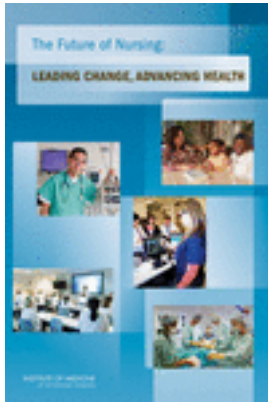


Free Summary



The Future of Nursing: Leading Change, Advancing Health

Committee on the Robert Wood Johnson Foundation Initiative on the Future of Nursing, at the Institute of Medicine; Institute of Medicine

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Summary¹

The United States has the opportunity to transform its health care system to provide seamless, affordable, quality care that is accessible to all, patient centered, and evidence based and leads to improved health outcomes. Achieving this transformation will require remodeling many aspects of the health care system. This is especially true for the nursing profession, the largest segment of the health care workforce. This report offers recommendations that collectively serve as a blueprint to (1) ensure that nurses can practice to the full extent of their education and training, (2) improve nursing education, (3) provide opportunities for nurses to assume leadership positions and to serve as full partners in health care redesign and improvement efforts, and (4) improve data collection for workforce planning and policy making.

A VISION FOR HEALTH CARE

In 2010, Congress passed and the President signed into law comprehensive health care legislation. With the enactment of these laws, collectively referred to in this report as the Affordable Care Act (ACA), the United States has an opportunity to transform its health care system to provide higher-quality, safer, more affordable, and more accessible care. During the course of its work, the Committee on The Robert Wood Johnson Foundation Initiative on the Future of Nursing, at the Institute of Medicine developed a vision for a transformed health care system. The committee envisions a future system that makes quality care accessible to the diverse populations of the United States, intentionally promotes wellness and disease prevention, reliably improves health outcomes, and provides compassionate care across the lifespan. In this envisioned future, primary care and prevention are central drivers of the health care system. Interprofessional collaboration and coordination are the norm. Payment for health care services rewards value, not volume of services, and quality care is provided at a price that is affordable for both individuals and society. The rate of growth of health care expenditures slows. In all these areas, the health care system consistently demonstrates that it is responsive to individuals' needs and desires through the delivery of truly patient-centered care.

The ACA represents the broadest changes to the health care system since the 1965 creation of the Medicare and Medicaid programs and is expected to provide insurance coverage for an additional 32 million previously uninsured Americans. Although passage of the ACA is historic, realizing the vision outlined above will require a transformation of many aspects of the health care system. This is especially true for the nursing profession, which, with more than 3 million members, represents the largest segment of the health care workforce.

¹ This summary does not include references. Citations for the findings presented in the summary appear in the subsequent report chapters.

STUDY CHARGE

In 2008, The Robert Wood Johnson Foundation (RWJF) approached the Institute of Medicine (IOM) to propose a partnership to assess and respond to the need to transform the nursing profession. Recognizing that the nursing profession faces several challenges in fulfilling the promise of a reformed health care system and meeting the nation's health needs, RWJF and the IOM established a 2-year Initiative on the Future of Nursing. The cornerstone of the initiative is this committee, which was tasked with producing a report containing recommendations for an action-oriented blueprint for the future of nursing, including changes in public and institutional policies at the national, state, and local levels (Box S-1). Following the report's release, the IOM and RWJF will host a national conference on November 30 and December 1, 2010, to begin a dialogue on how the report's recommendations can be translated into action. The report will also serve as the basis for an extensive implementation phase to be facilitated by RWJF.

BOX S-1 Committee Charge

An ad hoc committee will examine the capacity of the nursing workforce to meet the demands of a reformed health care and public health system. It will develop a set of bold national recommendations, including ones that address the delivery of nursing services in a shortage environment and the capacity of the nursing education system. In its report, the committee will define a clear agenda and blueprint for action including changes in public and institutional policies at the national, state and local levels. Its recommendations would address a range of system changes, including innovative ways to solve the nursing shortage in the United States.

The committee may examine and produce recommendations related to the following issues, with the goal of identifying vital roles for nurses in designing and implementing a more effective and efficient health care system:

- Reconceptualizing the role of nurses within the context of the entire workforce, the shortage, societal issues, and current and future technology;
- Expanding nursing faculty, increasing the capacity of nursing schools, and redesigning nursing education to assure that it can produce an adequate number of well prepared nurses able to meet current and future health care demands;
- Examining innovative solutions related to care delivery and health professional education by focusing on nursing and the delivery of nursing services; and
- Attracting and retaining well prepared nurses in multiple care settings, including acute, ambulatory, primary care, long term care, community and public health.

