

Where There Is No Dentist

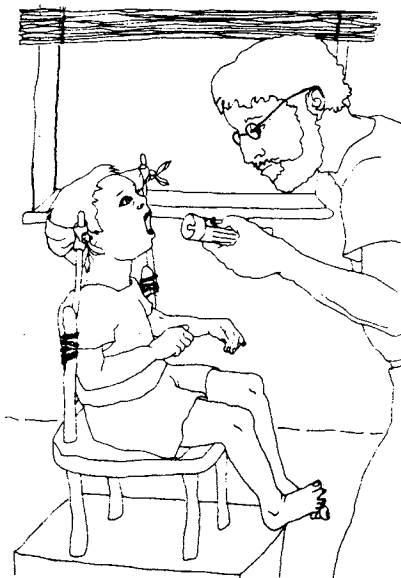
by Murray Dickson

updated and expanded

with information about HIV and AIDS

by Richard Bebermeyer,
Martin Hobdell and Gene Stevenson

Introduction by David Werner,
author of *Where There Is No Doctor*



h
hesperian
health guides

Berkeley, California, USA
www.hesperian.org

Copyright © 1983, 2006, 2012, 2015 by Hesperian Health Guides

First edition, November 1983

ISBN: 978-0-942364-05-7

Hesperian encourages you to copy, reproduce, or adapt any or all parts of this book, including the illustrations, provided that you do this for non-commercial purposes, credit Hesperian, and follow the other requirements of Hesperian's Open Copyright License (see www.hesperian.org/about/open-copyright).

For certain kinds of adaptation and distribution, we ask that you first obtain permission from Hesperian. Contact permissions@hesperian.org to use any part of this book for commercial purposes; in quantities more than 100 print copies; in any digital format; or with an organizational budget more than US\$1 million.

We also ask that you contact Hesperian for permission before beginning any translation, to avoid duplication of efforts, and for suggestions about adapting the information in this book. Please send Hesperian a copy of any materials in which text or illustrations from this book have been used.

THIS EDITION CAN BE IMPROVED WITH YOUR HELP. If you are a health worker, community organizer, student, teacher, parent, or anyone with ideas or suggestions for ways this book could be changed to better meet the needs of your community, please write to Hesperian. Thank you for your help.

This book was printed in the USA by Quad Graphics.



Hesperian Health Guides
1919 Addison St., #304
Berkeley, California 94704 USA
hesperian@hesperian.org
www.hesperian.org

THANKS

Where There Is No Dentist, updated edition, 2015

Thanks from Hesperian

We continue to be inspired by Murray Dickson and his tireless efforts to encourage health and dental promoters and community members to respond self-reliantly to their health needs. A few years ago, Murray introduced us to Richard Bebermeyer, Martin Hobdell, and Gene Stevenson, whom we thank for volunteering their time to write and develop the manuscript for Chapter 12 in this book, "HIV and Care of the Teeth and Gums." That material was originally published in 2002 and distributed as a supplement to the previous edition of *Where There Is No Dentist*. We also thank Jane Maxwell, who edited the supplement with assistance from Darlena David, Julie Gerk, and Todd Jailer.

Hesperian is lucky to be able to draw upon a large pool of people committed to grassroots health, and we owe a debt of gratitude for their insightful comments and suggestions to: Rodrigo de Amorim, Jean Arthur, Alma Carolina Blanco Reyes, Claire Borkert, Roman Carlos, Stephen Cox, Alan Dare, Callum Duward, Belinda Forbes, Jo Frencken, Monica Gandhi, Gene Gowdey, Gerardo Gutiérrez, Martin Hobdell, Christopher Holmgren, Marie Klaipo, Patcharin Lekswat, Brian Linde, Theresa Noe, Francina Lozada Nur, Stephen Moses, Foluso Owotade, Francis Serio, Michael Terry, Garth von Hagen, and P. Wanzala.

Illustrations added in the 2012 edition of the book are by: Silvia Barandier, Sara Boore, Heidi Broner, José de Jesús Chan, Gil Corral, Regina Doyle, Anna Kallis, Susan Klein, Gabriela Nuñez, Kathleen Tandy, Sarah Wallis, Lihua Wang, and Mary Ann Zapalac.

