EVIDENCE-BASED PRACTICE FOR HEALTH PROFESSIONALS
An Interprofessional Approach

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The concept for this book was born of the need for a text to accompany a course in evidence-based medicine and biostatistics. These topics are taught early in many health professional training programs across the country and around the world. Although useful and informative resources are available on these topics, many of them are geared toward experienced clinicians or designed to prepare students to perform biomedical research. The content and organization of this book emerged and solidified over years of teaching physician assistant, public health, nursing, and dental hygiene students.

This entry-level textbook for health professional students explores the basic concepts of evidence-based practice with a clinical emphasis. The text utilizes cases and examples derived from primary care. A pragmatic strategy is employed in this book, teaching the skills needed to access, interpret, evaluate, and apply evidence to interprofessional, patient-centered healthcare decisions. Practice exercises are included to provide applied learning experiences. These activities engage students in communication about evidence-based practice with other health professionals, patients, families, and professionals in related fields, including pharmaceutical representatives.

One of the most frequent encounters healthcare providers experience with healthcare-related evidence is through the pharmaceutical sales pitch. This textbook gives readers the knowledge and tools to make self-informed, evidence-based decisions and to communicate effectively with professionals in the pharmaceutical and other healthcare-related industries. The book also reviews common biomedical research and statistics terminology. A glossary of terms is also included.

**OBJECTIVES AND THE NEED FOR THIS TEXT**

Evidence-based practice (EBP) is a powerful tool for healthcare providers. This book is designed to help readers achieve two objectives related to EBP: (1) to locate, interpret, evaluate, and apply research to the care of individual patients and (2) to communicate effectively about research to patients, colleagues, and other professionals. Many books and resources are available to help practitioners understand the array of sophisticated concepts involved with EBP. Too often, however, these resources focus on statistics and research, emphasizing how to design and conduct clinical
studies. Although these skills are important for researchers, they are less relevant for healthcare students and educational programs whose interests focus on quality clinical practice.

Other EBP resources with a more clinical emphasis have been written outside of the United States. The concepts, language, and examples in these texts do not fit with the healthcare system in the United States. Lastly, other books on EBP remain highly abstract, offering no applied learning experiences. This textbook provides meaningful learning activities through communications such as writing a letter to an insurance company, explaining the evidence regarding treatment to a patient, selecting a diagnostic tool, and designing community-based educational materials. These brief applied-learning experiences, along with clinical case studies, help students bridge the gap from the abstract concepts of research, statistics, and technical jargon to the concrete skills of healthcare decision making and communications.

INTENDED AUDIENCE

This book was developed for teaching EBP to college students who have a basic science and statistics background. We have written with medical, dental, physician assistant, nursing, dental hygiene, pharmacy, rehabilitative professions, and public health programs in mind. This textbook is intended to be incorporated into the larger curriculum of entry-level training programs. It is designed to accompany a semester-long course in EBP. We presume the readers of this book also have a set of primary textbooks and other references appropriate for their training programs.

ACCREDITATION AND PROFESSIONAL STANDARDS

Satisfaction of accreditation standards is just one reason for programs to teach EBP. It was also one of the reasons this book was written. For example, accrediting bodies for schools of allopathic medicine, osteopathic medicine, physician assistant studies, dental hygiene, and nursing require the teaching of EBP. Here are a few examples of accreditation standards related to EBP and evidence-based nursing.

The Liaison Committee on Medical Education (LCME) is the national accrediting authority for medical education programs leading to the MD degree in the United States and Canada. Its education standard number 6 states:

The curriculum of a medical education program must incorporate the fundamental principles of medicine and its underlying scientific concepts; allow medical students to acquire skills of critical judgment based on evidence and experience; and develop medical students’ ability to use principles and skills wisely in solving problems of health and disease. (www.lcme.org/functions2010jun.pdf)

Predoctoral osteopathic schools of medicine are accredited by The American Osteopathic Association’s Commission on Osteopathic College Accreditation (COCA). The core competencies of the COCA state:

At minimum, a graduate must be able to: (1) Demonstrate basic knowledge of osteopathic philosophy and practice and osteopathic manipulative treatment; and, (2) Demonstrate medical knowledge through one or more of the following: passing of course tests, standardized tests of the NBOME, post-core rotation tests, research activities, presentations, and participation in directed reading programs and/or journal clubs; and/or other evidence-based medical activities. (www.do-online.org/pdf/8B03-Standards_of_Accreditation_July%201.%202010.pdf)

