PLANNING HEALTH PROMOTION PROGRAMS

An Intervention Mapping Approach

L. Kay Bartholomew

Guy S. Parcel

Gerjo Kok

Nell H. Gottlieb

María E. Fernández

PLANNING HEALTH PROMOTION PROGRAMS

PLANNING HEALTH PROMOTION PROGRAMS An Intervention Mapping Approach

L. KAY BARTHOLOMEW
GUY S. PARCEL
GERJO KOK
NELL H. GOTTLIEB
MARÍA E. FERNÁNDEZ
THIRD EDITION



Copyright © 2011 by L. Kay Bartholomew, Guy S. Parcel, Gerjo Kok, Nell H. Gottlieb, and María E. Fernández. All rights reserved.

Published by Jossey-Bass A Wiley Imprint 989 Market Street, San Francisco, CA 94103-1741—www.josseybass.com

No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, scanning, or otherwise, except as permitted under Section 107 or 108 of the 1976 United States Copyright Act, without either the prior written permission of the publisher, or authorization through payment of the appropriate per-copy fee to the Copyright Clearance Center, Inc., 222 Rosewood Drive, Danvers, MA 01923, 978-750-8400, fax 978-646-8600, or on the Web at www.copyright.com. Requests to the publisher for permission should be addressed to the Permissions Department, John Wiley & Sons, Inc., 111 River Street, Hoboken, NJ 07030, 201-748-6011, fax 201-748-6008, or online at www.wiley.com/go/permissions.

Readers should be aware that Internet Web sites offered as citations and/or sources for further information may have changed or disappeared between the time this was written and when it is read.

Limit of Liability/Disclaimer of Warranty: While the publisher and author have used their best efforts in preparing this book, they make no representations or warranties with respect to the accuracy or completeness of the contents of this book and specifically disclaim any implied warranties of merchantability or fitness for a particular purpose. No warranty may be created or extended by sales representatives or written sales materials. The advice and strategies contained herein may not be suitable for your situation. You should consult with a professional where appropriate. Neither the publisher nor author shall be liable for any loss of profit or any other commercial damages, including but not limited to special, incidental, consequential, or other damages.

Jossey-Bass books and products are available through most bookstores. To contact Jossey-Bass directly call our Customer Care Department within the U.S. at 800-956-7739, outside the U.S. at 317-572-3986, or fax 317-572-4002.

Jossey-Bass also publishes its books in a variety of electronic formats. Some content that appears in print may not be available in electronic books.

Library of Congress Cataloging-in-Publication Data

Planning health promotion programs : an intervention mapping approach / L. Kay Bartholomew . . . [et al.]. — 3rd ed.

p.; cm.

Includes bibliographical references and index.

ISBN 978-0-470-52851-8 (cloth); ISBN 978-0-470-91886-9 (ebk); ISBN 978-0-470-91887-6 (ebk); ISBN 978-0-470-91888-3 (ebk);

1. Health promotion. 2. Health promotion—Planning—Methodology. 3. Health education.

I. Bartholomew, L. Kay.

[DNLM: 1. Health Promotion. 2. Evidence-Based Medicine. 3. Health Education. 4. Planning Techniques. 5. Program Development—methods. WA 590]

RA427.8.P553 2011

362.1—dc22

2010036299

Printed in the United States of America THIRD EDITION $HB\ Printing \qquad 10\ 9\ 8\ 7\ 6\ 5\ 4\ 3\ 2\ 1$

CONTENTS

Figures, Tables, and Exhibits xi Acknowledgments xvii The Authors xix

Part One Foundations

One	Overview of Inter	rvention Mapping	3
	Learning Objectives 3	}	

Perspectives 8

The Need for a Framework for Intervention Development 14

Intervention Mapping Steps 18

Core Processes for Applying Theory and Evidence 25

Navigating the Book 33

Important Repeating Concepts in the Book 35

Usefulness of Intervention Mapping 42

Summary 47

Discussion Questions and Learning Activities 48

Two **Behavior-Oriented Theories Used in Health Promotion** 51

Learning Objectives 51

Perspectives 52

Overview of Theories 55

Learning Theories	60	
Theories of Informa	ation Processing	64

Health Belief Model (HBM) 67

Protection-Motivation Theory (PMT) and Extended Parallel Process Model (EPPM) 68

Theories of Reasoned Action, Planned Behavior (TPB) and the Integrated Behavioral Model (IBM) 71

