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EVIDENCE-BASED PRACTICE

An Integrative Approach to Research, Administration, and Practice

SECOND EDITION

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Dedication

To the many colleagues, students, and friends who assisted in making this book possible—every contribution is important. This book is also dedicated to Helen.

Heather R. Hall

I am most appreciative of our contributors and stakeholders who create healthcare environments that translate best practices for improvement. Thank you for your tireless efforts, commitment, and relentlessness to safe, quality care for those we are privileged to partner with in innovation and sustained improvement.

Linda A. Roussel

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Foreword

The rapid unfolding of new knowledge in contemporary nursing and the other disciplines that impact nursing, specifically medicine and other healthcare professions, is both a blessing and burden to our large community of clinicians, practitioners, educators, executives, and all others involved in nursing in some capacity. We are blessed by being part of a "living discipline" that is on the cutting-edge of developing, implementing, and evaluating new health information that can directly and indirectly the lives and communities of people across the globe. For this reason, during the Great Recession of 2007–2009, data indicate that industries with the largest volume of employment growth were internet-related, hospitals and health care, health, wellness and fitness, oil and energy, internet technology, and renewables (Nicholson, 2012). In addition, as reported in the *New York Times* in 2014, the largest middle-wage industries with the greatest growth potential were overwhelmingly in health care (Ashkenas & Parlapiano, 2014). These indicators point to nursing being thoroughly part of the growing knowledge economy, resulting in very high growth in our BSN, master's, and DNP programs (American Association of Colleges of Nursing [AACN], 2015).

But we are also burdened by the difficulties of managing this rapid knowledge expansion, and bedside nurses are specifically challenged by the realities of all the data they are required to report and outcomes they are accountable for that are tracked and measured on every shift. We are also challenged to come out of our comfortable nursing silos and be more visible members and leaders on today's modern interdisciplinary and interprofessional healthcare teams. Hall and Roussel's second edition of their book, *Evidence-Based Practice: An Integrative Approach to Research, Administration, and Practice*, is a significant contribution to professional, advanced, and doctoral advanced nursing practice because its editors and contributors seek to better navigate this sometimes contradictory world of the critical appraisal of research findings that is essential to any nursing practice. Individuals or patients can now go on the Internet to investigate their illnesses or conditions and easily be overwhelmed by what various websites indicate they should or should not eat, for example. It is the nurse's role, as health educators at all levels, to synthesize this information and, based on an evaluation of the best evidence, including

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using the new Joanna Briggs Institute Levels of Evidence (2014), share their professional assessments. In this new data-driven world even competent managers and leaders are expected to make decisions based on evidence. Thus, the scholarship of administrative practice, an emphasis in Part II of this book, is an important contribution. Good management and leadership (and good teaching!) require mastery of specific advanced content, and the idea that an excellent clinical nurse can instantly become an excellent manager or teacher should have been dispelled by now. Today's successful administrator, really no matter the discipline, must not only have expertise in improvement and healthcare safety science, but also keen interpersonal skills and the ability to persuade others while mastering the art of listening.

The third section of this text focuses on the scholarship of clinical practice. This is certainly one of the more challenging topics with which to generate consensus. Everyone knows what clinical practice looks like. But what is the "scholarship" of clinical practice? This text suggests that it is evidence that is disseminated in some professional manner. The question that remains is how are professional, advanced, and doctoral advanced practice nurses educated and mentored to disseminate their knowledge that might enhance care and improve the health of aggregate populations. It is accepted that the PhD-prepared nurse in most settings is supposed to publish research. But DNP-prepared nurses have been sent very confusing messages, likely during their education, about what constitutes their role in the relationship to the generation of evidence. Although some attest that the PhD should generate evidence and the DNP not generate but instead evaluate and translate evidence into practice, this view is an oversimplification and not practical or even helpful to the discipline. It is almost impossible to draw finite distinctions among mathematical, basic, applied, clinical, and translational science, even in nursing science. The generation of "practice evidence" ought to be the chief domain of the DNP student and graduate (Dreher, 2015), where the generation, implementation, and evaluation of evidence is constructed along collaborative healthcare disciplinary guidelines that are understood by all.

