to try and chase and identify the small group in that population who are, one could say, the focal point of development of caries in that population group?

These are areas which I think are important, especially in non-industrialized countries. Where there has been no caries in the past, there has been no caries challenge, then suddenly,
fermentable carbohydrates are introduced into that society and you might see an explosion of
dental caries. Unless you reduce the sugar intake, which is simply impossible to do at the
moment in many developing countries, we think that it is better to introduce fluoride into that
society, rather than to look at who is particularly at risk in such a society. That is why in the final
sentence of our document we say that ‘in this situation, every effort is needed to introduce
fluoride where appropriate. This must be a priority, as sugar reduction is not realistic’. However,
we want to modify that last sentence and say then that hopefully in the long term, even in
developing countries, the sugar consumption ought to be reduced and better nutrition reinforced.
I think I will now ask for questions from the floor.
Dr. Shou: Could you please clarify that last sentence again, do you want it to stand as it is in the
paper or do you want to change it?
Dr. Moller: We want to extend it by saying that this must be a priority as at this moment sugar
reduction would be difficult to impose on a population. But ‘in the long term sugar consumption
in non-industrialized countries should be controlled or, preferably, reduced’.