This second edition of an acclaimed book for nurse educators provides a practical, step-by-step guide to designing and developing simulation scenarios and integrating them into the nursing curriculum. Based on extensive discussion with contributing authors and new faculty, the text has been updated to include changes in simulation pedagogy since the first edition was published in 2008, and thoroughly reorganized to facilitate greater ease of use. Outstanding features include scenarios easily adaptable to the instructor’s own lab, and a new section on graduate nursing education and interdisciplinary clinical scenarios. Scenarios are ordered according to their complexity for ease of access.

The authors provide concrete information about the use of simulation in a variety of programs, courses, and schools, and describe how nursing faculty have mastered the challenge of integrating simulation into their curricula, from fundamental nursing arenas to more complex levels of care. Chapters discuss how simulation can be used with such diverse populations as medical-surgical, geriatric, pediatric, trauma, obstetric, and home care. The book offers scenario-running instructions, as well as recommendations on developing faculty, integrating point-of-care decision-making tools and necessary equipment, how to set up a lab (including static to high-fidelity manikins), and much more. Scenarios explore key themes in nursing, from ethics, spirituality and palliative care, to communication and cultural diversity. A template for creating scenarios spans the text and includes student preparation materials, forms, and checklists.

**THIS UPDATED EDITION INCLUDES:**

- Scenarios easily adaptable to an instructor’s own lab
- A new section on graduate nursing education and interdisciplinary clinical scenarios
- New interdisciplinary, interprofessional, and community-based scenarios
- Expansive chapter templates
- Focus on cultural sensitivity, health literacy, and research methods
- Information on certification issues and integrating e-records in simulation
Simulation Scenarios for Nurse Educators
Suzanne Hetzel Campbell, PhD, WHNP-BC, IBCLC, graduated with her BS and MS in nursing from the University of Connecticut, and her PhD in nursing from the University of Rhode Island. She obtained her postmaster’s certificate as a women’s health nurse practitioner from Boston College. At the writing of the first edition of the book, she was associate professor, associate dean for academic programs, and project director for the Fairfield University School of Nursing Robin Kanarek Learning Resource Center. She has been teaching at Fairfield University since 2000. Her increasing interest in web-enhanced learning and simulation-based pedagogy has led to publications and workshops on these topics using her own experience to empower nursing faculty. Suzanne has been a board member and faculty liaison for the School of Nursing Advisory Board for the past 3 years. She oversaw a $1.06 million 5-year project, which included building renovation, classroom upgrades, faculty development, and integration of simulation throughout the nursing curriculum. The project included a 5-year assessment plan examining program, faculty, and student outcomes in relationship to the integration of simulation and other technology. In addition, Suzanne is certified as an International Board Certified Lactation Consultant (IBCLC), she was the country coordinator for Ireland for the Fairfield University School of Nursing, and she served as Director-at-Large of the board of the International Lactation Consultant Association (term 2006–2009).

In June 2011, Suzanne became interim dean at Fairfield University School of Nursing for the 2011 to 2012 academic year. In this role, she hired a new lab director, continued simulation research, and worked with administration to support plans for an interdisciplinary health science building, incorporating arts and sciences, business, engineering, and graduate education and applied professions. Plans for an Integrative Health Science Building are underway and the interdisciplinary focus of Fairfield University will be maintained. In July 2012, Suzanne was appointed as Director of the School of Nursing at the University of British Columbia, Vancouver, British Columbia in Canada, where her vision for interprofessional education incorporating the use of simulation can be realized.

Karen M. Daley, PhD, RN, graduated from Villanova University with her BS in nursing, from Troy State University with an MS in nursing, and from Rutgers–State University of New Jersey with a PhD in nursing. At Western Connecticut State University, Karen spearheaded the implementation of human patient simulation throughout the curriculum and is primarily responsible for the acquisition of SimMan technology, the expansion and development of the nursing labs and the Nursing Resource Center, and the upgrade of resources for the nursing labs. As the chair of the Learning Resources Committee, Karen acquired additional lab space for an additional SimMan lab, an assessment lab, a technology classroom, and a pediatrics/obstetrics area. A new intensive care unit lab opened in the fall of 2008, funded by a federal initiative.