Hall and Roussel also revisit the use of theoretical and conceptual models that can guide clinical practice. This is an excellent, often neglected perspective that is emphasized in this new book. My own School of Nursing has used a human-caring, holistic model of care that has guided our curriculum at the baccalaureate and masters (and soon doctoral) levels for several decades. In a time in which our experience with knowledge management (just look at the size of current undergraduate nursing texts!) and the acquisition of specific clinical skills has perhaps marginalized to some degree our focus on the interpersonal and ethical aspects of nursing care in baccalaureate and master's nursing education (I note the reduction at least in the prominence on the emphasis of ethics in the revised 2011 AACN's *Essentials of Master's Education in Nursing*), this text revisits the inherent value of guiding principles that should be overt, not covert or mostly invisible, in any mission statement or degree learning outcomes. In my own time as Dean, I have encouraged the faculty to be more explicit in

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our mission and framework in our various curricula. Moreover, it has been satisfying to our health agency partners that we emphasize core elements of our human-caring, holistic framework that they indeed later see when they hire our graduates.

Nursing remains a vibrant profession and the focus on healthy eating, exercise, integrative health, and other self-care activities must be driven by evidence and science that our nursing profession can determine advances health and wellness and improves palliative and end-of-life care. The recent emergence and use of big data in nursing prominently discussed at the closing plenary at the 2016 AACN Doctoral Conference in Naples, Florida will be an important challenge to us as a profession (Corwin et al., 2016). The healthcare sector is increasingly requiring that we better defend what we do and be fully accountable for our direct nursing-sensitive outcomes in particular. I am reminded that I recently wrote that even with the move to more evidence-based and practice-based nursing practice that we be cautious to avoid any "consequential reductionist effect on nursing care delivery . . . [that may] . . . possibly interfere with or oversimplify the uniqueness of every single nurse-individual/family interaction" (Dreher, 2015, p. 4). It is evident that Hall and Roussel have navigated this balance of evidence and contemporary nursing practice, especially as interdisciplinary healthcare teams benefit from the visibility and active participation of the highly educated nurse.

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Preface

We are privileged to be part of the ongoing dialogue that informs healthcare education in the 21st century. We are honored to be given continued opportunities to offer up our lived experiences in research, administration, and practice in putting together this collaborative effort shaped by our work with patients, students, stakeholders, and colleagues.

The first edition of this work began as an effort to better guide our graduate students in their understanding of the research, evidence-based practice (EBP), and quality improvement connection. We have observed students struggling with the magnitude of scientific studies and the complexity of health systems. This led to a discussion between the two of us related to the need for better models and structures to frame EBP from learning, translation, and application experiences. From ongoing feedback from our students, patients, and colleagues, we noted the disconnect between students' overall practice experience with research and the use of evidence. We, as editors, were inspired by our experience teaching doctoral students and guiding them through what was for many their first experience with EBP and quality improvement translation in health care. Gaps were identified in the foundational knowledge when graduate students entered into coursework, as evidenced by their confusion about asking the clinical question, finding the best research evidence, and synthesizing the volumes of studies, as well as their limited critical appraisal skills. Following this through, we noted difficulties with translating evidence into practice and connecting improvement and team science to the process of change and innovation. Although there is much respected literature, we wanted a book that would be user friendly and filled with great examples, tools, and reflective questions. In addition, the book needed to be relevant throughout the student's educational experience.

We believe that combining our own personal experiences and those of our contributors will be beneficial to multiple disciplines. This work has continued to evolve up to the final edits of the second edition. We live in a fast-paced health system that demands that we move forward as we reflect on our past and create our future. These experiences, along with our own search for meaning, have shaped our scholarship and professionalism. We have had a

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number of iterations and deep reflections, which were necessary for our own scholarship. In the spirit of these reflections and the synthesis of this work, we were able to extract the necessary components of research, administration, and practice.

