

INTRODUCTION

In recent years, the health situation in the Americas has improved considerably thanks not only to better living conditions and greater access to health services, but also to the implementation of far-reaching nutrition policies and programs. However, nutritional deficiency disorders persist, and are now, moreover, accompanied by overweight and obesity, problems resulting from poor eating habits and unhealthy lifestyles. Nutritional deficiency disorders and problems of excessive caloric intake are seen in virtually every country. While children under 3 continue to suffer from malnutrition, with stunted growth and anemia, overweight and obesity are on the rise not only among adults, but children as well.

Stunting rates range from 10.5% in Brazil to 46.4% in Guatemala, with the highest prevalence rates recorded in Bolivia, Ecuador, El Salvador, Haiti, Nicaragua, and Peru. Low weight-for-age is more prevalent in Ecuador, Guatemala, Haiti, and Nicaragua, with levels ranging from 11% to 24%. Both micronutrient deficiencies and problems of overweight and obesity are the product of improper diet and are found especially in young children and pregnant women. Anemia in children under 5, measured by low hemoglobin levels, is present in all the countries, with levels of approximately 20%. Prevalence rates in pregnant women are above 30%, and are 25% among women of childbearing age. At the same time, prevalence rates for overweight and obesity in women of childbearing age exceed 30% and are found in the majority of the countries, with the exception of Haiti; school-age children are also among those affected.

Notwithstanding, in recent decades several nutritional disorders have been brought under sufficient control that they have ceased to be a public health problem. These achievements are the result of the application of effective strategies that have demonstrated the feasibility of fighting these problems and reducing their devastating consequences.

This book details programs and policies implemented in the Region that have helped to improve the overall health of the population by reducing the high prevalence rates of nutritional disorders and promoting healthy lifestyles. It is hoped that these experiences will serve as examples that may be replicated in other communities and nations inside and outside the Region of the Americas.

Not all the experiences described in this book have been subjected to a rigorous evaluation of their effectiveness. Nevertheless, after careful analysis of the programs considered successful, we have decided to include them for the following reasons: they offer programming lessons because they were conceived with highly innovative vision; they have been implemented using viable processes and were able to elicit broad multisectoral participation; and they have raised awareness among the target populations of their right to good health and nutrition. Readers will be able to readily identify and appreciate these elements and will find in these programs a source of information, guidance, and reflection.

The chapters in the book are divided into four sections: the first consists of a review of scientific evidence, and the second focuses on successful interventions in the area of micronutrients. The last two sections encompass strategies adopted at the local and national levels to address issues related to nutrition and the adoption of healthier, more active lifestyles. The four sections are followed by a chapter summarizing the book's most salient messages and offering conclusions based on these.

The first section consists of two chapters. In the first of them, Martorell examines the long-term consequences of early malnutrition and how research findings may help shape better policies and programs. The chapter is based on lessons learned from a series of longitudinal and follow-up studies conducted by the Institute of Nutrition of Central America and Panama and Reynaldo Martorell. It analyzes research launched in the 1960s and still under way. The studies are unique, in the sense that they begin with interventions during early childhood whose effects are followed into adulthood and the next generation. The second chapter, written by Victora, Albernaz, and Lutter, also reviewed studies conducted in Latin America in the second half of the twentieth century and their contribution to the design of policies related to infant feeding. This review focuses on the role of research findings by demonstrating the impact of breast-feeding on child health and growth.

The second section presents effective strategies utilized by micronutrient programs and consists of four chapters. The first, by Freire, Vanormelingen, and Vanderheyden, describes the successful experience of a program to control iodine deficiency disorders in Ecuador. This program set a true milestone by clearly demonstrating that salt iodization is the most effective and least costly measure for combating iodine deficiency disorders in the Americas. The second chapter, by Dary, Martínez, and Guamuch, focuses on vitamin A sugar fortification in Guatemala, an initiative that not only managed to reduce cases of blindness from vitamin A deficiency, but also decreased infant morbidity and mortality by improving immune response. This experience led other countries to adopt similar programs, as was the case in El Salvador, Honduras, Nicaragua, Nigeria, and Zambia. The chapter summarizes the evolution of sugar fortification in Guatemala from 1988 to 2005 and its vicissitudes, updating and complementing works previously published on the subject. The third chapter, by Mora, Navas, Bonilla, and Sandino, describes the experience of a program to control vitamin A deficiency in Nicaragua and discusses the lessons learned, so that others may take advantage of them. Nicaragua, like other countries facing this issue, recognized the important role played by vitamin A in the health and survival of children and decided to adopt a national control plan to improve intake utilizing the most effective and least costly supplementation and fortification strategies that could be implemented at the national level. The fourth chapter, by Hertrampf, describes the successful Chilean experience of wheat flour fortification as a way of decreasing the incidence of neural tube defects, for it has been shown that food fortification is effective in preventing these malformations. This strategy has had particular impact in countries where a food staple suitable for fortification could be readily identified. Hertrampf reviews the role of folates in the metabolic process and then presents the epidemiological and clinical characteristics of neural tube defects and effective strategies to prevent them. She concludes with an overview of the Chilean experience, demonstrating the benefits of fortifying wheat flour with folic acid.