Editing and updating of the 2006 edition was coordinated by Kathleen Vickery with assistance from Todd Jailer and Susan McCallister, production by Iñaki Fernández de Retana and Leana Rosetti, and additional writing by Fiona Thomson. For the 2012 edition, coordination by Dorothy Tegeler, with support from Jacob Goolkasian, Zena Herman, Todd Jailer, Melody Segura, and Kathleen Tandy. For the 2015 edition, coordination by Kathleen Vickery, with support from Todd Jailer, Rosemary Jason, and Kathleen Tandy.

Thanks from Murray Dickson, 1983

Where There Is No Dentist is here to fill a need. To many people, it has seemed that the existing books about dental care were either too incomplete or too complicated. If this book fills that need, it is only because a number of people worked hard to make it happen. To them I owe my sincere thanks.

Much has happened since that day in Papua New Guinea when David Werner's letter arrived. His challenge was simple: "Since no one else has written a dental manual like this, why don't you?" With David's encouragement and constant support, I was able to take teaching notes and

produce a suitable draft that was the basis for this book. To you, David, for your patience in helping me learn, my heartfelt thanks. Thanks also to Trude Bock and Bill Bower for the home, food, direction, and support, during a short visit to Hesperian in which the book took a definite turn for the better.

Michael Blake deserves special mention. As editor of *Where There Is No Dentist*, it was he who took the manuscript and nursed it along to completion. Michael's commitment to finishing the book was vital, and I sincerely appreciate it.

My thanks go to Maggie Leung for typing the final draft, and to those dedicated persons who helped get the book into final form: Annaloy Nickum (page design); Hal Lockwood (typesetting and paste-up); Paul Chandler, Serena Clayton, and Elaine Rossi (proofreading); Pat Bernier (typing); and Howard Uno (photostats).

For their outstanding drawings, I am exceedingly grateful to: June Mehra, Janet Elliott de Jacques, Michael Marzolla, Joan Thompson, Mindy Mead, Arlene Ustin-Cartagena, and Lynn Gordon. My own drawings in the manual appear amateurish in comparison.

I want to thank the many persons who reviewed the manuscript and offered valuable suggestions: Ken Cripwell, Bill Bower, Jeff Vore, Aaron Yaschine, Rosalie Warpeha, Norma Francisco, Mike Muller, Marcia Anderson, Phil Haskett, Bert Bali, Tom Coles, Sunil Mehra, and John Rogers. In particular, thanks to Chris Lennox who, faced with stressful times in Papua New Guinea, found time to read through two drafts; and to David Morley for his ideas for improving the book and his assistance with its eventual publication.

For their financial help, I am grateful to the Ella Lyman Cabot Trust, Muttart Foundation, the Canadian Organization for Development through Education, and the James C. Penney Foundation.

I thank the C.V. Mosby Company and Dr. Kenneth Snawder for permission to adapt several drawings from the *Handbook of Clinical Pedodontics*, and the Medical Missionary Association (244 Camden Road, London NW1 9HE, U.K.) for permission to use parts of David Halestrap's book *Simple Dental Care*.

This book is based upon several years of practical experience, made possible by the Canadian Organization CUSO. For this opportunity, and for CUSO's active interest and involvement in this book, I most gratefully say thanks.

Finally, I want to acknowledge my family's contribution. For weeks on end, my wife, Gerri, faithfully read and discussed with me each part of the book as it changed and was rewritten. She did this cheerfully, at a time when she was fully occupied in a graduate study program. For much longer than I had anticipated, Gerri and our two boys, Michael and Brennan, had to tolerate my preoccupations.

My parents endured my wanderings and search for answers to human problems with love and a growing sense of understanding. It is my only disappointment that they did not live to see this book in its final form.