The Commission on Collegiate Nursing Education (CCNE) accredits nursing programs. The CCNE’s standards call for nursing programs to incorporate guidelines from the AACN (American Association of Critical-Care Nurses). The AACN includes a host of expectations related to evidence-based nursing, which are too lengthy for purposes of this discussion. However, we include one of the AACN
Professional nursing practice is grounded in the translation of current evidence into practice. Scholarship for the baccalaureate graduate involves identification of practice issues; appraisal and integration of evidence; and evaluation of outcomes. As practitioners at the point of care, baccalaureate nurses are uniquely positioned to monitor patient outcomes and identify practice issues. Evidence-based practice models provide a systematic process for the evaluation and application of scientific evidence surrounding practice issues. . . . Dissemination is a critical element of scholarly practice: baccalaureate graduates are prepared to share evidence of best practices with the interprofessional team. (www.aacn.nche.edu)

Physician assistant (PA) programs are accredited by the Accreditation Review Commission on Education for the Physician Assistant (ARC-PA). Regarding the PA curriculum, the most recent ARC-PA standards state:

The curriculum establishes a strong foundation in health information technology and evidence-based medicine and emphasizes the importance of remaining current with the changing nature of clinical practice.

The ARC-PA holds PA programs to the following standard:

The program curriculum must include instruction to prepare students to search, interpret and evaluate the medical literature, including its application to individualized patient care. (www.arc-pa.org)
The three lead authors would like to thank all of the people who contributed to this text, both directly and indirectly. We want to thank our contributing authors Gloria A. Jones Taylor, DSN, RN; Barbara J. Blake, PhD, RN, ACRN; and D. Dennis Flores, BSN, ACRN.

It took 3 years to fully realize this book, and 14 years of education for this project. As such, my husband, Richard, and my sons, Jacob and Calvin, have committed as much of their lives to this book as did I. The writing of this book was, in some ways, similar to competing in a professional car race. If a racecar driver alone tried to compete, he or she could not get past the starting line. The car and the race require a team. My team included my co-authors, my immediate and extended family, my friends, many of my colleagues, my students, and the teachers whose classes I took during my education. Ellen Rogo has been a colleague, mentor, and friend for many years. I wish to thank her for everything she has taught me. Teresa Shelton was once a student who took an EBP course from me and has since become both a friend and valued colleague. My family members were unwavering in their confidence in me throughout this project, as were my colleagues and students. I will be forever grateful to the students who have taken my EBP courses—they are the reason I wanted to write this book. I wish to acknowledge Teri Peterson, the statistician for the Division of Health Sciences at Idaho State University. Through my work with Teri on countless research projects over the years I gained a deep understanding of research and appreciation for the importance of a team approach to research. I want to thank Kate Erickson, Rebecca Hall, Jessica Fullmer, and Kathy Evans. They are exceptional students, researchers, and scholars from Idaho State University who worked closely with me throughout the process of developing this book. I wish to thank the teachers and staff at Holy Spirit Catholic School, in Pocatello, ID, whose demonstration of outstanding education and steadfast support of my family has been a constant inspiration to me. I am sorry I cannot identify by name everyone who has been by my side throughout this process. I hope you all know how very grateful I am.

Bernadette Howlett, PhD

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Jim, and my grandparents provided unconditional love and ongoing support as a valuable gift to me throughout my journey. My grandmother Mary, as a spiritual icon, helped me realize the many blessings in my life, and to live life by values that are important. My own family has been a significant inspiration for my professional endeavors. To my husband, Paul Rogo, I appreciate your ability to keep me grounded in reality and for the adventures that provided relaxation during my scholarly pursuits. My son Paul Marco, I thank you for your support and being proud of my accomplishments, as I am proud of yours. To Jason, my youngest son, I am eternally grateful for your ongoing computer and technical support to complete this project; your talents continue to impress me. My mother-in-law, Ruth Rogo, has always been proud of my accomplishments as a working mother and I thank her for her support. To my grandsons, Braxton and Gunner, I wish you a lifetime of love, happiness, and success. It has been an honor and a privilege to work with Bernadette Howlett. Her wealth of knowledge of evidence-based practice and her dedication and commitment to the writing of this textbook are noteworthy. I cherish the hours we spent together and the laughs we had. To Teresa Shelton, thank you for your valuable insights into the pharmaceutical industry.

Ellen J. Rogo, RDH, PhD

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In addition to teaching in a graduate PA program, Dr. Howlett has also taught graduate-level classes for nurse practitioner, dental hygiene, and public health programs. She also taught a freshman seminar course for more than 10 years. Dr. Howlett has coordinated and designed clinical trials, and has written numerous publications, national paper presentations, and international conference presentations. She is a recipient of the John L.V. Bobell Award for Outstanding Dedication and Devotion to the Field of Adult Learning from the American Society of Training and Development.

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qualitative research investigations on clinical and educational topics.

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