In June 2011, Karen became the dean of the College of Health Professions at Davenport University in Grand Rapids, Michigan. She now oversees the Allied Health, Health Information Management, and Nursing programs. Davenport’s simulation facilities are state of the art, with three simulation labs on three campuses. In May 2012, Karen realized her dream of having multidisciplinary health students embedded in a mass disaster drill simulation. Karen continues to work to integrate simulation throughout nursing and the health curriculum; facilitate faculty training in simulation-focused learning experiences in their classes; and encourage the use of simulation for education, training, and to enhance interprofessional education, communication, and teamwork.
Simulation Scenarios for Nurse Educators
Making It Real
Second Edition

Suzanne Hetzel Campbell, PhD, WHNP-BC, IBCLC
Karen M. Daley, PhD, RN
Editors
This book is dedicated to all those who have helped along the way. To our husbands and families who never stop believing, supporting, and inspiring us: You are the wings upon which we soar. We also dedicate this book to the nursing faculty, without whom any of this would be possible and to our colleagues and the administrators at our respective universities who have helped pave the way, moved mountains, and given full support to integrating simulation within the nursing curriculum. To nursing students at all levels: Excellence in nursing is not just a goal; it is a journey. Simulation can help take you there.
Contents

Contributors xi
Foreword Pamela R. Jeffries xv
Preface xvii
Acknowledgments xix

PART I: SETTING THE FOUNDATION FOR SIMULATION

1. Simulation-Focused Pedagogy for Nursing Education 1
   Suzanne Hetzel Campbell and Karen M. Daley

2. Integrating Simulation-Focused Pedagogy Into Curriculum 9
   Karen M. Daley and Suzanne Hetzel Campbell

3. Enhancing Communication Skills Through Simulations 17
   Michael Pagano and Philip A. Greiner

4. Faculty Learning Communities: An Innovative Approach to Faculty Development 25
   Joyce M. Shea, Suzanne Hetzel Campbell, and Laurence Miners

5. Building a Learning Resource Center 33
   Karen M. Daley, Suzanne Hetzel Campbell, and Diana R. Mager

   Colleen H. Meakim and Leland J. Rockstraw

PART II: INNOVATIVE SIMULATION SCENARIOS IN DIVERSE SETTINGS FOR DIVERSE STUDENTS

A. Specialty Undergraduate Nursing: Medical–Surgical

7. Tune Into Simulation Through Physical Examination 63
   Catherine Rice

8. Postoperative Care Following Appendectomy 71
   Diana R. Mager and Jean W. Lange
CONTENTS

9. Medical–Surgical Skill-Based Scenarios  83
   Karen M. Daley

10. Acute Management of Respiratory Distress in an Adult Patient  95
    Monica P. Sousa and Linda H. Warren

11. Small Bowel Obstruction  105
    Suzanne C. Brown

12. Trauma Resuscitation  115
    Carolyn Bruno

13. Cardiovascular Resuscitation: Code Simulation for Student Nurses  125
    Gloria Brummer

B. Specialty Undergraduate Nursing: Obstetric

14. Obstetric Emergency: Postpartum Hemorrhage  137
    Suzanne Hetzel Campbell

15. Intrapartal Obstetric Emergency: Shoulder Dystocia  149
    Carol Connery and Suzanne Hetzel Campbell

16. Perinatal Grief: Threatened Spontaneous Abortion  163
    Joan Esper Kuhnly and Lisa Marie Griffiths

C. Specialty Undergraduate Nursing: Pediatric

17. Care of an Infant With Congenital Heart Disease Status
    Postcardiac Surgical Repair  173
    Eileen R. O’Shea

18. Abusive Head Trauma: Infant  185
    Leslie D. Catron

19. Bacterial Meningitis in a Pediatric Patient  207
    Patricia Moreland

20. Pediatric Emergency  219
    Eileen R. O’Shea and Julie DeValk

D. Specialty Undergraduate Nursing: Psychiatric Mental Health

21. Posttraumatic Stress Disorder/Traumatic Brain Injury and Other
    Conditions in Military Combat Veterans  229
    Doris Troth Lippman

22. Assessing a Patient With a Mood Disorder  237
    Joyce M. Shea

E. Specialty Undergraduate Nursing: Home Care

23. Wound Management in Home Health Care  247
    Philip A. Greiner

24. Home Care Patient With Elevated Blood Sugars  253
    Diana R. Mager
25. Home Care Community Setting With Limited English Proficient Patients: Second Semester 263
   Desiree A. Diaz

F. Specialty Undergraduate Nursing: Older Adults
26. Care of an Older Adult With Congestive Heart Failure 273
   Alison Kris
27. The Older Adult in an ICU With Acute Respiratory Failure: Critical Care Nursing: Senior-Year Elective 283
   Sheila C. Grossman
28. Communication With an Elderly Client 295
   Lillian A. Rafeldt, Heather Jane Bader, and Suzanne Turner

G. Specialty Undergraduate Nursing: Quality and Safety Education (QSEN)
29. QSEN Carousel for First-Year Nursing Students 307
   Lillian A. Rafeldt