The book has three components: Part I: Critical Appraisal of Research to Support Scholarship, Part II: Scholarship of Administrative Practice, and Part III: Scholarship of Clinical Practice. Each component consists of chapters that provide detailed, specific information on the targeted area. Each chapter has learning objectives, key ideas, and reflective activities. As we expanded our own understanding and application of EBP and improvement science, we included the wisdom and struggles from our international colleagues. The future of safe, quality care depends heavily on our ability to integrate our research, administrative, and clinical practices through intercollaborative teams.

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INTRODUCTION

Interdisciplinary Collaboration and the Integration of Evidence-Based Practice

■ Heather R. Hall and Linda A. Roussel ■

Identified gaps in the application of research and knowledge have affected policy changes in education and practice in health care. Such gaps have proved costly in terms of patient outcomes, death notwithstanding. Freshman, Rubino, and Chassiakos (2010) described collaboration in the healthcare setting as a coming together of professionals that occurs among the healthcare team. Professionals from multiple disciplines come together to increase collaborative efforts to add value and improve communication processes. Additionally, collaboration among the healthcare team enhances understanding of system processes. The system includes a variety of disciplines responsible for the patient; integrative collaboration is a cornerstone of successful patient care (Freshman et al., 2010).

Goldman and Kahnweiler (2000) provide a classic definition of collaboration as "a mutually beneficial and well defined relationship entered into by two or more organizations to achieve common goals" (p. 435). Collaboration across professions and nations is being encouraged by higher education institutes and research and health organizations (e.g., World Health Organizations [WHO], International Council of Nurses [ICN], and Sigma Theta Tau International [STT]). These collaborations are particularly being encouraged in research and scholarly activities to identify best practices across the world (Uhrenfeldt, Lakanmaa, Flinkman, Basto, & Attree, 2014).

Uhrenfeldt et al. (2014) identified two key factors related to international scholarly collaboration that were consistent with the literature. These factors include "Facilitators" and "Barriers" that encompassed "both the individual (micro) and contextual/organizational (meso/macro) level factors" that either supported or obstructed collaboration (Uhrenfeldt et al., 2014, p. 495). In regard to Facilitators, personal attributes that assist with collaboration at the micro level include obligation, common goals, aiming to succeed and develop, and enthusiasm. Factors related to the contextual and organizational factors that are essential to collaboration at the meso and macro level include coordination, organization, networks, occasions, funding, and guidance by others. Inhibiting "Factors/Barriers" identified from the analysis included

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Table 1 Literature Review Search and Results

Database	*Search terms and combinations*	*Limitations*	*Hits*	*Included after abstract review*
Medline (OVID)	(scholarly activities OR research) AND international AND collaboration AND nursing	2045–2010 Abstract/full text available English	117	5
CINAHL (EBSCO)	(scholarly activities OR research) AND international AND collaboration AND nursing	2005–2010 Abstract/full text available English	31 (one duplicate)	2
Google Scholar	Scholarly collaboration AND research AND international	2045–2010 In article title, social sciences, arts and humanities	67	
Manual data search				6
Result: papers included after abstract review				14

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deficiency in support and older mentors (Edwards, Webber, Mill, Kahwa, & Roelofs, 2009). Other inhibiting factors include unmet requirements for time and funding for research, workload burden, pressure, conflict in the role, inadequate resources (Uhrenfeldt et al., 2014).

A conceptual model of the "Critical Success Factors for Collaboration" comprising three key criteria attributes (Structures/Inputs, Process/Mechanisms, and Outcomes) was developed (Uhrenfeldt et al., 2014). The initial success factors to complete for collaboration are considered to be structures, contexts, and inputs. The processes are predicted as essential collaborative mechanisms and are considered core collaborative skills. The structures/contexts and processes/mechanisms are thought to be required circumstances for the accomplishment of the necessary outcomes of collaboration (see **Table 1**) (Uhrenfeldt et al., 2014, p. 496). The critical success factors for the collaboration model is initial work, with additional research required to validate the components (Uhrenfeldt et al., 2014).

