THE CARNEGIE FOUNDATION
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PREPARATION FOR
THE PROFESSIONS

EDUCATING NURSES

A Call for Radical Transformation

Patricia Benner
Molly Sutphen
Victoria Leonard
Lisa Day

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Foreword by

Lee S. Shulman

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FOREWORD

Some words are regularly misspelled. Among them is the word *foreword*, often spelled *forward*. The pages that follow are not intended to look forward beyond the narrative, argument, findings, and recommendations of this volume on the preparation of nurses. They are intended as a set of reflections that come "before the word," as antecedent to the texts that constitute the heart of this book. Forewords are appetizers rather than main courses. Indeed, they are not even that substantial; perhaps they can be compared to the bite-size *amuse-bouche* that chefs present before a meal as a small conceit to remind the patrons that there's a serious cook in the kitchen. Its intent is to amuse or tickle the tongue but also as a subtle communication, a wink from the kitchen. Shall we think of the foreword as an *amuse-pensee* or even as an *amuse-esprit*?

Ironically, the foreword is typically the *last* piece of text composed for a book and nearly always by someone who is not among the authors. Although it is the first word to be read, it is the last to be written. So it is on this occasion. Indeed, I prepare this Foreword looking back not only on the Carnegie studies of nursing education, but on the full series of Carnegie's program on preparation for the professions that took place over more than a decade. Law and engineering, the rabbinate, priesthood and ministry, medicine and nursing, school teaching and university professing, all were objects of inquiry and deliberation, of data gathering and analysis, of investigations and convenings, within and beyond the Carnegie Foundation's hillside home.

From my vantage point in the kitchen, I take this occasion to reflect on our studies of nursing education through the lens of all the other studies we conducted during the past decade. What is particularly striking is the extent to which nursing is a hybrid, a profession whose distinctive features mirror many of the central attributes of other professions while also creating a singular identity of its own. Indeed, when I look at the work of nurses, I see reflections of each of the other professions we have studied.

I will never forget the response we received from a group of nurses in North Carolina when we asked, "What is a nurse?" Their response: "As a nurse, I am the patient's last line of defense." No other conception

of the nurse's role prevailed in our interviews and observations as much as the role of the nurse as patient advocate, that last line of defense against the impersonal nature of the health care system. Repeatedly we heard nurses, nursing students, and nursing faculty refer to "patient advocate" as the central role of the nurse, the heart of nursing identity. As we came to appreciate in our studies of legal education, advocacy is no simple concept. It is more than defending the rights of the client; there are times when clients must face their responsibilities and obligations, not merely defend their rights. What are the limits of zealous advocacy? The nurse is also a member of the health care team and shares responsibility for maintaining the quality of health care for the larger community.

As an educator, in particular as an educator of teachers, I was equally struck by the attention to the role of nurse as teacher. The work of a nurse is not complete, we were told, when a disease has been healed but when a patient has been prepared to return to a life that is self-managed and independent. For this nurses regularly are expected to teach: to explain to patients how they must care for themselves and why, what new habits of eating and exercising, self-examination and self-regulation they need to develop in order to live healthy productive lives. Who teaches? Nurses teach.

One need only spend a few hours with nurses on a hospital floor or in a cancer treatment room, in an individual office or even during a home visit, before being struck by the varieties of technology with which the nurse must competently cope. Some technologies are as exotic as the now-typical arrays of sensing devices in an ICU or the daunting devices needed for dialysis. Others appear as pedestrian as a hypodermic syringe or a blood pressure cuff. And computers are ubiquitous for record keeping, communications, and the monitoring of drugs. All these now fall within the nurse's responsibilities, and he or she is expected to understand what and how to perform in those circumstances. There is an element of engineering and technology in that role, as much *Star Trek* as *ER*.

The nurse "ministers" to patients; he or she offers care and consolation, encouragement and understanding. Much like clergy, we expect nurses to understand how to respond to pain and anxiety, to nurture patients in the face of the terror of the unknown, and to offer hope when there appears to be little available. At times, nurses act as rabbis or priests, comforting family members and caring for the ill. There is a recurring element of spirituality in that caring, even aspects of faith and dedication.

