

Preface

THIS BOOK is designed both for the student and for the general practitioner of dentistry. It gives an introduction to the broad field of public health and also detailed, specific material on the development of dental public health programs. Previous textbooks on dental public health have dealt almost exclusively with the dental aspects. This is a good method of approach if the text is to be used for teaching purposes in a situation where lecturers on the broader aspects of public health can fill in the background material. Practicing dentists, however, suddenly finding themselves so placed that they must design or participate in a community dental health program, need to know more than mere dentistry. They need to know the frame of reference in which their efforts will fit. They can read basic texts on public health but will find them designed for the physician and filled with much detail that appears irrelevant to them as dentists. They need a simplified approach to public health practice, and they need, particularly, an elementary knowl-

edge of those tools of public health that will help them design and operate their own program. By tools I mean those basic sciences such as biostatistics and epidemiology which are essential to all study of mass disease, whether it be systemic or dental. The problems of dental disease are primarily those of chronic disease, the field toward which medicine is turning its sharpest attention these days and where epidemiology and biostatistics are indispensable aids.

This book is, in a very real sense, the crystallization of a course in dental public health which has been presented since 1947 to upperclass undergraduates at the Harvard School of Dental Medicine and, since 1955, in more or less the same form as an evening course for graduate dentists. Both student groups have been very rewarding, though in different ways. The undergraduates are closer to their period of basic science training in the Medical School. They give evidence of better background and of greater interest in the material grouped under the heading "Tools of Dental Public Health." The graduate group, with practical experience back of them, are more specifically interested in dental program planning. For the members of this group, the course has been their first contact with the broad field of public health, and they show great eagerness to understand the framework of public health administration within which they are operating. Both groups appear interested in continued education in dental public health because they find themselves, chiefly as a result of the advent of fluoridation, for the first time in history possessed of preventive techniques which can be applied at the community level. From these experiences and from others, I see clear evidence of the need for a textbook on dental public health that will reach all practitioners of dentistry and which will stand on its own feet as reading material for those practitioners unable to obtain formal teaching in the subject.

A book of this sort can serve only as an introduction to the larger field of public health. Biostatistics, for instance, is an extremely hard subject to learn by oneself. The chapters on biostatistics here are designed merely to present the statistical point of view, including the concept of variability and a few of the simpler tests commonly needed in the dental field. Students going more deeply into this field will need not only more advanced textbooks but also

good teachers. The material on public health administration and personnel management is merely an introduction to a large field in which practical experience counts heavily. Dentists who suddenly find themselves in charge of a large working force will need additional help. This they can obtain from some of the textbooks referred to in the list of references and also by seeking aid from their public health colleagues. In the field of preventive dentistry, this book treats dental caries, periodontal disease, oral cancer, and the like in such a way as to give a basic understanding of their earlier signs and of those mass phenomena which are of interest from a public health point of view. The refinements of oral pathology can be learned from textbooks specifically devoted to the subject.

To the teacher of dental public health, this book should have value as a teaching outline, either for undergraduate dental students or for postgraduate students. Around it can be built a course which will have both breadth and detail, the detail often supplied by specialists from areas outside dentistry, where these are available. Where the teachers must do most of the work themselves, it is hoped that by reading as far as they can in the reference material presented here, they will be able to do a reasonably good job. It is hoped they will enjoy their teaching work as much as has the author over the past decades.

Since the third edition of this book went to press in 1978, the sharp drop in the incidence of dental caries in children in developed countries all over the world, coming at a time of high inflation and economic recession, has profoundly altered dental practice in the United States. No longer do children up through the teenage period require massive restorative dentistry. Fluoridation can claim a major share of the credit for this change, but epidemiologically the drop is a complex matter requiring further study.

The immediate result of this drop has been less work for dentists to do among children. Inflation has then urged dentists to raise their fees in such a way as to price many of them out of their market. This situation has forced a number of changes on the profession—some constructive, others destructive. Constructive changes have occurred in the marketing of private practices and in the greater attention paid to periodontal disease and to the care of adult and elderly patients. A destructive change has taken place in

the opposition of the profession to the use of extended function auxiliaries at just the time when increases in the public delivery system for dental care are needed to reach low-income citizens and people in underserved areas.

The re-election of a conservative administration has made restoration of the recent drastic cuts in federal health programs unlikely. The gap between the "haves" and the "have-nots" in our society has widened, so that more and better public health programs are needed—not fewer programs. Dental care delivery systems, as a consequence, need careful study.

For all these reasons, dentists now appear to have greater opportunities for future public health action than formerly, even though the success of their preventive measures for caries has resulted in a lessening of the need for care for children. It is my hope that this textbook may continue to inspire and to facilitate the careful planning of programs and political actions for the future.

Even the English language has changed, in response to a lowering of sex barriers. A dentist can no longer be referred to uniformly as "he," nor an auxiliary as "she." Where this may still occur in the book, no sex preference is implied.

I am deeply indebted not only to a number of publishers and authors whose specific contributions are noted at appropriate points, but to many other workers and teachers in the fields of public health and of dentistry whose points of view and phraseology have influenced the writing of this text. Certain well-turned phrases and basic concepts become the vocabulary of any specialized field, and it is often impossible to credit their originators. More particularly, I wish to express gratitude to colleagues who read the original manuscript of this book and offered constructive criticism. Among these are Louis J. P. Calisti, Robert L. Glass, John E. Gordon, Demetrios M. Hadjimarkos, Leon B. Leach, Hugh R. Leavell, Benjamin F. Paul, Robert B. Reed, James H. Shaw, Reidar F. Sognnaes, William D. Wellock, and Marjorie A. C. Young. Within my immediate family, my first wife, Mae, and daughter Cornelia have given particularly helpful advice. I am also indebted to Laurence B. Brown for the preparation of most of the illustrations. To my father, the late William B. Dunning, I am indebted for leadership both in dentistry and in writing. Dr. Dunning saw the first chapter of the book in time to lend it his encouragement.

Help in this revision has come from a number of quarters, but particular acknowledgments are due to Robin M. Lawrence (for the comprehensive revision of Chapter 23), Theodore Rebič, Jr. (for the New York material), David E. Barmes, Gregory N. Connolly, Chester W. Douglass, and Jonathan Director. My wife, Nora Dunning, has provided valuable editorial assistance, as well as doing the word-processing and the heavy cut-and-paste work in the preparation of the revised manuscript.