Goal-Setting Theory 79

Theories of Goal-Directed Behavior 80

Theories of Automatic Behavior, Impulsive Behavior, and Habits 82

Transtheoretical Model (TTM) of Behavior Change 86

Precaution-Adoption Process Model (PAPM) and Risk Communication 90

Attribution Theory and Relapse Prevention 93

Communication-Persuasion Matrix (CPM) 95

Elaboration Likelihood Model (ELM) 97

Theories of Self-Regulation 100

Social Cognitive Theory (SCT) 102

Theories of Stigma and Discrimination 105

Diffusion of Innovations Theory (DIT) 108

Summary 111

Discussion Questions and Learning Activities 112

Three **Environment-Oriented Theories** 113

Learning Objectives 113

Perspectives 114

General Environment-Oriented Theories 117

Interpersonal-Level Theories 124

Organizational-Level Theories 129

Community-Level Theories 136

Societal and Governmental Theories 155

Summary 166

Discussion Questions and Learning Activities 166

Part Two Intervention Mapping Steps

Four Intervention Mapping Step 1: Needs Assessment 171

Learning Objectives 171

Perspectives 172

Collaborative Planning 174

Planning and Conducting the Needs Assessment 190

Conducting the Needs Assessment 196

Sources of Needs-Assessment Data 209

Community Capacity 221

Setting Goals and Linking to Evaluation 225

Summary 236

Discussion Questions and Learning Activities 237

Five Intervention Mapping Step 2: Preparing Matrices of Change Objectives 239

Learning Objectives 239

Perspectives 241

Behavioral and Environmental Outcomes 243

Performance Objectives 255

Personal Determinants 269

Matrix of Change Objectives 275

Implications for Program Evaluation 294

Summary 305

Discussion Questions and Learning Activities 306

Six Intervention Mapping Step 3: Selecting Theory-Informed Intervention Methods and Practical Applications 309

Learning Objectives 309

Perspectives 313

Ideas About the Program 316

Identifying Theoretical Methods 317

Method Selection 322

From Methods to Application	ons	356
Implications for Evaluation	37	1

Summary 375

Discussion Questions and Learning Activities 376

Seven Intervention Mapping Step 4: Producing Program Components and Materials 379

Learning Objectives 379

Perspectives 382

Designing Culturally Relevant Program Materials 383

Creating Program Plans and Structure 387

Producing Program Materials 408

Initial Design Documents: Conveying the Project Intent 410

Reviewing Existing Program Materials 424

Developing Program Materials 431

Pretesting, Revising and Producing Program Components 443

Summary 458

Discussion Questions and Learning Activities 459

Eight Intervention Mapping Step 5: Planning Program Adoption, Implementation, and Sustainability 461

Learning Objectives 461

Perspectives 462

Planning Group for Program Use 468

Program Use Outcomes and Performance Objectives for Adoption,

Implementation, and Sustainability 474

Determinants of Program Use 484

Matrices for Promoting Program Use 489

Methods and Practical Applications for Program Use 493

Interventions to Influence Program Use 499

Implications for Program Evaluation 503

Summary 506

Discussion Questions and Learning Activities 507

Nine Intervention Mapping Step 6: Planning for Evaluation 509

with Patricia Dolan Mullen

Learning Objectives 509

Perspectives 510

Reviewing the Program Logic Model 515

Impact on Health, Quality of Life, Behavior, and Environment 519

Impact on Change Objectives 522

Program Process 523

Selecting and Developing Measures 531

Design Issues 539

Summary 549

Discussion Questions and Learning Activities 550

Ten Using Intervention Mapping to Adapt Evidence-Based **Programs to New Settings and Populations** 553