The third section analyzes integrated strategies adopted at the local level and includes four chapters. The first one, by Rea and Araújo, describes the Brazilian experience in effectively promoting the practice of exclusive breast-feeding during the first six

months of life and, following the introduction of complementary foods, continued breast-feeding until the child reaches 2 years of age or older. Among the most noteworthy of the strategies employed are wide-reaching social mobilization and multimedia campaigns and the establishment of a national network of human-milk banks. The second chapter, by Benavides, describes the Best Buy Project developed by the Peruvian Institute of National Research in partnership with grassroots organizations (community kitchens), the mass media, the private sector, and the international community. The project periodically monitored food prices in Lima, the country's capital, with a view to identifying foodstuffs available in local markets containing the most cost-effective units of energy and protein. This information was used to design and develop nutritionally sound recipes in community kitchens at prices within the economic means of low income population groups. Messages promoting "best buy" foods and recipes incorporating them were distributed through the mass media and in face-to-face educational activities. Evaluation of the program showed that it is possible to improve access to highly nutritious foods after only a five-month period. The third chapter is about a successful model for promoting active lifestyles, the Agita São Paulo Program. This experience demonstrates the effectiveness of forging partnerships with national and international organizations and of having political backing and a strong scientific foundation. The chapter describes the history and key characteristics of the program, emphasizing its multisectoral essence. This section ends with a chapter by Montezuma on the link between the urban environment and an increase in physical activity. The author describes the transformation of Bogotá, Colombia, a process which helped to counteract a trend of growing dependence upon individual motorized transportation. The increase in vehicular use is related to the growth of sedentary lifestyles, a factor that contributes to rising overweight and obesity among urban dwellers. The Bogotá experience shows that the structural design of cities directly and indirectly influences many behaviors related to physical activity and a sedentary lifestyle among the population and that positive changes in the physical environment have a greater potential for increasing physical activity than do policies targeting individual behavior alone. These changes include greater access to means of mass transportation, and the creation of public spaces for pedestrians (such as plazas, sidewalks, and pedestrian-only streets), bicycle paths, and urban parks.

The fourth section deals with integrated strategies adopted at the national level and consists of three chapters. The first one, by Rivera, shows that mission-based research in public health makes it possible to improve the population's health status by applying scientific method to the study of different objects and levels of analysis. The author demonstrates that this methodology facilitates an in-depth analysis of the population's health using a multidisciplinary approach to generate information and can improve the organized social response, resulting in better designed policies and programs to prevent and control poor nutrition. The chapter also presents evidence of how the use of scientific research findings has led to actions with high impact and promising indications for the future of malnutrition prevention and control policies and programs in Mexico. The second chapter, by Vio and Uauy, describes the history of nutritional problems in Chile and how the adoption of policies targeting priority issues, the reallocation of resources, and changes in program execution have enabled the country to bring a number of nutritional problems under control. The experience gained within this national institutional framework has led to the search for other interventions to counter the emerging problem of overweight and obesity. Finally, Jacoby and colleagues

present a chapter on this same topic in which they analyze a situation common across urban landscapes in the Americas: lack of personal safety, violence, gang activity, stress, physical inactivity, and social disintegration. These factors are recognized as a high risk to the population's health and are responsible for the epidemics of cardiovascular diseases, mental health problems, and obesity that together account for nearly 60% of all deaths in the Region. Jacoby and colleagues observe that unlike the public health approach, which focuses on the individual, the urban planning mindset seeks to address problems from a collective perspective, setting as its priorities the improvement of urban quality of life, securing a healthy environment, and providing efficient public infrastructure, such as transportation systems and appropriate urban land use. The authors highlight the potential value for human health of creating a more active synergy between the public health and urban development sectors.

We are proud to present this book to our readers in the certainty that they will discover strategies, tools, and perspectives useful in addressing the health and nutrition challenges in their communities. As its pages show, there is no magic bullet. Yet significant progress can be achieved through selection from a highly diverse set of actions, depending on the problem's nature and the environment in which change needs to occur. While there exists no single prescription, starting with scientific evidence and reviewing experiences that have been successful elsewhere can provide reliable clues for a given intervention's viability and adaptability to local circumstances in your own community or region.

Wilma B. Freire