H. Advanced Practice Nurse Practitioners: (FNP, PsychMHNP, DNP)
30. Diabetes Management—Nurse Practitioner 317
   Kellie Bryant
31. Assessment and Differential Diagnosis of a Patient Presenting With Chest Pain 329
   Nancy A. Moriber
32. The Prescriber’s Skit: A Simulation Designed to Build Confidence and Competency in New Psychiatric APRN Prescribers 341
   Renee Provost
33. Abdominal Pain in a Woman of Childbearing Age 353
   Suzanne Hetzel Campbell and Jenna LoGiudice
34. Primary Care Patient With Gastrointestinal Problems: Graduate Program Advanced Physiology and Pathophysiology 365
   Sheila C. Grossman
35. Care/ACNP: Aortic Emergencies 373
   Joshua Squiers

I. Interdisciplinary and Interprofessional Scenarios
36. Multiple Patient Medical–Surgical Scenario 385
   Kathleen A. Gordon and Mary S. Cook
   Laura T. Gantt, Walter C. Robey, Tamara L. Congdon, and Linda Bolin
38. Prevention and Management of Operating Room Fires 417
   Nancy A. Moriber
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Foreword

In the past 4 years, since the first edition of the book was written and disseminated, clinical simulations incorporated into health care curriculum and clinical orientation programs have been widely used and accepted as a new clinical redesign or as a strategy to better prepare nursing students for quality patient care and safe clinical environments. With the increased growth, use, and the incorporation of simulations in nursing education today, the second edition of this book, Simulation Scenarios for Nurse Educators, could not have come at a better time. Living up to the goals and outcomes of the first edition, the authors have continued to develop and refine more step-by-step guidelines for nursing faculty to design, develop, and implement clinical simulation scenarios in diverse settings; with diverse patients; and for different levels of students, from the novice in a fundamentals course to the student in a senior-level critical care or capstone course, to a nurse practitioner in a graduate program. Since the first edition, the authors have shared their expertise and contributions, reaching out to experts across the country to double the number of simulation scenarios in this new second edition. A unique aspect differentiating the second edition from the first is the inclusion of a separate section on graduate nursing education and interdisciplinary clinical scenarios that are so needed in nursing education today.

The passion, caring, and inspiration of the authors are reflected and demonstrated in each and every chapter. The book is based on the authors’ personal experiences, regionally, nationally, and internationally, with nursing faculty who have also experienced the frustrations, growing pains, and lack of knowledge about where to start when planning to incorporate simulations into a nursing course or curriculum. Compiling all of the authors’ lessons learned, teaching–learning strategies, and in-depth research and exploration of their topics, this book is an excellent guide for nursing faculty just getting started with simulations or is a validation for faculty who are already using this pedagogy.

Once you begin to read the book, you will find many ideas you can use in your own teaching practices that can enhance students’ learning. The authors have included their experiences on how to develop a simulation center and approaches to developing faculty for simulations to debriefing and evaluation, as well as information on the cutting-edge visions of the future of simulations. The book is comprehensive, resourceful, and a gift for nurse educators embarking on the development and implementation of clinical simulations.

Some of the highlights of the book are the beginning chapters by the coeditors on simulation pedagogy, integrating a simulation-focused pedagogy into the nursing curriculum, faculty learning communities, and how to integrate simulations into diverse settings. Various authors then provide chapters focusing on knowledge, strategies, and recommendations on how to implement simulations in different types of course or clinical settings. For example, if you are in doubt about how simulations can be incorporated in a physical assessment course, one chapter provides ideas, scenario objectives, and examples of how the simulation pedagogy can be used in this type of setting. The entire spectrum of courses, from fundamentals, health assessment, and medical–surgical nursing courses, to more complex levels, such as trauma resuscitation, are discussed, with authors providing specific examples, simulation scenarios that include patient information,
simulation objectives, preparation lists, and other information on all necessary components to develop and implement the simulation successfully. Various chapters address the diverse patient population, including geriatric, pediatric, trauma, obstetric, and home care patients, in terms of simulations that can be designed and implemented in those contexts. Finally, one of the last chapters of the book presents a cutting-edge vision of the future of simulations, which is appropriate since this teaching–learning pedagogy is changing almost on a daily basis, affecting our nursing education and ultimately student learning and outcomes.

As nursing leaders and educators are addressing the future of nursing education recommendations as outlined by the Institute of Medicine (2011), this book provides educators’ knowledge, skills, and tools to prepare for educational reform to manage the shortage of clinical learning experiences, the lack of clinical sites, shortage of nurse educators, and the need to better prepare students for clinical decision making in a complex health care environment. The book provides practical solutions to begin the transformation of clinical education. The creativity and innovation demonstrated by the authors in this second edition provides a wonderful continued journey to meeting these challenges. This book is an important first step in contributing to tomorrow’s future.

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Preface

Nursing education is situated in a unique moment in time. In what has been called the perfect storm (Hinshaw, 2008), a faculty shortage has collided with a nursing shortage, and the two have resulted in challenges for nursing educators. In addition, new generations of techno-savvy nursing students are before us in our classrooms. In the face of this challenge, nursing educators have the opportunity to create a new paradigm for teaching that reflects students’ need for interactive technology. Nurses have always responded to crises throughout time with creativity and innovation, and the same is true today. By complementing our traditional teaching with simulation, we, as educators, are addressing our need to do more with less. In making simulation real, we can deliver our teaching in an engaging yet effective manner, thereby transforming nursing education through a simulation-based pedagogy.