with Joanne Leerlooijer, Shegs James, Jo Reinders, and Patricia Dolan Mullen

Learning Objectives 553

Choosing, Adopting, and Adapting Evidence-Based Programs 554

Perspectives 558

Applying Intervention Mapping to Adaptation 560

Lessons Learned from Adaptation Cases 631

Summary 631

Discussion Questions and Learning Activities 632

References 633

Index 731

FIGURES, TABLES, AND EXHIBITS

Figures

- 1.1 Schematic of the Ecological Approach in Health Promotion Programs
- 1.2 Intervention Mapping Steps and Tasks
- 1.3 Logic Model of the Problem
- 1.4 Logic Model of Change
- 1.5 Intervention of Logic Model
- 2.1 Logic Model for Methods, Determinants, Behaviors, Environmental Conditions, and Health
- 3.1 Logic Model for Relationships Between Methods, Determinants, Behaviors, Environmental Conditions, and Health
- 3.2 Model of Environmental Health Etiology and Empowerment
- 3.3 Community Coalition Action Theory
- 3.4 Community-Organizing and Community-Building Typology
- 3.5 Public Socioenvironmental Policy That Shapes American Environments, Personal Behavior, and Prospects for Health
- 3.6 A Model of the Public Policymaking Process in the United States
- 4.1 Logic Model for Needs Assessment
- 4.2 Preliminary Systems Depiction for Early Stroke Treatment
- 4.3 Different Systems Boundaries for Diabetes from the Centers for Disease Control and Prevention
- 4.4 Asthma PRECEDE Model
- 4.5 Environmental Levels and Their Impact on Health
- 4.6 Integrating Qualitative and Quantitative Methods
- 4.7 PRECEDE Logic Model
- 5.1 Logic Model of Change
- 6.1 Intervention Logic Model
- 6.2 Schematic Representation of Shift in Environmental Levels
- 7.1 Developing Tailored Feedback
- 7.2 Watch, Discover, Think, and Act Screen with Self-Regulatory Icons

7.3 Project PCCaSO Flowchart Design Document
--

- Detail from Project PCCaSO Flowchart Design 7.4
- 7.5 Tasks for Producing a Print Piece
- 7.6 Tasks for Producing a Video
- 7.7 Tasks for Producing a Print Piece
- 7.8 Tasks for Producing a Print Piece
- 7.9 Newspaper Article (The Daily Sentinel)
- 9.1 Intervention Logic Model
- 9.2 Overview of Program Pathways
- 9.3 Intervention Logic Model for Evaluation: Behavioral and **Environmental Outcomes**
- 10.1 Logic Model of the Problem: HIV Risk Among South African Adolescents
- 10.2 Proposed Logic Model of Change
- 10.3 LHAP Logic Model of the Program

Tables

1.1	Provisional List of Answers Regarding Condom Use Among
	Adolescents
1.2	Examples of Theories for Intervention Mapping Steps
1.3	Programs Developed Using Intervention Mapping
2.1	When to Use Theory in Intervention Planning
2.2	Theories Arrayed by Level
2.3	Change Processes in the Transtheoretical Model
2.4	The Precaution-Adoption Process Model
3.1	A Comparison of Empowering Processes and Empowered Outcomes
	across Levels of Analysis
3.2	Culture-Embedding Mechanisms
3.3	Principles Underlying Effective Tactics
4.1	Questions to Guide Recruitment of Stakeholders
4.2	Group Facilitation Processes

- 4.3 Examples of Secondary Data Sources for Health, Behavior, Environment, and Quality-of-Life Description
- Contrasting the "Needs" Versus "Assets" Approach to Community 4.4 Enhancement
- Stroke Project Community Survey Variables 4.5

