EVIDENCE-BASED NURSING: A GUIDE TO CLINICAL PRACTICE

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Ai miei genitori, NICOLINA E FRANCESCO DI CENSO, con eterna gratitudine per i loro immensi sacrifici, che mi hanno permesso di raggiungere importanti traguardi nel corso della mia vita.

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The words *evidence-based nursing* (EBN) are on the lips and in the minds of nurses around the world. They ask, “What is it?” “How is it practiced?” and “When will I know I’m acting on solid evidence that will benefit patients?” Nurses also query about tools, resources, and services to improve their knowledge, competency, and skills in order to fully engage in EBN.

The EBN era is upon us in health care, and nurses need not wait any longer for solutions to their inquiries about it! This much needed book, *Evidence-Based Nursing: A Guide to Clinical Practice*, provides answers and how-to’s for practitioners, faculty, and students, enabling them to frame clinical questions in a way that supports finding and using evidence. It illustrates how to identify and distinguish between strong and weak evidence, clearly understand study results, weigh the risks and benefits of clinical management options, and apply the evidence to individual patient needs and preferences in order to improve outcomes.

Written by world-renowned leaders in the EBN field, this resource also brings together the best thinking on EBN through its editors, contributors, and editorial board members. This team from 13 countries creates and presents a comprehensive, cutting-edge resource that will help nurses implement evidence-based care around the world. Its unique approach provides nurses with tools for using and evaluating nursing literature, clinical scenarios, and case presentations that stimulate critical thinking toward problem resolution, appropriate interventions, and desired outcomes.

Sigma Theta Tau International made a commitment to being a leading source of knowledge and resources that foster EBN practice globally, and in 2003 the Honor Society issued the following position statement on EBN:

The Honor Society of Nursing, Sigma Theta Tau International, defines EBN as an integration of the best evidence available, nursing expertise, and the values and preferences of the individuals, families, and communities who are served. This assumes that optimal nursing care is provided when nurses and health care decision-makers have access to a synthesis of the latest research, a consensus of expert opinion, and are thus able to exercise their judgment as they plan and provide care that takes into account cultural and personal values and preferences. This approach to nursing care bridges the gap between the best evidence available and the most appropriate nursing care of individuals, groups, and populations with varied needs.

To underscore this commitment, the Honor Society formed strategic partnerships with international organizations centered on EBN; launched a peer-reviewed, quarterly...
journal, Worldviews on Evidence-Based Nursing; and produced and distributed multiple on-line courses and resources. Providing knowledge resources on EBN fulfills the Honor Society’s goal to develop, disseminate, and promote knowledge use for service of others.

This text is an excellent resource that fosters and promotes EBN practice, and the Honor Society commends it to nurses around the world as a valuable asset for enhancing the health of all people.

Enjoy, read, and expand your knowledge—for soon EBN will not just be on nurses’ lips and minds, but in these nurses’ every action and the resulting outcomes.

Nancy Dickenson-Hazard, RN, MSN, FAAN
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The term evidence-based nursing (EBN) was coined only 10 or so years ago; yet, in this short time, the concept has become central to the nursing profession around the world. Major international nursing organizations such as Sigma Theta Tau International have incorporated the promotion of evidence-based practice into their strategic plan. Centers for EBN have sprung up around the world. The journal, Evidence-Based Nursing, first published in 1998, and its associated Web site enjoy a high subscription rate. EBN courses are being developed and incorporated into many nursing education programs. Health care agencies have struck EBN committees, and governments around the world are encouraging evidence-based practice. We are pleased to contribute to this growing movement by offering this book.

As we will discuss in more detail in Chapter 1, Introduction to Evidence-Based Nursing, evidence-based practice is the integration of best research evidence with clinical expertise and patient values to facilitate clinical decision making. While research has repeatedly shown that nurses are highly motivated to be evidence-based practitioners, it has also shown that most nurses, especially those educated more than 10 years ago, lack the skills to discriminate high quality research from that which is flawed and to interpret the results of research studies. This book is designed to help readers learn these skills.

 HOW DID THIS BOOK COME ABOUT? 