This book is divided into three parts. Part I provides an overview of the integration of simulation into nursing curricula, options for building a learning resource center, the description of innovative methods for faculty development related to integrating technology into the curriculum, and the role of health communication. New in this edition is expert advice from Colleen H. Meakim and Leland J. Rockstraw on the audio/visual setup and integration of high technology lab centers. Part II presents a collection of 35 exemplars, including 17 brand-new simulation scenarios for this edition. These chapters contain increasingly complex scenarios in multiple clinical areas and testimonies of practicing faculty in a variety of settings at different levels of nursing education. Part II is divided into three key areas: (a) specialty undergraduate nursing, including: medical–surgical, obstetric, pediatric, psychiatric–mental health, home care, older adult, and thematic scenarios on Quality and Safety Education in Nursing; (b) advanced practice nurse; and (c) interdisciplinary and interprofessional scenarios. Scenarios in this new edition capture many of the key themes in nursing, including ethics, spirituality, palliative care, communication, and cultural humility. It is meant to encourage nursing faculty that simulation development and incorporation into the curriculum is feasible and fun. The book provides concrete information about the use of simulation in a variety of programs, courses, and schools with flexible simulator uses, including live actors and static, and low-, medium-, and high-fidelity manikins. The practical applications are for individuals who are interested in taking first steps toward incorporating simulation or for those who have begun but want to expand beyond a typical medical–surgical, intensive care, and trauma focus. This book will encourage the development of critical thinking, clinical reasoning, and clinical judgment, as well as caring, competent, and safe practitioners. Finally, hints for suspending disbelief and “making it real” for students and faculty are incorporated throughout the book.

Finally, Part III explores future directions for simulations in nursing education. Given the work of the coeditors with the chapter authors and faculty in their own institutions, a framework of simulation learning was created and is provided in Chapter 44 of this book. For this new edition, the role of certification in simulation for nursing education is described by Carol R. Sando and Leland J. Rockstraw, publishing your simulation work is addressed by the editor of the Clinical Simulation in Nursing, Suzie Kardong-Edgren, and an innovative statewide project to facilitate the
integration of simulation in nursing education is outlined by Linda M. Perfetto. Chapter 48 then details the evolution of simulation and its integration in nursing curriculum and practice, since the publication of the first edition of this book.

A template for creating scenarios is provided throughout the book, including the following:

- Student preparation materials, such as suggested readings, skills necessary for scenario enactment, and websites with more information
- Forms to enhance the realness of the scenario, such as patient data forms, patient medication forms, and assessment tools (or websites, where they can be acquired)
- Checklists, such as health communication checklists to use in the creation of scenarios, evaluation criteria checklists for assessing student performance in scenarios, and debriefing guidelines

The intent is to provide faculty with a strong basis to run multiple scenarios in a variety of clinical specialties geared at different learning levels and with different learning objectives.

It seems only fitting that this second edition is being released after the 101st birthday of “Mrs. Chase”—the soft, lightweight doll that had hand-painted, raised facial features and included stitched jointed hips, knees, elbows, and shoulders, who was both flexible and durable (Herrmann, 2008, p. 53). In 1911, this first manikin arrived at the Hartford Hospital Training School for Nurses on the request of “Miss A. Lauder Sutherland, an 1891 graduate of Toronto General Hospital who was then the superintendent of nurses and the principal of the Hartford (CT) Hospital Training School for Nurses (1905–1918).” (Herrmann, 2008, p. 53).

We’ve come a long way in 100 years!

This long-awaited book provides real life stories of faculty in the trenches providing the light at the end of the tunnel to the sometimes-challenging, but always worthwhile, journey of simulation integration!

Suzanne Hetzel Campbell
Karen M. Daley

REFERENCE


Acknowledgments

To all those who contributed time and effort in creating their scenarios for this book, we thank you from the bottom of our hearts for sharing your knowledge and expertise in describing your challenges and victories using simulation. There are numerous individuals who provided support. In grateful recognition, to name a few at Fairfield University: the administration, especially Dean Jeanne Novotny, whose vision for the school has been an inspiration; Lab Director Diana Mager, whose expertise in organizing, running, and overseeing the lab make this all possible; colleague and Codirector Phil Greiner, whose insight in so many areas has led to this greater vision; the School of Nursing Advisory Board, without whom this project would not have come to fruition, especially the Chair, Nancy Lynch, whose guidance and tireless perseverance has led to marvelous outcomes; major donor Robin Kanarek, whose passion for nursing provides endless encouragement; Media Department Manager Kirk Anderson, who is always just a phone call away; the Center for Academic Excellence, especially Larry Miners, whose support for faculty development has been key to our progress; and the Computing and Network Services departments, as well as the students who have patiently worked with us throughout the years.

