Essentials of Planning and Evaluation for Public Health

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Dedication

Kevin
My husband
1950–2014
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Preface

This text was written for undergraduate public health students enrolled in an introductory course related to program planning and evaluation. The chapters are divided into a sequential order that forms the foundation for the knowledge needed to understand basic evaluation projects. This text is not intended to achieve complete understanding or proficiency in the complex subject of program planning and evaluation and research needed in the field of public health. However, the chapters provide an overview of topics needed to review published literature, collect primary data, analyze data using basic statistics, and present results in written or verbal formats for intended audiences.

The first three chapters set the stage for program planning and evaluation. Chapter 1 explains the differences and similarities between evaluation and research along with how to review literature and develop measurable goals and objectives. Chapter 2 introduces ethics, which is a core element in program planning and evaluation and needs consideration during the development phase. Chapter 3 explores determinants of health, such as health disparities and access to health care. Without attention to social determinants, evaluators miss the key elements in the lives of their target audience that influence health outcomes.

The next several chapters define terms and concepts that should be understood prior to planning an evaluation. Chapter 4 introduces various types of theories and models along with examples from current literature on how the theories and models have been used as the framework for project development. The list of theories and models is not intended to be comprehensive, but rather an introduction to examples. Chapter 5 defines the concepts of reliability and validity as well as random and systematic errors. The chapter ends with a detailed description of how to conduct a pilot test and why pilot testing is essential. Chapter 6 explains the similarities and differences between qualitative and quantitative data, then goes on to provide a more detailed discussion related to types and methods utilized in qualitative data.

The next two chapters provide information about study design and survey development. Chapter 7 presents some basic tools for study design, including types of variables, group assignment, constructs, and operational definitions. After these concepts are explained, the three basic types of study design (true experimental, quasi-experimental, and nonexperimental) are defined and examples are provided to enhance understanding. Chapter 8 focuses on survey design, including types of surveys and how to select them. Various tests, inventories, and scales are introduced along with examples and reasons for selecting one survey type over another. A discussion of how culture and diversity influence data collection is included near the end of the chapter.

Chapters 9, 10, and 11 focus on basic skills related to data analysis. Chapter 9 introduces how data are classified as categorical or continuous and then organized using frequency distributions. Building on this knowledge, the concepts of measures of central tendency, the normal curve, standard deviation, and variance are explained in detail. This chapter serves as the foundation for understanding the next two chapters. Chapter 10 describes terms related to population and samples. There are three main topics covered: sample size considerations, probability and nonprobability samples, and sampling bias. Each topic deserves substantial consideration when determining the sample size needed for any evaluation or research project. Chapter
11 introduces inferential statistics and defines the terms *scientific hypothesis*, *research questions*, *null hypothesis*, and *alternative hypothesis*. The next section presents basic statistical tests (e.g., chi-square, *t*-tests, and correlation coefficients). The chapter ends with a discussion of type I and type II errors.

The last four chapters provide skills related to budgets, reports, and presentations, culminating in a case study. Chapter 12 is divided into two sections. The first section describes various types of budgets and budget justifications. The second section defines the types of cost analyses and how each type is used. Chapter 13 illustrates several ways to present results, including abstracts, executive summaries, reports, manuscripts, posters, and verbal presentations. Chapter 14 is a lengthy case study covering all aspects of program planning and evaluation presented in this text.
Essentials of Planning and Evaluation for Public Health by Kay Perrin, PhD, MPH is an important addition to our Essential Public Health series. It provides the ideal text for an undergraduate course in program planning and evaluation, which is an increasingly important part of public health education at all levels.

The Recommended Critical Component Elements of an Undergraduate Major in Public Health expect that all undergraduate public health majors, including those in health education, will “know the fundamental features of project implementation and evaluation.”1 These “critical component elements” are now being used by the Council on Education for Public Health (CEPH) as part of the criteria for accreditation of undergraduate public health majors. The Essentials of Planning and Evaluation for Public Health will aid in accomplishing this objective.

Dr. Perrin’s book includes many important features that will appeal to a wide range of students. Dr. Perrin provides an accessible, engaging, and active participation text. As she describes in the Preface, it is organized in a step-by-step process that introduces undergraduates to all of the key elements of program planning and evaluation. The text makes extensive use of case studies for public health applications. Her treatment of quantitative methods is accessible, requiring only a minimum of mathematics. Overall, Dr. Perrin’s text is clear, easy to read, and has a personalized style of writing that makes learning both productive and enjoyable.

Dr. Perrin is widely recognized for developing new styles of teaching that engage students inside and outside the classroom. Her extensive and creative teaching experience is evident in every chapter of the text. Dr. Perrin brings to her writing extensive experience teaching and applying principles of program planning and evaluation. Her clinical and public health research background provides the perfect combination to understand the roles and goals of program planning and evaluation.

Finally, on a personal note, Kay Perrin was recently presented the Riegelman Award for Excellence in Undergraduate Public Health from the Association of Schools of Public Health. I was delighted that she was chosen, especially knowing that I had nothing to do with the selection process. Dr. Perrin’s nominator wrote that she “continues to foster excitement about the field of public health in the undergraduate arena . . . and most importantly nurture future public health leaders through her unwavering commitment to undergraduate public health education.” I couldn’t agree more.

I’m delighted that Kay Perrin’s work is now a part of our Essential Public Health series. I’m confident that you will find it to be an important addition.

Richard Riegelman, MD, MPH, PhD
Editor, Essential Public Health series

During process of writing this book, I received assistance and support from numerous family, friends, and colleagues.

Kevin, my husband, supported me through the many weekends that were consumed with writing. He allowed me the opportunity to fulfill my dream.

Laura Merrell, public health doctoral student, edited each chapter with great attention to detail. Her superb skills greatly contributed to the quality of this text.

Dr. Richard Riegelman provided guidance and mentoring as I embarked on writing this text. His constructive comments improved the overall quality of this text.

Dr. R. Clifford Blair offered valuable advice throughout the process. As a biostatistician and author, he offered humor and encouragement whenever I was exhausted.

After decades of teaching courses and engaging in community service, hundreds of public health students have taught me the skills and expertise needed to write this text.

University of South Florida, College of Public Health granted me time to complete this public health text.

Most educators say that the best way to learn a subject is to teach it. After writing two textbooks, I have revised this advice to say:

“The best way to learn a subject is not to teach it, but rather to write a book about it.”