Group Facilitation Processes

5.1 Performance Objectives for Consistently and Correctly Using Condoms During Sexual Intercourse

5.2	Environmental Performance Objectives for the SPF Project
5.3	Comparison of Performance Objectives
5.4	Performance Objectives for Using Coping Theory
5.5	Determinants of Performance Objectives
5.6	MATRIX for Children in the SPF Program
5.7	Sample of Rows from Matrix for Organizational Environmental
	Change in SPF Program
5.8	Selected Change Objectives for Asthma in Hispanic Children—Parent
	Matrix
5.9	Examples of Cells from a Simulated Matrix: Consistently and Correctly
	Using Condoms During Sexual Intercourse
5.10	List of Action Words for Writing Change Objectives: Organized by
	Levels of Complexity of Learning Tasks
5.11	Stroke Project Work on Determinants of Community Members'
	Response to Stroke
5.12	Work on Determinants of Health Care Providers' Response to Stroke
5.13	Stroke Project Community (Bystander) Matrix for Response to
	Stroke
5.14	Stroke Project Emergency Department Matrix for Response to
	Stroke
5.15	Stroke Project Emergency Medical Service Matrix for Response to
	Stroke
5.16	Stroke Project Primary Care Provider Matrix for Response to Stroke
6.1	Examples of Objectives and Methods for Changing Awareness and
	Risk Perception
6.2	Examples of Objectives and Methods at Various Levels
6.3	Basic Methods at the Individual Level
6.4	Methods to Increase Knowledge
6.5	Methods to Change Awareness and Risk Perception
6.6	Methods to Change Habitual, Automatic and Impulsive Behaviors
6.7	Methods to Change Attitudes
6.8	Methods to Change Social Influence
6.9	Methods to Change Skills, Capability, and Self-Efficacy and to
	Overcome Barriers
6.10	Methods to Reduce Public Stigma
6.11	Basic Methods at the Environmental Level
6.12	Methods to Change Social Norms
6.13	Methods to Change Social Support and Social Networks
6.14	Methods to Change Organizations
6.15	Methods to Change Communities

6.16	Methods at the Societal Level
6.17	Methods and Applications for Community Matrices in the Stroke
	Project
7.1	Safer Choices 2 Program Scope and Sequence
7.2	Communication Channels and Vehicle
7.3	Project Panda Preliminary Design Document—Newsletter
7.4	Project Panda Newsletter Design Document
7.5	Design Document for Health Hero Video Game
7.6	Suitability Assessment of Materials Rationale
7.7	Pretesting and Pilot-Testing Methods
7.8	Making Sense of Pretest Data
7.9	Scope and Sequence of the T.L.L. Temple Foundation Stroke
	Project
7.10	Highlights from the Stroke Project Community Component
7.11	Message Development Guide for the Stroke Project
8.1	Cystic Fibrosis Family Education Program (CF FEP) Matrix
8.2	Cystic Fibrosis Family Education Program (CF FEP) Diffusion
	Intervention Plan
8.3	Smart Choices Diffusion
8.4	Scope and Sequence of the Cystic Fibrosis Family Education Program
	Diffusion Intervention
9.1	Evaluation Stakeholders
9.2	Evaluation of a School HIV Prevention Program
9.3	Process Evaluation Indicators and Proposed Measurement
9.4	Hypothetical Process Evaluation of Diabetes Counseling Program
9.5	Implementation Checklist for Counseling Sessions
9.6	Comparison of Domains of Asthma Knowledge
9.7	Evaluation Plan Summary—School HIV/AIDS Prevention
	Program
9.8	Evaluation Plan
10.1	Intervention Mapping Steps and Processes in Program Adaptation
10.2	Behavioral Outcomes and Performance Objectives for Students in
	Uganda and Indonesia
10.3	Selected Cells from Matrix of Change Objectives for Young People
10.4	Performance Objectives for Program Adoption and Implementation:
	Ministry of Education Staff, School Administrators, and Teachers
10.5	Matrix of Change Objectives for Adoption and Implementation
10.6	Differences Between Programs for Uganda and Indonesia
10.7	Behavioral Outcomes and Performance Objectives for Adolescents in
	South Africa