Thus when I think about the preparation of nurses, I see key elements of preparing lawyers and teachers, engineers and ministers, physicians and psychotherapists, social workers and institutional managers. The work is

physically grueling and intellectually taxing. It is both routine and filled with the unexpected and the surprising. Nursing education is preparation for remarkably hard work.

This complexity and richness characteristic of the nursing profession is paralleled by the complexity of its contexts of practice. In most other professions, the practitioners maintain a certain modicum of control over the pace and density of the services they render. They normally can limit their attention to a single patient, client, case, or design at a time. But in nursing, much like teaching, many clients are present at the same time, often all needing attention and care. Some form of "batch processing" may be possible in teaching, as when a teacher instructs a large or a small group. But nursing typically requires one-on-one attention and treatment. Thus, some form of "triage" is needed on a continuing basis.

Nursing is indeed a hybrid profession, an interdisciplinary and inter-professional nexus of roles and obligations. At its core, however, remain the expectations for caring and advocacy, for ministering to the needs of those who are ill. Hybrids are often particularly robust because they combine the strengths of several species into one. But they may also be particularly vulnerable.

The historian Susan Reverby has made the poignant observation that nurses are "obliged to care" in a society that does not value caring. Not only are nurses offered little respect and only moderate financial compensation, they are also licensed to practice with less formal education than any of the other professions. While medicine, law, and the clergy generally expect post-baccalaureate preparation, and teaching and engineering require at least a bachelor's degree and often more, nurses can currently practice with only a two-year associate's degree. It is mind-boggling that this profession, this hybrid of advocacy and medicine, engineering and ministry, teaching and caring, can be practiced with less formal preparation than any other academic profession. It is a challenge that the authors of this book address directly. It will be a significant aspect of the issues and controversies that the book provokes.

When the Carnegie Foundation was ready to address the challenges of nursing education, we scoured the country for the ideal person to lead the study. One name was proposed repeatedly; she lived and worked in our backyard at the University of California San Francisco School of Nursing. Patricia Benner was a social scientist and humanist, an experienced nurse and a chaired professor; someone initially trained as a nurse at Pasadena City College who received her doctorate at Berkeley, a distinguished scholar and a conscience to her profession. We asked. Patricia agreed. We had the leader this work required.

As her alter ego, we needed someone who would bring a very different set of perspectives to the inquiry, who would serve as complement and compatriot with both research training and scholarly experience from another direction. Molly Sutphen had originally pursued studies as a physical anthropologist and anatomist until she was captured by the history of science and medicine. After completing her doctorate in the history of medicine at Yale, she continued to do research and to teach in medical schools. The opportunity to spend four years studying and writing about the preparation of nurses was irresistible to Molly and her talents were irresistible to Carnegie.

Patricia rounded out the nursing team by going to two of her own former students who were now pursuing distinguished careers as nursing educators and practitioners. Victoria Leonard, now a health consultant at the UCSF California Childcare Health Program, and Lisa Day, a clinical nurse specialist for Neuroscience and Critical Care at UCSF Medical Center, joined the team.

Finally, the work was supported by the senior scholars who had coordinated our studies of education in the professions from the very beginning—Anne Colby and William Sullivan. The former is a notable life-span developmental psychologist with special interest in the moral development of adults, and the latter is a superb philosopher/social scientist who has written extensively about "habits of the heart" and the ethical aspects of professional work. Their role was to collaborate actively in every study we conducted as well as to stitch together the separate professional education studies so they emerged as more than the sum of their parts.

This Foreword cannot do justice to the volume it introduces without acknowledging that this book indeed looks forward with wisdom, courage, and a premeditated dose of provocation to the needed reforms of the field of heath education in general and nursing education in particular. Patricia Benner has served as a beloved gadfly within the nursing community for decades, even as she has been properly admired, even venerated, for her contributions to the theory and practice of the field. This book is neither an apologetic nor a rationalization for current practice. It holds up a mirror to the field and, while applauding it for its superb accomplishments in the face of many barriers, it also is unambiguously critical of the status quo and quite specific about what remains to be done. As such, it is a worthy addition to the lineage of critical Carnegie studies, going back to Abraham Flexner's 1910 report on medical education a century ago up to the studies on law, the clergy, and engineering published recently. I applaud Patricia Benner, Molly Sutphen, Victoria Leonard, Lisa Day, and

Carnegie's entire staff for the professions programs for this superb contribution. I look forward to witnessing its impact on the field of nursing education.