At Western Connecticut State University, grateful thanks are extended to Lorraine Capobianco and Kevin Koshel, whose work within University Computing has set the foundation for simulation; President James Schmotter, Provost Linda Rinker, and Dean Lynne Clark, whose leadership and support have led the way; Barbara Piscopo, who encouraged and supported the pursuit of simulation; Karen Crouse, who creatively and enthusiastically has embraced simulation in nursing education; Undergraduate Coordinator Deb Lajoie, as well as Kathy Barber and the Learning Resources Committee, who truly do all the work supporting simulation; and to the Western Connecticut State University class of 2008, who inspired and created the student-generated senior scenarios.

We also thank the faculty of Davenport University, who have realized the dream of state-of-the-art simulation facilities as a standard, not just a remote goal; visionary President Dr. Pappas and the Provost, Dr. Rinker, who led the way. Most importantly, we thank the amazing faculty, staff, and students of Davenport’s College of Health Professions, who inspire us every day to be our best.

We cannot possibly name them all.
PART I: SETTING THE FOUNDATION FOR SIMULATION

CHAPTER 1

Simulation-Focused Pedagogy for Nursing Education

Suzanne Hetzel Campbell and Karen M. Daley

THE CHALLENGE OF TEACHING IN THE 21ST CENTURY

This book has been written on the basis of our personal experiences regionally and nationally with audiences of nursing faculty who have expressed frustration, consternation, anxiety, and bewilderment about “where to start” with simulation, especially with human patient simulators. We have been privileged to be here at the start of simulation, with the inherent frustration of explaining to administration and fellow faculty the potential and vision that this innovative learning experience can provide for nursing students.

It is our hope that the simulations included in this text will provide nurse educators with a place to start—a template for the creation of their own broad and relevant experiences in the classroom and clinical settings. It is paramount that we share our passion for the process and our strong belief that all faculty can contribute, at whatever level of simulation, to this process. Yes, there are gaps in the literature and challenges expressed in the literature; yes, faculty struggles to meet the new demands of this technology within the realm of faculty shortages and workload. Yet the potential benefits to faculty and students are clear, especially by enhancing critical thinking beyond protocol and critical pathways. Oftentimes, it is an astute, expert nurse who, in noting subtle changes in his or her patient, enacts the kind of care that saves the patient’s life. Nurses are the front-line providers of care.

Simulation enters here by allowing for reflection on all aspects of care. The built-in debriefing period, which encourages reflection on thoughts, actions, and outcomes, also leads to better transfer of knowledge to practice and more versatile thinking processes for future application. In addition, the faculty role of mentor and facilitator in this process combines faculty expertise with student innovation. It is a learning process for all, which overall improves methods of teaching and learning.

ROLE OF SIMULATION IN NURSING EDUCATION

Nurse educators and researchers now recognize simulation as a valuable general tool for gaining knowledge (Alinier, Hunt, & Gordon, 2003; Childs & Sepples, 2006; Henneman & Cunningham, 2005; Jeffries, 2007; Roberts & McGowan, 2004). The availability of high-fidelity technology at reasonable cost, and the availability of funds to purchase this equipment, has resulted in widespread acquisition across the country. Some faculty, though, have reported
to us that, on delivery, these human patient simulators may remain in a box, unused. Other faculty, who have had the benefit of preassembly and attending 1- to 2-day workshops, need encouragement and inspiration to fully implement simulation within their individual courses. When attending simulation conferences, it appears that everyone is incorporating and using simulation (or has bought the equipment). But when you talk to faculty, they are confused, overwhelmed, and frustrated with trying to write and implement scenarios into their individual courses.

One needs only watch a group of students in a simulation to fully appreciate the teaching and learning potentialities at hand. After all, simulation prompts positive results. However, the research for assessment and evaluation for nursing education falls behind the medical literature, and has not been fully tested and incorporated. For example, in a study of the use of clinical laboratories in Victoria, Australia (with site visits, interviews, and curricula review), researchers found that use of the laboratories was based on past experience, tradition, and resources rather than evidence (Wellard, Woolf, & Gleeson, 2007). Otherwise, while research on simulation in nursing is ongoing, it is still in its initial stages, just beyond description, and is still in need of synthesis. Of course, the benefits of simulation have been well documented by the National League for Nursing (NLN)/Laerdal simulation study (Jeffries & Rizolo, 2005), and large projects have examined the benefits and best practice for implementation. But there is much more to learn.