Between 1993 and 2000 the Evidence-Based Medicine Working Group, led by Gordon Guyatt, produced a series of 25 “Users’ Guides to the Medical Literature” that were published in JAMA. This series, which outlined criteria to identify high-quality research, proved very popular not only in medicine but also in other health professions. At McMaster University, many of these guides formed the foundation for the Critical Appraisal of Data undergraduate nursing course. In 2002, Guyatt and his colleagues updated these guides and incorporated them into a book entitled Users’ Guides to the Medical Literature: A Manual for Evidence-Based Clinical Practice, published by AMA Press.

 Even as Guyatt and his colleagues prepared the Users’ Guides book, we began to discuss the possibility of adapting their book to create a much needed nursing version. Both AMA Press and Elsevier were interested, and as a result, Evidence-Based Nursing: A Guide to Clinical Practice became a reality. As with the Users’ Guides book,
Evidence-Based Nursing is available in both print and electronic format. Robert Hayward has taken primary responsibility for translation of the material into CD-ROM format. Rob and his team have done a magnificent job with the electronic version.

WHO SHOULD READ THIS BOOK?

Any nurse who wishes to understand the health care literature, and to use it more effectively in solving patient problems, will benefit from this book. Those who wish to develop a core knowledge of basic concepts will read Part I of the book thoroughly and delve into Part II only for issues that catch their particular interest. Most undergraduate nursing students and clinical nurses will likely be satisfied with this level of understanding. They will find Part I filled with case scenarios and clinical examples that facilitate their understanding, and they will also uncover tips for finding the best information and applying it to their practice.

Those who wish to reach a higher level of proficiency in using the health care literature in patient care, administration, and teaching will find the in-depth discussions in Part II useful. Nurses involved in delivering continuing nursing education, nursing faculty, and graduate nursing students will wish to master the concepts we present in Part II.

A NOTE ABOUT AUTHORSHIP

As noted above, many of the book chapters were adapted from chapters that originally appeared in the Users’ Guides book. The contributors to this nursing text are the editors or colleagues who took responsibility for making the required modifications to the original chapters. Upon completion, most chapters were sent to members of the editorial board for review. We acknowledge those who provided input immediately below the chapter author byline. Below this line, we acknowledge those who wrote the original version of the chapter for the Users’ Guides book, and thank them for kindly consenting to the adaptation of their original chapter for inclusion in this text.

A number of chapters that do not appear in the Users’ Guides book were identified as important to a text on EBN. These included Chapter 1, Introduction to Evidence-Based Nursing; Chapter 11, Changing Nursing Practice in an Organization; and Chapter 17, Health Services Interventions.

Grounding nursing practice in evidence, rather than tradition, is necessary to (1) provide high quality nursing care, (2) meet nursing’s social obligation of accountability, (3) gain and maintain credibility among other health disciplines, and (4) build a nursing knowledge base that can be used to influence policy in both health care organizations and government. Using this book, nurses can acquire the necessary knowledge and skills to become evidence-based practitioners.

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We thank our students who through their motivation for advanced knowledge strive to improve health care delivery. They helped us to clarify our ideas and provided encouragement and support during the preparation of this book. We are also grateful to the authors of the original chapters that appeared in the Users’ Guides to the Medical Literature: A Manual for Evidence-Based Clinical Practice, edited by Gordon Guyatt and Drummond Rennie. They kindly provided permission for the adaptation of their work for this nursing text. We thank those who contributed chapters to this book, often under tight time constraints. Many colleagues on our editorial board read chapters and provided their reactions and suggestions; for all of this we are most thankful. Marielle Layton and Tanya Voth worked efficiently behind the scenes to translate the material into an electronic format. Thank you both for your important contribution.

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Like evidence-based nursing (EBN), this book is about clinical decision making. In particular, our objective is to make efficient use of the published literature to help with patient care. What does the published literature comprise? Our definition is broad. Evidence may be published in a wide variety of sources, including original journal articles, reviews and synopses of primary studies, practice guidelines, and traditional and innovative nursing textbooks. Increasingly, clinicians can most easily access many of these sources through the Internet.

PART I: THE BASICS: USING THE NURSING LITERATURE

Part I of the book covers the basics: what every nursing student and practicing nurse should know about reading the health care literature. We kept this part as succinct as possible. From an instructor’s point of view, Part I constitutes a curriculum for a course to teach nursing students how to use the literature; it is also appropriate for a continuing education program for practicing nurses.