I hope that your intellectual palates have been stimulated and your interest provoked. I know that personally I could not imagine being more enlightened and stimulated during the past ten years than I have been by our studies of education in the professions.

Lee S. Shulman
President Emeritus
The Carnegie Foundation for the Advancement of Teaching
Stanford, California

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We simply could not have done this study without the enthusiastic participation of the nine participant schools of nursing, their administrators, faculty, and students, who opened their schools, classrooms, and clinical sites for us to observe and ask questions. We listened and learned from your experiences and observations. Thank you to the Samuel Merritt School of Nursing; Riverside School of Nursing; Roberts Wesleyan School of Nursing; Saddleback Community College, Department of Nursing; University of California San Francisco School of Nursing; University of North Carolina School of Nursing; University of South Dakota School of Nursing; University of Washington School of Nursing; and Villanova University School of Nursing. We appreciate the openness,

hospitality, and genuine interest in the study that we encountered at all the schools.

We are also grateful to our nursing organization collaborators and partners whose counsel and support made the project better: the American Association of Colleges of Nursing, American Nurses' Association, National Council of State Boards of Nursing, National League for Nursing, and National Student Nurses' Association. In the tradition of the Carnegie Foundation for the Advancement of Teaching, we now give the study to your stewardship, along with students, nurse educators, and all stakeholders in improving nursing education to make the findings accessible and useful within the profession.

Nursing scholars and leaders were frequent and useful advisors on this project. Thank you, Dr. Pat Cross, Carnegie Foundation for the Advancement of Teaching board member and internationally known scholar in higher education, for your careful and most useful early read and critique of the manuscript. We are particularly grateful to Dr. Christine Tanner of Oregon Health Sciences University and Eloise Balasco Cathcart of New York University, who consulted with us all along the way, including reading drafts of this manuscript and making many helpful suggestions. Also many colleagues at AACN and NLN, in particular Dr. Beverly Malone and Dr. Kathy Kauffman, Dr. Pamela Ironside, and Dr. Terry Valiga at NLN; Dr. Polly Bednash, and AACN board members who reviewed the study early and late.

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Thank you all for your contributions to this work!

Patricia Benner
Molly Sutphen
Victoria Leonard
Lisa Day

THE AUTHORS

Dr. Patricia Benner is a senior scholar with the Carnegie Foundation for the Advancement of Teaching. She is also a professor emerita at the University of California San Francisco School of Nursing. She is a noted nursing educator and author of *From Novice to Expert: Excellence and Power in Nursing Practice*, which has been translated into eight languages. She is the director of this Carnegie Foundation for the Advancement of Teaching National Nursing Education Study, which is the first such study in forty years. Additionally, she collaborated with the Carnegie Preparation for the Professions studies of clergy, engineering, law, and medicine. Dr. Benner is a fellow of the American Academy of Nursing. She was elected an honorary fellow of the Royal College of Nursing. Her work has influence beyond nursing in the areas of clinical practice and clinical ethics. She has received two honorary doctorates. She is the first author of *Expertise in Nursing Practice: Caring, Ethics and Clinical Judgment* (2009) with Christine Tanner and Catherine Chesla, and she has coauthored twelve other notable books.

Dr. Molly Sutphen is a research scholar at the Carnegie Foundation for the Advancement of Teaching and co-director of the Carnegie Foundation National Nursing Education Study. She is also an assistant adjunct professor in the Department of Social and Behavioral Sciences at the University of California, San Francisco. She is a historian of public health, medicine, and nursing. She has taught history, ethics, and global health to medical, pharmacy, and nursing students at the University of California, San Francisco. She has published numerous articles on nursing education and the history of public health and is finishing the book *An Imperial Hygenist*. She received her doctorate from Yale University in the history of medicine and the life sciences.