On a broader level, an administration’s procurement of the money for providing the necessary resources (faculty development, equipment purchase, building renovations, faculty time, etc.) does not transfer immediately into less faculty workload. In contrast, it often requires more investment of time and resources up front to get to the “work smarter, not harder” phase. One strategy has been to assign already overburdened lab directors with the “task” of incorporating simulation for faculty. Whether in static modules as testing prior to entering clinical, skill-based task training or endpoint competency testing, the actual development and running of the scenarios is parceled out to lab staff, information technology personnel, and others. Because this process may not directly involve faculty, their valuable educational and clinical expertise is more often overlooked. Another strategy allows for individual faculty to initiate simulation within their own teaching load in single courses. Faculty find this process time consuming and complex when starting without help or guidance of those more experienced in simulation (Nehring & Lashley, 2004). Currently, experts in simulation are few and far between.

We feel that simulation offers an innovative approach that complements and easily integrates into existing nursing curricula, addressing the needs of a new generation of nurses and a society with increasingly complex health care needs. In order to fully appreciate the incorporation of simulation and the driving forces behind this movement, one needs to recognize that challenges include understanding issues facing nursing education, the influence of technology on theoretical and conceptual aspects of nursing education, learning in the digital culture, and the challenge of suspending belief to make simulations real. In order for a transfer of knowledge to occur, the student’s role in the simulation needs to be as authentic as possible.

Some of the issues facing nursing education include the increased acuity level of patients, the nursing faculty and staff shortages, limited clinical sites, and the shifting role of the nurse. Quality and safety of patient care has become a major societal focus driving the increased accountability of nursing faculty and students to provide safe, effective, knowledgeable nurses who can function in a highly complex health care environment. Nurses are expected to demonstrate leadership skills in the coordination of patient care and safety and in this role oversee interprofessional teams who provide multifaceted care. Increasingly, nurses are expected to use their knowledge to transform health care delivery. Simulation provides an environment for the teaching and learning of interprofessional collaboration through scenarios embedded with communication, safety, delegation, critical thinking, and other important nursing program outcomes where novice nursing students can practice in a safe environment (Haskvitz & Koop, 2004; Jeffries, 2007; Radhakrishnan, Roche, & Cunningham, 2007). Finally, the challenge of assessment and evaluation of student performance can go beyond skill-based assessment and include...
processes such as student growth over time, development of critical thinking, and competencies of nursing education.

THEORETICAL AND CONCEPTUAL ISSUES IN NURSING EDUCATION

When viewed as a learning tool, simulation aligns well with the theoretical and conceptual foundations of nursing education. Models and frameworks have been proposed and utilized to help conceptualize the role of simulation in nursing education. One such model describes a simulation protocol that was formulated by the University of Maryland Baltimore School of Nursing (Larew, Lessans, Spunt, Foster, & Covington, 2006). This protocol, based on the work of Benner (1984), utilizes a cue-based system with escalating prompts to move students through recognition to assessment to intervention to problem resolution. Recommendations to highlight one problem at a time, allowing the scenarios to be student directed with time for processing in the pacing of the scenario, laid the foundation for further development of simulation frameworks. Jeffries and Rodgers (2007) proposed a theoretical framework for simulation from “insights gained from theoretical and empirical literature” (p. 22) on simulation in nursing and related disciplines. This eclectic approach to formulating simulation frameworks provides the basis for a holistic, flexible, and multifaceted approach to integrating simulation into nursing education.

In addition to those seminal works cited above (Jeffries & Rodgers, 2007; Larew et al., 2006), we have considered the work of Tanner (2006) in our conceptualization of simulation. Tanner’s model of clinical judgment is relevant in simulation because so much of what simulation involves clinical judgment and decision making. Tanner’s description of aspects of the process includes noticing, interpreting, responding, and reflecting. This model emphasizes expectations of the situation that may be implicit or explicit. A particular emphasis on reflection finds support in the recent literature, which highlights reflection as an essential element in the improvement of clinical reasoning (Tanner, 2006). In simulation, an equivalent concept is debriefing, which should include Tanner’s reflection-on-action as a synthesis of experiential knowledge resulting in formulation of best practices. In a clinical situation, nursing students often observe and are unable to enact interventions independently. In simulation, reflection on interventions can result in a second try in a safe environment, where improved outcomes are immediately evident.

Fink (2003), another driving force in our simulation-focused pedagogy, discussed the creation of significant learning experiences. On the basis of education research, he has compiled six major dimensions to “formulate significant learning goals” (p. 75). In considering these learning goals, we have identified areas that demonstrate how simulation complements nursing education to meet program goals and outcomes. For example, the goals include (a) foundational knowledge (nursing content), (b) application (enactment of the scenario allows for use of knowledge and skills in a safe environment), (c) integration (synthesizing the science of nursing with knowledge from all disciplines—in conjunction with critical thinking, this dimension incorporates decision making and priority setting), (d) human dimension (interacting with themselves and others to form a view of who they are as nursing professionals, including opportunities for collaboration), (e) caring (the art of nursing), and (f) learning how to learn (empowering students for professional lifelong learning). The debriefing component of simulation pedagogy allows for an integration of all six major dimensions of Fink’s learning goals.