- 10.8 Matrix of Change Objectives for Adolescents
- 10.9 Implementation Outcomes and Performance Objectives for Teachers and Administrators
- 10.10 Planning Matrix 1: Implementation Related to Teacher Development of Student Life Skills Applied to HIV Risk

Exhibits

- 7.1 Computerized Telephone System for Smoking Counseling
- 7.2 Walk Texas! Steps for Recruiting Community Partners
- 7.3 Advocacy Design Document: Organizing the Interview Team
- 7.4 Storyboard: Project PCCaSO

This book is dedicated to the memory of Herman Schaalma, 1960–2009, whose ideas, constructive criticisms, and thoughtful suggestions have significantly contributed to the advancement of the Intervention Mapping planning process. Herman will be remembered for his innovative teaching and his commitment to students. His work and contributions will live on through the many students he has taught and helped to apply behavioral science to finding solutions for promoting health and preventing disease. We remember Herman with great fondness and miss him dearly.

Herman Schaalma was associate professor in social psychology at Maastricht University and held the Dutch AIDS Fund-endowed chair for AIDS prevention and health promotion with a special focus on the development of culturally sensitive prevention programs. He received his doctorate in health sciences from Maastricht University, the Netherlands. His research focused on applying psychology to understanding and predicting behavior, carefully specifying health promotion goals and objectives, developing innovative health promotion interventions, and promoting the adoption and implementation of health promotion programs.

ACKNOWLEDGMENTS

UR THANKS to our colleagues who contributed case studies to the Third Edition: Patricia Dolan Mullen, Alicia Gonzales, Shegs James, Joanne Leerloijer, Chris Markham, Sylvia Partida, Jo Reinders, Ross Shegog, Guillermo Tortolero-Luna, and Shellie Tyrrell.

Patricia Dolan Mullen not only contributed her ideas to the book particularly regarding systematic review and evaluation, but has unflaggingly believed in the usefulness of Intervention Mapping.

We are indebted to our students who challenge us each time we teach to make the book better.

The Third Edition benefited from the review and critique by our colleagues Lea Maas, Nanne de Vries, Larry Hershfield, and Marita Murman. Our enthusiastic thanks to Glenna Dawson and Tiffany Jones for reference and manuscript management!

We offer thanks to our friends and colleagues for their conceptual contributions to the development of Intervention Mapping: Hugo Alberts, Charles Abraham, Elaine Belansky, Erika Borkoles, Arjan Bos, Marijn de Bruin, Matt Commers, Nanne de Vries, Patricia Goodson, Zamira Gurabardhi, Doug Kirby, Lea Maas, Bobbie Person, Brian Oldenburg, Cheryl Perry, Melissa Peskin, John Pryor, Rob Ruiter, Chris Smerecnik, Ross Shegog, Andrew Springer, Susan Tortolero, Theo van Achterberg, Bart van den Borne, Pepijn van Empelen, Janet Wordley, and to Dan Eldredge for the couch and the quiet.

The following individuals were lead contributors to material in case study chapters:

Patricia Dolan Mullen, professor of Health Promotion and Behavioral Sciences at the School of Public Health, University of Texas Health Science Center at Houston, teaches classes on program evaluation and on systematic review and meta-analysis. She has served on many review groups and expert panels, including the U.S. Community Preventive Services Task Force. She is interested in the problems practitioners face in identifying, selecting, and adapting "evidence-based programs." She contributed to Chapters Nine and Ten.

Christine Markham is assistant professor in Health Promotion and Behavioral Sciences at the University of Texas Health Science Center at Houston. Her research area is child and adolescent health with emphasis on sexual and reproductive health and substance use prevention. She has been instrumental in demonstrating the use of Intervention Mapping as an effective approach for adapting existing programs to meet the needs of a new target population and has taught Intervention Mapping in the United States and the Netherlands.