Victoria Leonard is a family nurse practitioner and child care health consultant at the University of California San Francisco (UCSF) California Childcare Health Program. She is a trainer for Child Care Health Consultants in California and does trainings and presentations, as well as writing

educational materials on health and safety issues for child care providers in the state. She has taught health policy and ethics and pediatrics in the nurse practitioner program at UCSF and has worked with children and families with chronic illnesses in pediatric subspecialty clinics. Leonard was a research associate for the Carnegie Foundation National Nursing Education Study and participated in the data collection, analysis, and writing up of the findings. She has also consulted on a longitudinal research study of teen mothers and their infants for the past fifteen years. She received her Ph.D. from the UCSF School of Nursing.

Lisa Day graduated from Long Beach City College in California with an associate degree in nursing in 1984. She has worked as a nurse in a postanesthesia recovery room, a medical cardiac intensive care unit, and a neuroscience critical care unit, and she completed her B.S.N, M.S., and Ph.D. (with Patricia Benner) at the University of California San Francisco School of Nursing. She taught prelicensure nursing in an accelerated second degree program for eight years before recently returning to clinical practice; she is now the clinical nurse specialist for neuroscience and critical care at UCSF Medical Center. Day has been involved as a consultant in several projects related to nursing education, including the RWJ-funded Quality and Safety Education in Nursing (QSEN), the Helene Fuld Health Trust–funded project Evaluating the Outcomes of Accelerated Nursing Education, and evaluation of the Oregon Consortium for Nursing Education (OCNE); and she participated in the 2008 National League for Nursing think tank on Transforming Clinical Nursing Education.

EDUCATING NURSES

INTRODUCTION

THE PROFESSION OF nursing in the United States is at a significant moment. Profound changes in science, technology, patient activism, the market-driven health care environment, and the nature and settings of nursing practice have all radically transformed nursing practice since the last national nursing education study, almost forty years ago (Lysaught, 1970). The changes in nursing practice, in turn, have enormous implications for nursing education.

Indeed, a list of just a few of the changes in nursing practice suggests many implications for nursing education. Nurses now do most bedside monitoring, make almost all home visits, assist and teach aging patients to manage multiple chronic illnesses, and deliver much of everyday primary care. Nurses maintain patient safety while managing multiple intrusive technologies where the margin of error is extremely narrow, and they do so in increasingly complex, hazardous work environments. Nurses administer care in widely diverse settings, ranging from specialized acute hospital bedside care to in-home and long-term nursing care for the technologically dependent and aging, as well as school and community nursing care. Although charged with caring for patients with increasingly complicated diagnostic and treatment regimes in hospital settings, nurses may also deliver care to patients with similar needs in ambulatory settings, the community, and the home.

New nurses need to be prepared to practice safely, accurately, and compassionately, in varied settings, where knowledge and innovation increase at an astonishing rate. They must enter practice ready to continue learning, often through self-directed learning that can be adapted to any site of practice, from school nursing to intensive care nursing. To practice safely and effectively, today's new nurses must understand a range of nursing knowledge and science, from normal and pathological physiology to genomics, pharmacology, biochemical implications of laboratory medicine for the patient's therapies, the physics of gas exchange in the lungs, cell-level transport of oxygen for the acutely ill patient, as well as the human experience of illness and normal growth and development—and much more. Increasingly called on to perform highly skilled

technical-scientific and relational work, nurses must draw on nursing science and the natural physical and biological sciences as well as the social sciences and humanities.

Moreover, nurses learn and work under less-than-optimal circumstances. Nurses and nursing students must function within the complicated (and, many would say, chaotic and dysfunctional) environment of the U.S. health care system. Current health care institutions are not well designed for either good nursing and medical practice or education. For example, care of a critically ill patient in a hospital—a setting that is likely to be rapid-paced—typically involves layers of sophisticated technical supports and complicated titrations of multiple medications, all requiring the nurse's judicious monitoring and management. Further, disparities of health outcomes exist between the insured and the underinsured, of whom a disproportionate number are of lower economic means or belong to populations who encounter racism and other forms of cultural bias. With health care disparities at crisis proportions (Chao, Anderson, & Hernandez, 2009; Smedley, Stith, & Nelson, 2003), nurses struggle to uphold and transmit their core professional values of keeping patients safe and ameliorating human suffering. Because nurses are, as one student nurse in this study observed, the patient's "last line of defense" in a complex health care system, they must deploy a complex array of skills and knowledge, and do so with deep commitment to each patient's best interests.