Of interest in simulation is social ecological theory (Stokols, 1996). This framework examines individual experiences and culture brought to social situations and how they impact behavioral outcomes. The social determinants of health (Wilkinson & Marmot, 2003), developed by the World Health Organization’s European division in the 1990s, incorporates social ecological theory and was used as a foundation for Healthy People 2010 (U.S. Department of Health and Human Services, 2000). These theoretical cores should be directly linked to simulations as they are being developed.
For example, a common challenge for nurses working in inpatient environments is the decontextualization of the patient. By this, we mean that care is being provided without an understanding of the social and physical environment or the behavioral motivators related to health of the individual patient. The result can be that patient teaching and other nursing activities done in the institution do not match the reality of the patient's home environment. In home health care, nurses often need to reteach the patient and/or caregiver to fit the care plan to the resources available.

In simulation, not only is the context of the patient important, but educators must consider the cultural predispositions that students bring into the learning environment, which may affect behavior and the outcome of the scenario. Much the same is true within the culture of a nursing floor or unit. Clinical judgments made may be influenced by these multiple factors and need to be considered in culturally sensitive care of real patients. Also, simulations can be manipulated such that the patients being cared for have a variety of cultural backgrounds, needs, experiences, and diverse social and environmental support systems. Including these factors enhances the simulation and learning experience for students and increases the "realness" of the scenario.

Related nursing concepts in simulation are vigilance and failure to rescue. As nursing educators, vigilance is one of the most important yet difficult concepts to teach to nursing students (Almerud, Alapack, Fridlund, & Ekebergh, 2007; Jacobs, Apatov, & Glei, 2007; Meyer & Lavin, 2005). Although introduced early in assessment courses, the evolution of vigilance as an essential function of a nurse is amenable to practice and refinement during simulation. Once taught in this setting, students become aware of the value of maintaining vigilance in actual health care settings. A consequence of failed vigilance is failure to rescue. Although unethical to practice in the clinical setting, a student who experiences failure to rescue in a simulation can follow through with reflective debriefing, reformulate a plan, carry out the new plan, and then successfully maintain vigilance. Students have reported “never forgetting” the opportunity to “redo.” Once again, this experience adds to the development of the student's vision of the impact of maintaining excellence in nursing care.

From the student perspective, there have been reports that conceptualizing the scenario through the lens of the nursing process while in the midst of a simulation is extremely helpful in producing positive outcomes! It has been frequently observed in our teaching that students, in the excitement of enacting a scenario, jump past focused assessments and begin performing interventions without data to support their decisions. Gentle coaching and reminders by the instructors alleviates this tendency.

In theorizing about technology in simulation, one may want to consider that, beyond technological fidelity, there are actually three levels of fidelity: environmental, equipment, and psychological (Fritz, Gray, & Flanagan, 2007).

- **Environmental fidelity:** “The realism of the environment in which the simulation takes place” (Fritz et al., 2007, p. 2).
- **Equipment fidelity:** “Hardware and/or software realism of the simulator” (Fritz et al., 2007, p. 2).
- **Psychological fidelity:** “The degree to which the trainee perceives the simulation to be a believable representation of the reality it is duplicating” (Fritz et al., 2007, p. 2).

In nursing, we have incorporated these fidelities by making simulation as real as possible—a suspension of disbelief—so that the student interacts and participates more fully. The way space is structured to look and feel like a clinical unit, with necessary equipment, sets the scene for the simulation. In addition, events need to flow smoothly (e.g., responses from “patients” and “families”) so that the student acknowledges his or her role in meeting patient needs.

There are three goals or levels of enacting a reality-based simulation:

1. **For students:** The simulation must be believable. They must take on the role of the “nurse” and feel the responsibility for the care, assessment, and delegation necessary to meet the needs of this “real” patient. If the patient takes a turn for the worse, can students believe that their actions...
(or inactions) may lead to an adverse outcome for the patient (maybe even death)? In reality, we would not want them to have a life-threatening experience with a real patient in clinical; however, simulation provides the safe environment to learn skills necessary for the prevention of adverse outcomes. It is necessary to “suspend reality” and allow the students to embrace their role and act confidently with the necessary critical reasoning to accomplish their objectives. The debriefing component of the simulation will be much richer if the students self-reflect from a perspective that their actions and decisions really made a difference in the outcome of care.

2. For faculty: Simulation must also be believable for faculty in the sense that they can accomplish this and meet their educational goals via simulation; it is feasible, possible, and fun. From learning theory and brain theory, we are trying to encourage the use of the right and left brain, which has been demonstrated to better embed the experience, and make the substance of what is learned more accessible or easily retrieved for use in future, varied, patient encounters (Seigel, 2007).