A collaborative meeting would create a consensus to include knowledge and learning. Leadership is required in collaboration; however, leadership can take on a social structure among unrestricted groups. Team success can be enhanced using

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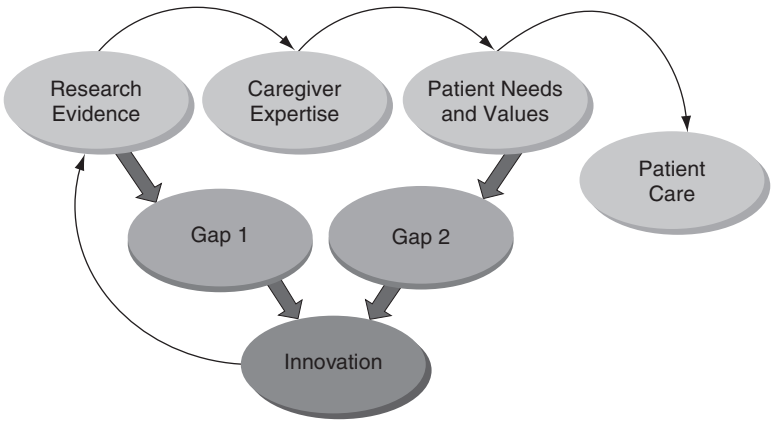

■ **Gap Identification: Evidence-Based Practice and Innovation Leadership**

Source: Porter-O'Grady, T., & Malloch, K. (2010). *Innovation leadership: Creating the landscape of health care*. Sudbury, MA: Jones & Bartlett.

collaborative team methods to problem-solve with the limited resources available (Straus & Layton, 2002). Porter-O'Grady and Malloch (2010) described paying attention, encouragement of feedback, and the resolution of conflict as constituting the basis of efficient collaboration. A leader of innovation will flourish in a team with professionals from multiple disciplines. The leader and members of the team will use an approach that is evidence based to recognize gaps in the literature in order to establish whether the gap is based on the needs of the patient or on published evidence (see **Figure 1**). To address complexity and novel ideas, transdisciplinary conversations must take place (Porter-O'Grady & Malloch, 2010). Members of the team should be persuaded to comment on all ideas presented. The process is considered counterproductive if members refuse to comment (Porter-O'Grady & Malloch, 2010).

Bennett and Gadlin (2011) stated that collaboration is supported by healthcare providers who come together to improve patient outcomes and simplify processes. A few of the rationales of collaborating include (a) access to skills provided by experts, (b) access to resources, and (c) multidisciplinary transformation. Many advances are brought forth secondary to collaboration. These improvements include increased funding, improved learning, and enhanced cross-training among disciplines. If healthcare providers are aware of individual jobs, the clinical pathways and protocols will be developed effortlessly (Bennett & Gadlin, 2011).

Bennett and Gadlin (2011) described productive collision as "a process by which parties who see different aspects of a problem can constructively explore their differences and search for solutions that go beyond their own limited vision of what is possible" (Slide 4). A lack of collaboration can result in the following: (a) problems

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without reason and definition differences; (b) future interests of many stakeholders; (c) stakeholders struggling with power difficulties; (d) lack of access to various levels of necessary information and experts; (e) difficulties distinguished by technological and scientific insecurity; (f) differences of opinions related to a problem-causing conflict; (g) unproductive work; and (h) inefficiencies in procedures to solve problems (Bennett & Gadlin, 2011).

Team members face challenges in any form of collaboration. Such problems may include: (a) decline in listening; (b) reduction of original terminology; (c) arguments related to goals and system success; (d) conflicts in conceptual frameworks; (e) rivalries related to authority, control, and credit; (f) self-esteem and/or rank intimidation; (g) failure to integrate a diverse point of view; (h) unsuccessful attempts to have differences of opinions appreciated; (i) difficulties accessing funds; and (j) problems finding publication sources (Bennett & Gadlin, 2011).

In the Institute of Medicine publication *Crossing the Quality Chasm: A New Health System for the 21st Century* (Briere, 2001), a common process to organize health care is the use of multidisciplinary teams. Much consideration has been placed on the value of such teams. For teams to be efficient, they must be maintained. Members of the team are usually educated separately, which does not include working collaboratively (Briere, 2001). Leaders take on the responsibility of developing and communicating the goals of the organization. To facilitate success, these individuals need to listen to the goals of others, give direction, develop incentives, integrate efforts for improvement, encourage environment of support, and encourage developments to facilitate success (Briere, 2001). It is important for leaders to use their own observations and thoughts related to quality improvement to provide reinforcement for team members. It is vital for leaders to understand "how units relate to each other—a form of systems thinking—and to facilitate the transfer of learning across units and practices" (Briere, 2001, p. 138).