CONTENTS

Preface to the 2015 edition by Murray Dickson
Introduction by David Werner

Part One: Learning and Teaching about Teeth and Gums

Chapter 1: **Your Own Teeth and Gums** 1

Eat only good healthy foods 3 Sore bleeding gums..... 7

Clean your teeth every day 4 More serious gum disease 8

Cavities, toothaches and abscesses 6

Chapter 2: **Teaching Family and Friends in Your Community** 9

Chapter 3: **Teaching Children at School**..... 19

Chapter 4: **School Activities for Learning about Teeth and Gums** 35

Why do we need teeth and gums?..... 37 How do germs make holes in the teeth?..... 50

Why do some teeth look different? 39 What makes the gums feel sore?..... 52

What holds the teeth?..... 41 What does it mean if a tooth is loose? 54

How often do teeth grow in? 43 How can we prevent cavities and
What makes teeth hurt? 46 sore gums?..... 55

Chapter 5: **Taking Care of Teeth and Gums**..... 61

Part Two: Treating Dental Problems

Chapter 6: **Examination and Diagnosis** 73

Where to examine..... 75 A good diagnosis..... 76

The instruments you need..... 75 Learn to tell similar problems apart..... 80

Chapter 7: **Treating Some Common Problems** 85

The first rule of treatment: stay clean! 86 Pain in the joint..... 114

Problems you will see most often 92 Swollen gums and epilepsy 115

 Cavities 92 Blood in the mouth 116

 Abscess 93 After you take out a tooth 116

 Infected sinus 95 Swelling of the face 116

 Tooth injuries..... 96 Pain from the socket 117

 Loose tooth 99 Bleeding from the socket 118

 New tooth growing in 100 Tetanus 118

 Gum disease 101 Infection in the spit (saliva) gland..... 119

 Fever blisters..... 104 Sores on the face 120

 Thrush 105 Noma..... 121

 Canker sores 106 Tumor..... 125

Some special problems 108 Cancer 125

 Broken bone..... 108 "Meth Mouth"..... 126

 Dislocated jaw 113

Chapter 8: Scaling Teeth	127
Chapter 9: Injecting Inside the Mouth	135
Chapter 10: How to Fill a Cavity	143
Chapter 11: Taking Out a Tooth	159
The instruments you need. 160	False teeth 169
Where you work is important. 162	Problems that can occur 171
How to take out the tooth. 163	Clean your instruments after you finish 173
How to place a suture 167	
Chapter 12: HIV and Care of the Teeth and Gums	175
What is HIV? 177	White or yellow patches in the mouth 186
How is HIV spread?..... 178	Sores of the skin of the mouth 188
Who gets HIV? 179	Infection of the gums 189
How HIV affects the mouth..... 179	Cold sores or fever blisters..... 192
How to examine the mouth for signs of HIV or AIDS 180	Red or purple patches in the mouth 194
Dental care for a person with HIV 183	Dry or painful mouth and throat 195
Common problems caused by HIV and how to treat them 184	Helping people with HIV in your community. 196
	Working for change in your community 197

Appendices

Get Rid of Wastes Safely	205
The Dental Kit	207
Medicines	208
Supplies	211
Instruments	213
Records, Reports, and Surveys	218
Resources.....	221
Vocabulary	223
Index	228

PREFACE TO THE 2015 EDITION

by Murray Dickson

The world has witnessed breathtaking changes since I wrote the first edition of *Where There Is No Dentist* in 1983. I sometimes feel that if a person had gone to sleep then and woke up 32 years later, they would have a difficult time understanding many of the things we take for granted today. Unfortunately, however, they would also find much remains the same, especially the unequal relations among people. Since you can look into a person's mouth and understand a lot about their income, nutrition, and general health and well-being, the inequality among people is not only a moral or ethical problem, but a dental problem as well.

As noted in the book's introduction, dental care remains beyond the financial reach of too many people in all parts of the world – developed, underdeveloped and overdeveloped. While many more poorer countries have picked up on the World Health Association's primary health care strategy and initiated training and support of front line dental therapists, it is not sufficient to reach the majority of those in need. Governments that are finally getting around to improving health insurance or extending health care to geographically or economically marginalized communities still treat dental care as an afterthought, as the last benefit to arrive.

Another change that has occurred, and not for the better, is the spread of diabetes into communities where it had never been a problem or maybe only a minor one. While classified as a Non-Communicable Disease (NCD) because it is not spread by germs, it is however spread by changes in diet and behaviors around the world. While sugary drinks such as Coca Cola were a problem for oral health before, now their spread threatens not just teeth but the heart, liver, indeed the entire body. The same is true of processed foods of many varieties: healthy diets have been replaced by factory foods and junk foods which contain too much sugar and not enough nutrition.