Part I of this book teaches a systematic approach that involves three steps to using an article from the health care literature. Nurses should ask whether the study is of sufficiently high quality that the study findings are likely to be true, what the study findings are, and how this information can be used in their nursing practice. In the first step, the nurse considers the likelihood of bias in the way the study was carried out. In the second and third steps, the nurse comes to understand the results and to apply those results to practice. To help demonstrate the clinical relevance of this approach, we begin each chapter with a clinical scenario, demonstrate a search for relevant literature, and present a table that summarizes criteria for the three steps.

A wide array of preprocessed (or prefiltered) evidence-based resources already exist, and most are easily accessed by computer. The number and quality of these resources are certain to increase dramatically during the next few years. Chapter 2, Finding the Evidence, will teach you how to identify the right databases—ones providing evidence that is both valid and applicable to your practice—and to efficiently find the information you want within them. The remaining chapters in Part I will teach you how to make optimal use of what you find to address clinical problems. A challenge that faces nurses once they have identified strong evidence for a change in nursing practice is mobilizing that change in their work environment. To assist with this, the last chapter in Part I, Changing Nursing Practice in an Organization, describes a framework for adopting an evidence-based innovation in the workplace.
Mastering the concepts in Part I will help you to ensure that your practice is evidence-based. From Part I, you will learn the following:

- How research evidence fits into clinical decision making
- How to efficiently find the best evidence
- How to distinguish stronger evidence from weaker evidence
- How to conduct a detailed critical appraisal, summarize the evidence, and balance the benefits and risks that should precede clinical decisions
- How to apply evidence from the literature to your nursing practice and, in particular, how to individualize the application to each unique patient
- How to change nursing practice in an organization

You need not read all of Part I. The book is designed so that each chapter is largely self-contained. If all you need is guidance on formulating and carrying out searches, read only Chapter 2. If the only original articles you are interested in are primary studies that seek to evaluate a nursing intervention and systematic reviews of those studies, read only Chapter 4, Health Care Interventions and Chapter 9, Summarizing the Evidence Through Systematic Reviews. We avoided excessive redundancy, so there are times when rather than repeating a concept common to two or more chapters, we refer you to the original chapter in which it is described. You will find such instances clearly denoted.

PART II: BEYOND THE BASICS: USING AND TEACHING THE PRINCIPLES OF EVIDENCE-BASED NURSING

Part II of this book is directed to nurses who want to practice EBN at a more sophisticated level. Reading Part II will deepen your understanding of study methodology, statistical issues, and effective use of the numbers that emerge from health care research in helping patients make the best health care choices. We wrote Part II mindful of an additional audience: those who teach evidence-based practice.

You need not read Part II from beginning to end in the order presented. Our intent is for you to read sections of Part II as the need arises when considering issues that emerge in critical appraisal and application of articles that may guide your clinical nursing practice. How should you use Part II? Many of the chapters include more detailed discussion of concepts introduced in Part I. For instance, in Part I, Chapter 4, Health Care Interventions, we introduce the concepts of intention-to-treat and number needed to treat. For those interested in more detailed discussion of these concepts, Part II includes chapters specifically focused on these concepts (Chapter 15, The Principle of Intention to Treat, and Chapter 32, Number Needed to Treat).

Thus, we anticipate that clinicians may be selective in their reading of both parts of this book. On the first read, you may choose only a few chapters that interest you. If, as you use the health care literature, you find the need to expand your understanding of specific concepts, you can return to the relevant chapter to familiarize or reacquaint yourself with the issues.

Throughout the book, we have used clinical examples to illustrate the concepts. As much as possible, we have used examples of direct relevance to nursing practice. However, there were times when the concepts were best illustrated using examples that
were more medically focused. While these examples may not have direct relevance to all nurses, they do often have relevance to advanced practice nurses in primary health care and acute care settings. As nursing research continues to grow and develop, it will be easier to find illustrations that are more broadly applicable to nursing practice.

Some may find the CD-ROM version more convenient to use as the core content of the textbook is rendered to a format suitable for viewing, browsing, and searching on personal computers. All illustrations and tables are in a form suitable for electronic display, and there is a consistent navigational, iconographic, and graphical interface. Hypertext links allow you to quickly move from one section to another and to access glossary definitions and reference abstracts as you read. Interactive tools such as wizards, calculators, and worksheets allow you to work with the materials in ways that are not possible with the printed textbook and provide alternative ways for learning key concepts. We hope that this organization and functionality is well suited to the needs of any nurse who is eager to achieve an evidence-based practice.