A Crisis of Numbers

Since 1998, there has been a growing shortage of nurses (Buerhaus et al., 2007b; Buerhaus, Donelan, Ulrich, Norman, & Dittus, 2006). Moreover, during the mid-to-late 1990s, the number of students accepted to nursing schools dropped for five straight years, creating the conditions for a severe nursing workforce shortage that is predicted to grow in the coming decades as aging nurses, who make up the most populous demographic of the nursing workforce, retire: 45 percent are age fifty or older (Buerhaus et al., 2006). A 2007 survey reported that the hospital vacancy rate for registered nurses was 8.1 percent (American Hospital Association [AHA], 2007). The Bureau of Labor Statistics (Dohm & Shniper, 2007) projects a 23 percent increase in available nursing jobs by 2016, the largest increase for any occupation. Other projections show a similar increase in demand for nurses, from about two million full-time equivalents in 2000 to about 2.8 million in 2020, with a shortage of one million nurses to meet that demand (Health Resources and Services Administration/Bureau of Health Professions [HRSA/BHP], 2007).

To meet current and projected shortages, U.S. nursing education programs need to increase their capacity by approximately 90 percent (HRSA/BHP, 2006). However, nursing education programs, faced with a severe shortage of faculty, are hard pressed to expand; there is a dearth of baccalaureate-level nurses eligible to enter graduate programs to become nursing faculty. Even if prospective students could gain access to nursing schools and efforts to recruit foreign-trained nurses were successful, the shortage of nurses by 2020 would be about 340,000 (Auerbach, Buerhaus, & Staiger, 2007).

The implications of the shortage are profound. Nurses, the largest of the health care professional groups, spend the most direct time with patients; their role in health outcomes is therefore critical. Many studies agree that a shortage of qualified nurses decreases the quality of health care delivery (Aiken, Clarke, Sloane, Sochalski, & Silber, 2002; Aiken, Clarke, and Sloane, 2002; Cheung & Aiken, 2006). Ninety-three percent of hospital-based registered nurses report lack of sufficient staff and time to maintain patient safety, detect complications early, and collaborate with other health care team members (Buerhaus, Donelan, Ulrich, DesRoches, et al., 2007a; Buerhaus, Donelan, Ulrich, DesRoches, et al. 2007b). More nurses at the bedside could save thousands of patients' lives each year; a study published in the *Journal of the American Medical Association*, for example, reports that patients in hospitals having the highest patient-to-nurse ratios face up to 31 percent greater risk of dying (Aiken et al., 2002).

Improving Patient Care Outcomes Through Nursing Education

The numbers are indeed staggering. Yet they do not fully represent the urgent challenge to nursing and nursing education. More nurses alone, however, are not sufficient for improving patient care outcomes. Studies of nursing practice have demonstrated that better patient outcomes are achieved in hospitals staffed by a greater proportion of nurses with a baccalaureate degree and a smaller proportion of those with an associate degree (Estabrooks, Midodzi, Cummings, Ricker, & Giovannetti, 2005). Although currently 60 percent of nursing graduates hold the associate degree in nursing (ADN) as their highest degree, administrative nurses call for better-educated nurses even as they are forced by resource constraints to hire and reward nurses with an associate degree only and build large staffs through lower-paid ancillary positions (Orsolini-Hain, 2008).