Joanne N. Leerlooijer, master in Health Promotion, has supported organizations in various countries in Africa and Asia to use Intervention Mapping. She has provided training and education on IM, behavior change approaches, research methodologies, and how to relate IM with existing project management approaches. She has codeveloped various tools and guidelines to make Intervention Mapping a practical framework for non-academic organizations that promote Sexual and Reproductive Health and Rights of young people. Joanne works at Rutgers—World Population Foundation, the Netherlands, and is a PhD student at Maastricht University, the Netherlands.

Jo Reinders, sexologist and technical advisor, has supported organizations in the Netherlands and internationally in developing and implementing school-based sexual health promotion interventions, sexuality education, and AIDS/STI prevention for youth, using a combination of Intervention Mapping, behavior change, human rights, and adolescent development approaches. Jo Reinders has codeveloped a number of national and international interventions on sexual health for youth and has served as trainer, lecturer, and member of scientific committees. Most recently he participated on the expert team for developing the International Technical Guidance on Sexuality Education of UNESCO. Jo Reinders currently works at the Rutgers—World Population Foundation, the Netherlands.

Shegs James, PhD, is a specialist scientist at the Health Promotion Research and Development Unit, Medical Research Council, South Africa. Dr James has been the co-investigator on several studies which included investigating the prevalence of several risk behaviors as well as developing, implementing, and evaluating interventions about tobacco use and cessation and HIV/AIDS. Her work is focused primarily among youth.

THE AUTHORS

L. Kay Bartholomew, EdD, MPH, is associate professor, Health Promotion and Behavioral Sciences and associate dean for Academic Affairs at the University of Texas School of Public Health. Dr. Bartholomew has worked in the field of health education and health promotion since her graduation from Austin College in the mid-1970s, first at a city-county health department and later at Texas Children's Hospital and Baylor College of Medicine. She teaches courses in health promotion intervention development and conducts research in chronic disease self-management. Dr. Bartholomew received her MPH degree from the University of Texas School of Public Health and an EdD degree in educational psychology from the University of Houston College of Education. She has won the Society for Public Health Education Program Excellence Award for the Cystic Fibrosis Family Education Program, is a fellow of the Association of Schools of Public Health/Pfizer Public Health Academy of Distinguished Teachers, and is the 2009 President's Scholar for Teaching at the University of Texas Health Science Center at Houston.

Guy S. Parcel, PhD, is former dean and professor in Health Promotion and Behavioral Science at The University of Texas Health Science Center at Houston, School of Public Health. Dr. Parcel has authored or coauthored over 200 scientific papers and book chapters over the past 36 years. He has directed research projects funded by the National Institutes of Health and by the Centers for Disease Control and Prevention (CDC) to develop and evaluate programs to address sexual risk behavior in adolescents, diet and physical activity in children, smoking prevention in adolescents, and self-management of childhood chronic diseases including asthma and cystic fibrosis. Dr. Parcel received his BS and MS degrees in health education at Indiana University and his PhD at The Pennsylvania State University with a major in health education and a minor in child development and family relations.

Gerjo Kok, PhD, is former dean and professor of applied psychology at the Faculty of Psychology at Maastricht University, the Netherlands. From 1984 to 1998 he was professor in health education at Maastricht University. He held the

Dutch AIDS Fund—endowed chair for AIDS prevention and health promotion from 1992–2004. A social psychologist, he received his doctorate in social sciences from the University of Groningen, the Netherlands. His main interest is in the application of social psychological theory to health promotion behavior, energy conservation, traffic safety, and the prevention of stigmatization.

Nell H. Gottlieb, PhD, is professor of health education in the Department of Kinesiology and Health Education at the University of Texas at Austin and formerly was professor of behavioral science at the University of Texas Health Science Center at Houston School of Public Health. Dr. Gottlieb received her PhD degree in medical sociology from Boston University. Her interests are in multilevel health promotion intervention development and evaluation. Dr. Gottlieb has served as a member of the executive board of the American Public Health Association (APHA), as chair of the APHA Health Education and Promotion Section, and as president of the Society for Public Health Education.