3. Translation into practice: Tapping into an emotional or psychological component for the students when learning has been demonstrated to improve memory and allow for better retrieving. Knowledge stored is better accessible and easily tapped for use in practice in a variety of situations. Students use a synthesis of past experiences to pool best practices into actual practice.

LEARNING IN THE DIGITAL CULTURE

Technology in nursing education is here to stay. Today’s students learn and study in the digital culture into which they were born. Multitasking is not an issue and, in fact, seems to be the way student brains are wired. Teaching to this group, whose attention span may be less than 10 to 15 minutes, requires new and innovative approaches other than the didactic. Repetitions, visual, and auditory and kinesthetic stimulation in an environment where students can move and interact while learning provide the variety of stimuli needed.

Of course, simulation also is one method to supplement didactic teaching. As such, educator expertise is essential when incorporating simulation. It requires background knowledge of the curriculum and the ability to assess where students should be, what they are capable of, and how nursing graduates from the program will function in the workforce. To provide optimal student learning experiences, changes in educational practices need to be incorporated with pedagogical principles, which in turn guide the development and implementation of simulation activities and the integration of technology (Jeffries, 2005). Simulation provides another avenue for achieving these outcome objectives. The importance of the integration of, exposure to, and mastery of technology has recently been confirmed and included in the revision of the Essentials of Baccalaureate Education for Professional Nursing Practice (American Association of Colleges of Nursing, 2007). For its part, the NLN (2003) challenges nursing to “reconceptualize reform in nursing education” by encouraging innovative teaching practices (p. 3).

Simulated patients allow for standardized learning experiences. Scenarios designed by nursing educators provide for focused learning with prescribed outcomes. Student performance can be measured and documented across groups and specific points of time in important focus areas of the curriculum. Results of these measurements can be used for assessment and evaluation progress toward curricular goals and program outcomes.

Murray, Grant, Howarth, and Leigh (2008) discussed the use of simulation for teaching and learning to support practice learning and stated that “simulation is a strategy to enhance clinical competence” (pp. 5–6). Used as a supplement to clinical preparation or for clinical remediation, simulation provides opportunities for students to practice clinical skills and interactions outside the actual patient setting. Kuiper, Heinrich, Matthias, Graham, and Kotwall (2008) concurred, stating that the results of their study show that evidence “supports the use of simulation as a source of remediation for students with clinical challenges and for an enhancement of didactic content” (p. 12). Simulation has also been shown to increase the confidence of students in a low-anxiety setting prior to clinical experiences (Murray et al., 2008).
PART I. SETTING THE FOUNDATION FOR SIMULATION

Simulation contributes to the development of a reflective practitioner who demonstrates better decision-making skills and superior problem-solving skills by using more creative thinking (Murray et al., 2008; Rauen, 2004). Unique to simulation exercises is the debriefing period, which allows for reflection on the effectiveness of interventions and processing of alternate theories for improving outcomes. Debriefing allows for reintegration of theory, evaluation of best practice, and an opportunity to learn about error management (Rudolph, Simon, Dufresne, & Raemer, 2006).

We are situated in a unique time period where the ability to use simulation fits with the issues of growing nursing faculty shortages and limited resources for student admission to programs as well as those related to clinical or agency use. In addition, safety and quality-of-care issues increase the importance of student education in situations where they can feel safe in providing care and transform an observational experience into a hands-on simulated learning experience.

As aptly put by Starkweather and Kardong-Edgren (2008), “The best outcomes with simulation occur when it is integrated across a curriculum, creating a challenge for academic nursing administrators, curriculum committees and faculty members who are struggling with how to incorporate simulation into, rather than on top of, already crowded curricular agendas” (p. 2). However, one must start at the beginning, and simulation often begins with one faculty member in one course. Part I of this book explores the integration of simulation within a curriculum, building a learning resource center, an innovative approach to faculty development, and the role of health communication within simulation. In order to meet the needs of nurse educators who are looking for help with designing and implementing simulation, we have written and collected scenarios currently in use from several seasoned faculty. It is our hope that the exemplars in Part II will fuel and encourage those who are enthusiastic about integrating simulation within their nursing programs. Finally, Part III of this book explores future directions for simulations in nursing education and outlines a framework of simulation learning created by the coeditors of this book.

CONCLUSION

The “perfect storm” is near, and the survival of the profession of nursing and the outcome of health care are at risk. We strongly believe that simulation-focused pedagogy holds many rewards, but working through the challenges and the need for extra resources to incorporate it awaits us. Infusing our passion for the process and our love of teaching and learning is the goal of this book. If we can help even one faculty member enhance teaching to incorporate these ideas for interactive learning that engages and excites students, then our mission is complete.

REFERENCES