In Istanbul in 2013, the International Dental Federation noted that "36 million people die every year from NCDs, and 86% of the premature deaths occur in developing countries." They issued a call for dentists to not only advocate for and promote oral health, but to commit themselves to take more responsibility in contributing to the improvement of the general health, quality of life, and well-being of their patients and the public at large. That kind of broad understanding of health and commitment to working for social justice is exactly what I hope people find in *Where There Is No Dentist*.

I am very happy that Hesperian is printing a new edition of *Where There is no Dentist*. But even more satisfying is knowing that the book continues to be used to train, empower, and motivate collaboration with new generations of dental health promoters and therapists. As a dentist, I always felt good about relieving a person's pain and/or infection, but the number of people who needed help was always more than I could ever hope to treat. Only through extending primary care, and making oral health a part of that care, can we ever hope to really make progress. And today that means promoting people's rights to a healthy diet, a dignified life, and access to health care.

INTRODUCTION

by David Werner

A healthy tooth is a living part of the body. It is connected by ‘life-lines’ of blood and nerve to a person’s heart and brain. To separate the tooth from the body, or even to interrupt those ‘life-lines’, means death to the tooth. It also means pain and injury to the body, to the person.

Let us look at it another way. The health of the teeth and gums is related to the health of the whole person, just as the well-being of a person relates to the health of the entire community.

Because of this, the usual separation between dentistry and general health care is neither reasonable nor healthy. Basic care of the teeth and gums—both preventive and curative—should be part of the ‘know-how’ of all primary health care workers. Ideally, perhaps, *Where There Is No Dentist* should be a part of *Where There Is No Doctor*. Think of it as a companion volume, both to *Where There Is No Doctor* and *Helping Health Workers Learn*.

Murray Dickson has taken care to write this book in a way that will help the readers see dental care as part of community health and development. The approach is what we call ‘people centered.’

Where There Is No Dentist is a book about what people can do for themselves and each other to care for their gums and teeth. It is written for:

- **village and neighborhood health workers** who want to learn more about dental care as part of a complete community-based approach to health;
- **school teachers, mothers, fathers**, and anyone concerned with encouraging dental health in their children and their community; and
- **those dentists and dental technicians** who are looking for ways to share their skills, to help people become more self-reliant at lower cost.

Just as with the rest of health care, there is a strong need to ‘deprofessionalize’ dentistry—to provide ordinary people and community workers with more skills to prevent and cure problems in the mouth. After all, **early care** is what makes the dentist’s work unnecessary—and this is the care that each person gives to his or her own teeth, or what a mother does to protect her children’s teeth.

While dental disease is decreasing in richer countries, it is on the increase in most poor countries. One reason for this is that people are eating fewer traditional (unrefined) foods and more pre-packaged commercial foods, often sweetened with refined sugar.

Even as the need for dental care is growing, there are still far too few dentists in poor countries. Most of those few work only in the cities, where they serve mostly those who can afford their expensive services.

People in many countries cannot afford to pay for costly professional dental care. Even in rich countries, persons who do not have dental insurance often do not get the attention they need—or go into debt to get it.

Two things can greatly reduce the cost of adequate dental care: popular education about dental health, and the training of primary health workers as dental health promoters. In addition, numbers of **community dental technicians** can be trained—in 2 to 3 months plus a period of apprenticeship—to care for up to 90% of the people who have problems of pain and infection.

Dentists' training usually includes complicated oral surgery, root canal work, orthodontics (straightening teeth), and other complex skills. Yet most dentists rarely do more than pull, drill, and fill teeth—skills that require a fraction of the training they have received. The simpler, more common dental problems should be the work of community dental technicians who are on the front lines (the villages), with secondary help from dentists for more difficult problems.

Would this reduce quality of service? Not necessarily. Studies have shown that dental technicians often can treat problems as well as or better than professional dentists. In Boston (U.S.A.), for example, a study showed many of the basic treatments commonly given by dentists to be done just as well, and often better, by dental technicians with much shorter training.