María E. Fernández, PhD, is associate professor of Health Promotion and Behavioral Sciences and director of diversity programs at the University of Texas Health Science Center at Houston, School of Public Health. She is a researcher at the Center for Health Promotion and Prevention Research where she leads the Cancer Prevention and Control Research Network—Latinos in a Network for Cancer Control (LINCC). Her research focus is the development and evaluation of cancer control interventions including interactive multimedia health promotion programs for Hispanic populations. Since the mid-1990s Dr. Fernández has contributed to the refinement of Intervention Mapping through her teaching and use of the framework in program development.

PLANNING HEALTH PROMOTION PROGRAMS

PART ONE

FOUNDATIONS

OVERVIEW OF INTERVENTION MAPPING

LEARNING OBJECTIVES

- Explain the rationale for a systematic approach to intervention development
- Describe ecological and systems approaches to intervention development
- Explain the types of logic models that can be used to conceptualize various phases of program development
- List the steps, processes, and products of Intervention Mapping
- Explain how to use core processes for developing theory- and evidence-based interventions

In this chapter we present the perspective from which Intervention Mapping was conceived as well as its purpose. We also present a preview of the program-planning framework, which is detailed in the remaining chapters.

The purpose of Intervention Mapping is to provide health promotion program planners with a framework for effective decision making at each step in intervention planning, implementation, and evaluation. Health promotion has been defined as combinations of educational, political, regulatory, and organizational supports for behavior and environmental changes that are conducive to health (Green & Kreuter, 2005), and health education is a subset of health promotion applications that are primarily based on education. We recognize this distinction but also the fact that many people in the health field practice health promotion; some of them specialize in health education. Often the boundaries are quite blurred. This book uses the terms *health educator*, *health promoter*, and *program planner* interchangeably when a subject is needed to mean someone who is planning an intervention meant to produce health outcomes. An intervention can be designed to change environmental or behavioral factors related to health, but the most immediate impact of an intervention is usually on a set of well-defined determinants of behavior and environmental conditions.

BOX 1.1 MAYOR'S PROJECT

Imagine a health educator in a city health department. The city's mayor, who has recently received strong criticism for inattention to a number of critical health issues, has now announced that a local foundation has agreed to work with the city to provide funding to address health issues. Youth violence, childhood obesity, adolescent smoking, and other substance abuse as well as the high incidence of HIV/AIDS are among the many issues competing for the mayor's attention. Not only does the allocated sum of money represent a gross underestimation of what is needed to address these issues, but also the city council is strongly divided on which health issue should receive priority. Council members do agree, however, that to dilute effort among the different issues would be a questionable decision, likely resulting in little or no impact on any single issue. As a response to increasing pressures, the mayor makes a bold political move and presents a challenge to the interest groups lobbying for public assistance. The mayor agrees to help secure funds on a yearly basis, contingent on the designated planning group's demonstrating significant, measurable improvements in the issues at hand by the end of each fiscal year.

The head of the health promotion division of the city health department has appointed the health educator to lead the project. Although apprehensive about the professional challenge as well as the complications inherent in facilitating a highly visible, political project, the health educator is encouraged by the prospect of working with community and public health leaders.

The first step the health educator takes is to put together the planning group for the project. She considers the stakeholders concerned with health in the city. These are individuals, groups, or other entities that can affect or be affected by a proposed project. She develops a list of community and public health leaders and invites these individuals to an initial meeting, the purpose of which is to expand this core group. She uses a "snowball" approach whereby each attendee suggests other community members who may be interested in this project. The superintendent of schools begins the process by suggesting interested parents, teachers, and administrators. Later these individuals may have additional suggestions. After the first meeting, the health educator has a list of 25 people to invite to join the planning group.

