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Public Health Issues in Infant and Child Nutrition

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Preface

Issues of public health importance are those that affect a substantial proportion of the population. For this workshop we decided to cover public health issues related to infant and young child feeding and nutrition in developing, transitional, and industrialized country settings. Infant and young child feeding is a strong determinant of childhood morbidity and mortality in developing countries, has effects on growth, and is also likely to have long-term effects on the health of adults.

The first session of the workshop focused on the global burden of malnutrition. More than half the deaths of children under 5 years of age associated with malnutrition, reflecting the strong interaction between malnutrition and infections, the malnutrition-infection complex. Improved nutrition will reduce the prevalence and severity of infectious diseases, and the control of infectious disease will reduce malnutrition. Malnutrition, especially during early childhood, affects cognition and social interaction and thereby also has important effects on national economic and social development.

The essential nature of vitamins and minerals, commonly referred to as micronutrients, has been recognized through identification of clinical conditions associated with severe deficiency of particular micronutrients. More recently it has been shown that mild to moderate deficiencies of micronutrients are highly prevalent in developing countries and have important public health consequences through effects on child growth and development, and on host resistance to infectious diseases. Thus, vitamin A and zinc deficiencies have been found to alter resistance to infections and to increase the risk of death, while iron deficiency may increase or decrease the risk, depending on the type of infection.

There is global agreement that breast-feeding is the best way to feed an infant. However, the reality is that in most countries the duration of breast-feeding is less than recommended. One strategy to improve this public health problem is the Baby-Friendly Hospital initiative launched by WHO and UNICEF. This breast-feeding promotion intervention has recently been assessed in a randomized trial presented at the workshop. Breast-feeding beyond the first year of life offers the infant living in a disadvantaged setting some protection against infections, while the possible benefits in industrialized countries are less clear. HIV infection of the mother can be passed on to the infant through breast milk. Therefore, breast-feeding is discouraged in settings where it is possible to supply infant formula in a safe and hygienic way. However, 95% of HIV-infected mothers live in developing countries and, for many of these, avoiding breast-feeding might result in an infant mortality that is higher than the risk of being infected with HIV. There is thus a need for strategies to reduce the HIV transmission through breast-feeding.

Inappropriate complementary feeding is one of the main causes of the high morbidity and mortality and the marked growth faltering seen between the ages of 6 and

18 months in disadvantaged settings. It is therefore a public health priority to improve complementary feeding. It is, however, only during recent years that research and policy development and program implementation within this area have been given a high priority. Strategies and programs to promote adequate complementary feeding were reviewed during the workshop, together with strategies to prevent microbial contamination of complementary feeds.

Early origin of adult diseases, also called programming or metabolic imprinting, is a research area that has expanded considerably during the last decade. Cardiovascular disease, glucose intolerance, and obesity seem to be influenced especially by early nutrition. A previous Nestlé workshop (No. 36) was devoted to the topic, but we found that there was a need for a critical review of some of the key issues. There is increasing evidence that programming takes place, but there is still uncertainty about the mechanisms behind such effects. Until we understand such mechanisms, it is difficult to draw any public health implications of the findings. Although most research has focused on intrauterine programming, there are also data suggesting that aspects of infant nutrition, such as breast-feeding and protein intake, may have long-term effects on health.

We appreciate the contribution of the speakers and participants to the presentations, discussions, and proceedings and hope that this book will contribute to the solution of the public health problems associated with inappropriate infant and young child feeding.

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