The American Association of Nurse Executives and Nursing Chief Officers (AONE) calls for a better-educated nursing workforce, with nurses

entering the profession from the baccalaureate level, and a reframing of the curriculum that leads to the bachelor of science in nursing (BSN). AONE's 2006 "Position Statement on Nursing Education" recommends: "The educational preparation of the nurse of the future should be at the baccalaureate level. This educational preparation will prepare the nurse of the future to function as an equal partner, collaborator and manager of the complex patient care journey. Given that the role in the future will be different, it is assumed that the baccalaureate curriculum will be re-framed" (American Organization of Nurse Executives [AONE], 2005).

Indeed, a major finding of our study is that a significant gap exists between today's nursing practice and the education for that practice, despite some considerable strengths in nursing education. Simply requiring more education will not be sufficient; the quality of nursing education must be uniformly higher. It is tempting to allow the current crisis related to a shortage of nurses to distract attention from the urgent need for increasing the quality and level of nursing science, natural and social sciences, and humanities currently offered in prelicensure programs. Even if there were no nursing shortage or nursing faculty shortage, nursing education would still need to change dramatically to meet the demands of current nursing practice.

In the course of our study, we found that the import of Johnson's findings (1988) about the quality of nursing education has only increased. Johnson noted significant differences in such areas as problem solving for nurses who have earned an associate degree or diploma compared to those with a baccalaureate degree. The need for better nursing education in science, humanities, social sciences, problem solving, teaching, and interpersonal capacities is, ten years later, even more acute. The rapidly developing field of practice demands preparation in more depth than is currently offered. The practice-education gap, already untenable, will continuously widen unless nursing education overhauls its approach to nursing science, natural and social sciences, and humanities. To be safe and effective practitioners nurses need to enter practice ready to draw on knowledge from a wide range of fields. Because practice will only become more complex over time, nurses must leave their formal programs prepared to be lifelong students, with the disposition and skills to be reflective practitioners and expert learners.

In prior studies of nursing education, researchers worried about the education-practice gap, that is, the ability of practice settings to adopt and reflect what was being taught in academic institutions. Now the tables are turned: nurse administrators and this research team worry about the practice-education gap, as it becomes harder and harder for nursing

education to keep pace with rapid changes in a practice driven by research and new technologies (AONE, 2005). Although moving to baccalaureate-level education is a necessary first step, it will not be a sufficient catalyst for change unless baccalaureate nursing education programs are improved. Otherwise, the practice-education gap cannot be closed.

Opportunity at a Time of Crisis

The nursing shortage and the complex demands of practice put nursing education in a position of opportunity and responsibility to both expand and improve. Yet the pool of qualified faculty is too small and rapidly shrinking. Over the last decade, the number of available nursing faculty has decreased to the extent that schools face severe shortages of teachers. Faculty report that they simply cannot take on more students, even as schools are enlarging classes and scrambling to find more clinical sites, preceptors, and staff nurses who are willing to teach students. The American Association of Colleges of Nursing reported that 42,866 qualified applicants were turned away from baccalaureate schools of nursing in 2006 primarily because of a shortage of nursing faculty, clinical placement sites, and classroom space (American Association of Colleges of Nursing [AACN], 2007a). Similarly the National League for Nursing reported that in 2005, all schools of nursing rejected more than 147,000 qualified applications because of shortages of faculty, classroom space, and clinical placement for students (National League for Nursing [NLN], 2006). The number of applicants denied admission to nursing schools has increased sixfold since 2002 because of the faculty shortage (PricewaterhouseCoopers' Health Research Institute [PCHRI], 2007).

This is only the beginning of a precipitous drop in available faculty over the coming decade. Currently almost a third of all nursing faculty are over the age of fifty-five, and those with a doctoral degree are slightly older (U.S. Department of Health and Human Services [USDHHS], 2004). Among those under fifty-five, fewer have a doctorate, the preferred credential for teaching, and almost 50 percent of them are between the ages of forty-five and fifty-four (Berlin & Sechrist, 2002).

As faculty retire, nursing schools are losing some of their most experienced teachers and face the challenge of finding and mentoring new faculty. First, it will be a challenge to retain these new teachers; in most parts of the country, they can earn higher salaries in practice. Second, although those new to teaching often bring enthusiasm and up-to-date clinical knowledge, few graduating with a master's or doctoral degree have had any preparation for teaching. Faculty and administrators of graduate