Twenty-five people is a lot for one group, and the health educator knows that this multifaceted group will have to develop a common vocabulary and understanding, work toward consensus to make decisions, maintain respect during conflicts, and involve additional people throughout the community in the process. Members must be engaged, create working groups, believe that the effort is a

partnership and not an involuntary mandate, and work toward sustainability of the project (Becker, Israel, & Allen, 2005; Cavanaugh & Cheney, 2002; Economos & Irish-Hauser, 2007; Faridi, Grunbaum, Gray, Franks, & Simoes, 2007). The health educator knows that she has taken on a complex task, but she is energized by the possibilities.

The composition of the city's planning group is diverse, and group members are spurred by the mayor's challenge and enthusiastic to contribute their expertise. With this early momentum, the group devotes several weeks to a needs assessment, guided by the PRECEDE model (Green & Kreuter, 1999). The members consider the various quality-of-life issues relevant to each of the health problems, the segments of the population affected by each issue, associated environmental and behavioral risk factors for each health problem, and determinants of the risk factors.

Planning group members recognize the relative importance of all of the health issues discussed by the group and they want to work with community members to ascertain what problem might be most relevant to the community and most feasible to implement.

Even though the planning group comprises many segments of the city's leadership, health sector, and neighborhoods, the members realize that they do not have a deep enough understanding of what health problems might be of most relevance in their community. A subgroup takes on the role of community liaison to meet with members of various communities within the city to discuss health problems. The community liaison group wants to understand community members' perceptions of their needs, but it is equally concerned with understanding the strengths of the communities and their unique potential contributions to a partnership to tackle a health problem. The subgroup invites members of each interested neighborhood to join the planning group. Jointly, the planning group, the communities, and the funders agree to select a problem as the focus of a health education and promotion intervention.

The group's initial work on the needs assessment identified childhood obesity as the most important problem in the community. This initial work facilitated group cohesion and cultivated even greater enthusiasm about generating a solution for the health problem; however, considerable needs assessment work remained to be done (see Mayor's Project, Chapter Four). Several members of the group even began to imagine the victory that would be had if the group were to produce a change in half the allotted time because so much of the needed background information had already been gathered. The health educator remained apprehensive about the time frame yet comfortable with the group's pace and productivity. Now that the group has decided which issue to address, it faces the challenge of moving to the program-planning phase. In her previous work the health educator had implemented and evaluated programs designed by others, but she had not

created new programs. Bolstered by its good work, the group schedules the first program-planning meeting.

What the health educator hadn't anticipated was that in the course of conducting the initial part of the needs assessment, each group member had independently begun to conceive of the next step in the planning process as well as to visualize the kind of intervention that would be most suitable to address the problem. The day of the meeting arrived, and on the agenda was a discussion of how the group should begin program planning. What follows is a snapshot of dialogue from the planning group that illustrates several differing perspectives.

School Board Member: As we see from the work of our community liaison group, parents are concerned about obesity in children. According to community development techniques, we have to start where the people are. I think we should begin by conducting a series of focus groups with parents and have them tell us what to do.

City Council Representative: But we also heard a lot about the barriers to eating good food and exercising. Some of these barriers are environmental. I think we ought to develop a program for the Department of Parks and Recreation.

Community Member Parent: Well, I think a school-based program is most important. Our children need to learn what to eat.

Community Member/Teacher: Yes, educating children is a factor, but what about the quality of food they are served at home and in the schools?

Community Agency Participant: I think the program should focus on television watching and sedentary behavior. All community members just need to get up and move!

Parks and Recreation Representative: We are talking about one dimension of the problem at a time. This is a very big, very complicated problem. How will we ever address everything? Maybe it is just too big. Maybe we need to take on a simpler problem.

Religious Leader: Well, it is big. Maybe we will need an agency coordinator. I say we find a nonprofit group to serve as a community coordinating center from which various interventions and services can be implemented. That way, programs are sustainable and a variety of activities can be offered.

Youth Club Board Member: One of the national obesity programs has great brochures and videos—in three languages. We have numerous testimonials from