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PRINCIPLES AND PRACTICE OF PUBLIC HEALTH DENTISTRY

By

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With a Special Chapter by

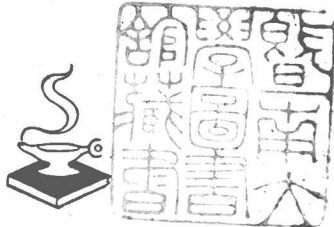
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Affectionately Dedicated

to

LEAH, MY WIFE

Preface

AT THE height of the so-called period of “unprecedented prosperity” of the late 1920's, dentists generally felt that they were not receiving a proportionate amount of the national income. An increasing number of dentists began to direct their attention toward the study and practice of “dental economics,” which was in reality a misnomer for office efficiency.

A close study of the economics of dental practice revealed conditions similar to those obtaining in other lines of endeavor at that period. In dentistry, as well as elsewhere, distribution had not been receiving adequate attention. As brought out by the Committee on the Costs of Medical Care, even during their busiest years dentists were wont to spend a great deal of time in their offices in “merely waiting for patients.” At the same time, survey after survey by the United States Public Health Service and other bodies disclosed the appalling incidence and wide spread of dental disease in the population, beginning with the preschool child and extending through all ages. The writer then arrived at the conclusion that the solution to the *impasse* lay in the better understanding by both the profession and the public of the Public Health phase of dentistry. It seems clear that through this approach only can the various types of needed dental service be provided for the whole population.

It was early in 1930 that work on the *Principles and Practice of Public Health Dentistry* was begun. At that time but a handful of men saw the value of such a work or, indeed, understood the meaning of Public Health Dentistry at all. The publication of the report of the Commit-

tee on the Costs of Medical Care, the conditions revealed by the White House Conference on Child Health and Protection, and the plans for Social Security initiated by President Roosevelt, and finally the adoption of the Federal Social Security Act, all have emphasized more and more the need for a work dealing with Public Health Dentistry. It is the author's hope that the present volume will help to place Public Health Dentistry among the recognized studies in the Public Health and dental curricula.

It is my pleasure at this time to give due thanks to Dr. J. L. T. Appleton, Jr., Professor of Bacterio-Pathology at the School of Dentistry, University of Pennsylvania, and to Dr. Alfred Walker, who has honored this volume with a foreword, for their early encouragement and constant advice, which inspired me to continue the work.

My thanks are due to Dr. John Oppie McCall, Director of the Murry and Leonie Guggenheim Dental Clinic, for the many hours he spent in going over my manuscript and for his guidance and advice, and especially for his contribution of a most valuable chapter to Part IV.

I wish to thank Dr. Harry Strusser, Chief of the Dental Division, Bureau of School Hygiene, Department of Health, New York City, for his practical suggestions, based on his many years of experience in Public Health Dentistry, which were of great value, especially in Part IV of the manuscript. The chapter on the Dental Public Health Program for Children, Part IV, contributed by Dr. Strusser, will be found of inestimable practical value to public health administrators.

To Dr. Leroy M. S. Miner, Dean of Harvard University Dental School, my sincere gratitude is due for his review of the manuscript and for his expressed approval of the plan and purpose of this book. I also wish to thank Dr. William J. Gies of Columbia University, who read the

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manuscript, for his stimulating encouragement and advice, and Dr. Hermann Prinz of the School of Dentistry, University of Pennsylvania, for his interest and advice, and for the loan of the halftones used in illustrating Part I of the book.

My thanks are due to Dr. Harvey J. Burkhart and the Rochester Dental Dispensary; to Dr. Percy R. Howe and the Forsyth Dental Infirmary, and the Murry and Leonie Guggenheim Dental Clinic, for the loan of halftones used for illustrations.

This book has received the endorsement of the Committee on Community Dental Service of the New York Tuberculosis and Health Association, to which representative body deepest thanks are due for their interest and for the honor they have bestowed on this work.

And, finally, grateful acknowledgment is made of the moral and financial support of the Julius Rosenwald Fund, which has helped to make possible the publication of this book.

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Foreword

Dental disease is a health problem, involving as it does almost the entire population. Dental disease never repairs itself, and seldom if ever ceases to increase without operative intervention. Until further research discovers effective means of prevention, a complete health service must include a complete dental service.—Universal dental care for children, beginning at the age of two, is the only present possible solution.

—*Health Dentistry for the Community.*

SINCE the conditions attending the provision of dental health service are beset with factors which tend to make any program of community dental care, based entirely on the repair of existing damage caused by manifest dental decay, uneconomic and ineffectual, it follows that dental health education must play an important rôle in public health dentistry.