Elwell and White (2011) noted that integrative or holistic health care is provided by the advanced practice nurse. "Nurses are educated to be holistic practitioners—attentive to the whole person, the mind, body, and spirit" (Kreitzer, Kligler, & Meeker, 2009, p. 13). Scholars included in the research component of health care may include PhD-prepared or research nurses, statisticians, or other stakeholders with common interests. Administration team members often include directors, quality improvement officers, chief officers, and managers. The translational nursing component often includes the Doctor of Nursing Practice (DNP), clinical pharmacists, nurse educators, bedside nurses, physical/occupational therapists, social workers, and other direct patient care providers. The multidisciplinary team is assembled to enable collaborative efforts that lead to evidence-based policy and quality improvement systems change. The aim of this book is to explore how each aspect—research, administration, and practice—can be integrated by multidisciplinary scholars collaborating with each other in evidence-based practice (EBP).

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■ **Collaboration or Competition?**

Source: Illustration by David Zinn, © 2011, www.zinnart.com.

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■ Integration and Collaboration

EBP is a part of the success of a system or organization. Polit and Beck (2012) described the emphasis of EBP as integrating the best available research evidence with other facets. The integration of research evidence needs to be included along with knowledge and clinical expertise. Important aspects of EBP and integration include the preferences and values of the patient. For example, the patient may reveal a negative perspective on a possible beneficial intervention (Polit & Beck, 2012). *Decision aids,* tools used to assist a patient in considering all available options, prove helpful so the patient can make an informed decision. Research evidence is crucial to EBP; however, the expertise of the clinician, preference of the patient, and the circumstances must be integrated into the final decision (Livesley & Howarth, 2007).

■ Scholarship

Scholarship is a process that has evolved over time. The profession level increases secondary to this evolution through involvement in generating new knowledge and participating in the exchange of ideas (Tymkow, 2011). Clinical scholarship includes applying and disseminating the evidence, which leads to a greater understanding of knowledge development (Dreher, 1999). While in the early phase of international collaboration, specific strategies for publishing should be established (Suhonen, Saarikoski, & Leino-Kilpi, 2009). The American Association of Colleges of Nursing (AACN, 2006) stated that scholarship and research are two core elements in doctoral education. Graduates from a research doctoral program are prepared with skills in research necessary to identify new knowledge in nursing (AACN, 2006). Practice experts should be well versed in "knowledge management, poised to extract information and apply it in a novel or utilitarian way, and then efficiently translate and disseminate this new conceptualization of the evidence" (Dreher & Glasgow, 2011, p. 30).

■ Approach

This book is organized into three main parts, and scholarship is the foundation for all three. Part I describes the process of critical appraisal of research to support scholarship. Part II outlines the scholarship of administrative practice. Part III presents the scholarship of clinical practice.

Part I: Critical Appraisal of Research to Support Scholarship

Part I consists of six chapters that describe quantitative research, qualitative research, mixed methods research, data analysis, institutional review board procedure, and critical appraisal process of evidence-based research. Burns and Grove (2009) described the critical appraisal process of research as "a systematic, unbiased, careful examination of all aspects of a study to judge the merits, limitations, meaning, and significance" (p. 598).

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Part II: Scholarship of Administrative Practice

Part II consists of six chapters that describe leadership; organizational systems; change; microsystems, macrosystems, and mesosystems; quality improvement: historical and future perspectives; and health policy. Chapters in Part II discuss quality improvement science and the process of integrating health policy into practice.

Part III: Scholarship of Clinical Practice

Part III consists of six chapters that describe philosophical and theoretical perspectives guiding inquiry, synthesis projects, translational research in the clinical setting, and dissemination of the evidence. The chapters discuss problem identification, evidence-based research, searching the literature, and incorporating evidence-based research into practice.

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