Fortunately, in some countries skilled dental technicians have managed to become the major providers of the most needed dental services. In India, there are still 'street-corner' dental technicians with footpedal drills, who drill and fill teeth at remarkably low cost.

In Honduras, dental technicians (who learn largely from each other, starting as helpers) have formed their own union. Their political strength was tested when, in the town of Trujillo, a dentist tried to put a technician out of business. The local technician had removed an infected root left mistakenly by the dentist. The technician had commented on the dentist's carelessness, and the dentist heard about it. The dentist sent a policeman who shut down the technician's office and took away his tools. However, the dental technicians' union took this to court. They argued their rights to

practice dentistry, because they are the only persons working in marginal communities where dentists' prices are too high for the people. The court decided in favor of the technicians, and ordered the dentist to return the technician's tools and pay him for work lost.

In other countries dentists and community dental workers work in closer harmony. In Guatemala, Ecuador, Papua New Guinea, and Mozambique, dental technicians are now recognized by the Ministries of Health. In Papua New Guinea and Ecuador, professional dentists train and supervise them to provide dental care to school children. In Ecuador, they work mostly as dentist assistants, bringing high quality services to more people while decreasing costs. The 'dental therapists' in Papua New Guinea are trained to extract, drill, and fill teeth, as well as to work on prevention of dental problems in school children.

In Guatemala and Mozambique, dentists from the dental school have trained village health promoters as dental workers who work with people of all ages. Their training includes community dental health education, cleaning of teeth, extractions, and drilling and filling. These health workers are provided with the few basic instruments needed to provide these services.

In Project Piaxtla Mexico (with which I and the Hesperian Foundation have worked for many years), visiting dentists have also helped train village 'dentics'. They, in turn, now teach basic dental skills to the part-time village health workers. These village dentics, some of whom have had only 3 to 6 years of primary school, now practice—and teach—a wider range of dental skills than the average dentist. Their activities include dental health campaigns with school children, community puppet shows about low-cost dental self-care, cleaning of teeth, extractions, drilling and filling, and the making of dentures (false teeth). Several of the dental workers can now do root canal work—a special treatment to remove the central nerve in order to save an infected tooth. One of the village dentics, remembering what he had seen a dentist do, taught himself how to do root canals when his girlfriend had an infected front tooth that he did not want to pull. (He had also learned to check the tooth from time to time afterward to make sure this treatment had been successful.)

We still have much to learn about dental health. Dentists need to learn from the knowledge of the local people, as well as the people from the dentists.

We have learned that villagers with little formal education often can learn skills with their hands—such as tooth extractions, puppetry, or surgery—much faster than university students (who have never learned to use their hands for much more than pushing pencils). We also have observed that the best way to learn dentistry is not through school but through practice, helping someone with more experience who is willing to teach.

Where There Is No Dentist has 2 parts. The first part (Chapters 1–5) discusses teaching and learning about preventive care. It begins by encouraging the health worker to examine herself and her family. To be a good example is the best way to teach.

The second part (Chapters 6–11) talks about diagnosing and treating common dental problems. It is especially for those who live where they cannot reach or afford a dentist. A poor neighborhood in the city can be as distant and neglected as a far-off village. This second part is intended mainly for health workers who have helped organize people to meet their own needs.

Murray Dickson—a Canadian with primary care experience in Northern Canada, Nigeria, Papua New Guinea, and Mozambique—has written this book in clear, simple language. He takes care to use popular names instead of unfamiliar scientific words. For example, instead of speaking of ‘dental plaque’ the author speaks of the ‘coating of germs on the teeth’. Such simple language does not weaken the message. The message is stronger because everyone understands.

The author has said:

I am sure some dentists will disagree with parts of this book. Some points of disagreement may be small, like the failure to use accepted dental terminology. Other ideas, particularly the suggestion that non-dental people can be trained to provide many kinds of treatments, may make some dentists angry.

The book is meant to be a source for argument and discussion. This way, it may stimulate others to write the kind of manual that is really needed in their countries.

The people must answer to the people’s needs. The health of teeth and gums, along with general health, will improve only when people take the lead in caring for themselves. The challenge for dentists and other health professionals is to allow and encourage this to happen.

— 1983