Furthermore, experience indicates that the prosperous members of the community do not necessarily acquire dental knowledge along with increased income; nor is interest in the teeth of their children and desire to have dental defects cared for proportionately greater among them than among the indigent. If we accept the *dictum* that dental disease is a community problem, then the dental educational program inevitably becomes a universal concern of the community as a whole. Education here, as elsewhere, must have a basis in fact and, unfortunately, the facts relating to the causation and consequently to the prevention of dental disease are as yet unknown to us.

Operative dental care in the public health program when intelligently applied is not nearly as impractical as

may at first appear. Children's teeth if kept under constant periodic supervision do not as a rule require extensive dental treatment when the children grow older and enter adult life. This fact is especially true when the operative program is carried on in conjunction with educational and prophylactic effort. The cost of conducting such a program becomes gradually less after the first few years when the older children begin to show the effects of systematic early care. Furthermore, the saving in human economy as the result of such a program more than justifies the expense involved.

It is rather generally agreed that disease of the teeth and adjoining structures is detrimental to general health. Statements to this effect are made and accepted practically without question, yet I venture to say that the views of the average health officer on this point are rather vague. As a matter of fact, perusal of dental and medical literature reveals that, while much attention is being given to individual cases where such relationship is suspected, no worthwhile studies are on record tending to show the extent of the effect of dental disease on the health of the community.

The examination of persons who are immune to caries usually reveals that these same people enjoy perfect health in every other respect as well. Is this not a significant fact? And should it not lead us to think of dental caries as a disease or at least some deficiency of the general system, manifesting itself in the mouth?

Let us examine the sequence of events that often follows the appearance of a cavity in a deciduous tooth. During its early stages it may frequently escape detection by visual examination and penetrate deeply toward the center of the tooth and the dental pulp located in that

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region. Before the presence of the cavity is disclosed by means other than a roentgen ray examination, it may possibly have produced infection of the pulp. Such infection may occur without the patient being warned of its advent by toothache. When the pulp becomes infected it is not always practicable to save the tooth, and even though saved, it may harbor a low-grade focus of infection.

Considering only the local effects, when decay exposes the pulp of a tooth it sets up inflammation resulting in devitalization of this tissue, the infection thereby reaching the periapical region. This condition may produce a chronic focus of infection which, in the case of the deciduous teeth, can usually be eliminated by extraction only. The premature loss of such teeth apparently removes a stimulating factor and the appearance of the permanent teeth may be delayed long beyond the normal eruptive time. In addition, the premature loss of deciduous teeth interferes with the normal growth of the jaws; and later the permanent teeth, not only in the immediate vicinity of the extracted tooth but even in remote parts of the mouth, assume irregular positions in the arch and constitute a condition which may require orthodontic treatment and increased dental care throughout the life span of the patient.

Another aspect of dental disease in the adult which requires consideration is the effect of such disease both directly and indirectly on earning power. Indirectly, loss of the teeth results in disfigurement which may and frequently does have an unfavorable influence on ability to secure employment. The psychological effect on the individual may also have an adverse effect on earning power. More directly, dental disease through its influence on

health may result in enforced idleness, the economic loss here being accentuated by the expense of medical care which may also necessitate hospitalization.

Present day research into the etiology of dental decay shows a division into three major premises: genetic influences, secretory imbalances and dietary deficiencies. These can be considered but an *anlage* or overture to the ultimate solution of the problem, because we do not at present have any definite knowledge as to how they may be employed in a practical way in order to obliterate the universal scourge of dental disease.

Dental research workers have been striving earnestly in their endeavor to solve the problem of widespread caries. However, not unlike workers in other fields of biologic research, they have too often labored under the mistaken assumption that research is something that can only be performed in a laboratory by the use of test tubes and laboratory animals. Clinical experience and continued study of the problem, seem to indicate that the causation of dental caries will in the end be found through the intelligent study of the child itself; not by the mere enumeration of the number of caries per child but rather through the intelligent study of all factors influencing the growth and development of the child beginning with the prenatal stage.

Such a study can be accomplished solely through the institution of definite dental public health programs. It seems to me that until complete community dental health service is instituted, knowledge concerning the cause of dental caries will be retarded, and the havoc wrought by dental decay will continue to assert itself in the health and life of our citizens and the future of our civilization.

Salzmann presents "Public Health Dentistry" in a com-

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plete, thorough and practical manner. This book provides the foundation for a new specialty in the field of Public Health and shows that dentistry is a public health service in fact as well as in theory.

ALFRED WALKER, D.D.S., F.A.C.D.

New York, N. Y.

May 1, 1937

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