THE ROLE OF NURSES IN REALIZING A TRANSFORMED HEALTH CARE SYSTEM

By virtue of its numbers and adaptive capacity, the nursing profession has the potential to effect wide-reaching changes in the health care system. Nurses' regular, close proximity to patients and scientific understanding of care processes across the continuum of care give them a unique ability to act as partners with other health professionals and to lead in the improvement and redesign of the health care system and its many practice environments, including hospitals, schools, homes, retail health clinics, long-term care facilities, battlefields, and community and public health centers. Nurses thus are poised to help bridge the gap between coverage and access, to coordinate increasingly complex care for a wide range of patients, to fulfill their potential as primary care providers to the full extent of their education and training, and to enable the full economic value of their contributions across practice settings to be realized. In addition, a promising field of evidence links nursing care to high quality of care for patients, including protecting their safety. Nurses are crucial in preventing medication errors, reducing rates of infection, and even facilitating patients' transition from hospital to home.

Nursing practice covers a broad continuum from health promotion, to disease prevention, to coordination of care, to cure—when possible—and to palliative care when cure is not possible. While this continuum of practice is well matched to the needs of the American population, the nursing profession has its challenges. It is not as diverse as it needs to be—with respect to race, ethnicity, gender, and age—to provide culturally relevant care to all populations. Many members of the profession require more education and preparation to adopt new roles quickly in response to rapidly changing health care settings and an evolving health care system. Restrictions on scope of practice, policy- and reimbursement-related limitations, and professional tensions have undermined the nursing profession's ability to provide and improve both general and advanced care. Producing a health care system that delivers the right care—quality care that is patient centered, accessible, evidence based, and sustainable—at the right time will require transforming the work environment, scope of practice, education, and numbers of America's nurses.

KEY MESSAGES

As a result of its deliberations, the committee formulated four key messages that structure the discussion and recommendations presented in this report:

1. Nurses should practice to the full extent of their education and training.
2. Nurses should achieve higher levels of education and training through an improved education system that promotes seamless academic progression.
3. Nurses should be full partners, with physicians and other health professionals, in redesigning health care in the United States.
4. Effective workforce planning and policy making require better data collection and an improved information infrastructure.

The recommendations offered in this report focus on the critical intersection between the health needs of diverse populations across the lifespan and the actions of the nursing workforce. They are intended to support efforts to improve the health of the U.S. population through the

contributions nurses can make to the delivery of care. But they are not necessarily about achieving what is most comfortable, convenient, or easy for the nursing profession.

Key Message #1: Nurses Should Practice to the Full Extent of Their Education and Training (Chapter 3)

Nurses have great potential to lead innovative strategies to improve the health care system. However, a variety of historical, regulatory, and policy barriers have limited nurses' ability to generate widespread transformation. Other barriers include fragmentation of the health care system, high rates of turnover among nurses, difficulties for nurses transitioning from school to practice, and an aging workforce and other demographic challenges. Many of these barriers have developed as a result of structural flaws in the U.S. health care system; others reflect limitations in the present work environment or the capacity and demographic makeup of the nursing workforce itself. Regulatory barriers are particularly problematic.

Regulations defining scope-of-practice limitations vary widely by state. Some are highly detailed, while others contain vague provisions that are open to interpretation. Some states have kept pace with the evolution of the health care system by changing their scope-of-practice regulations to allow nurse practitioners to see patients and prescribe medications without a physician's supervision or collaboration. However, the majority of state laws lag behind in this regard. As a result, what nurse practitioners are able to do once they graduate varies widely for reasons that are related not to their ability, education or training, or safety concerns, but to the political decisions of the state in which they work. Depending on the state, restrictions on the scope of practice of an advanced practice registered nurse may limit or deny altogether the authority to prescribe medications, admit patients to the hospital, assess patient conditions, and order and evaluate tests.

Because many of the problems related to varied scopes of practice are the result of a patchwork of state regulatory regimes, the federal government is especially well situated to promote effective reforms by collecting and disseminating best practices from across the country and incentivizing their adoption. Specifically, the Federal Trade Commission (FTC) has a long history of targeting anticompetitive conduct in the health care market, including restrictions on the business practices of health care providers, as well as policies that could act as a barrier to the entry of new competitors in the market. As a payer and administrator of health insurance coverage for federal employees, the Office of Personnel Management and the Federal Employees Health Benefits Program have a responsibility to promote and ensure the access of employees/subscribers to the widest choice of competent, cost-effective health care providers. Principles of equity would suggest that this subscriber choice should be promoted by policies ensuring that full, evidence-based practice is permitted to all providers regardless of geographic location. Finally, the Centers for Medicare and Medicaid Services has the responsibility to promulgate rules and policies that promote Medicare and Medicaid beneficiaries' access to appropriate care, and therefore can ensure that its rules and policies reflect the evolving practice abilities of licensed providers.

In addition to barriers related to scope of practice, high turnover rates among newly graduated nurses highlight the need for a greater focus on managing the transition from school to practice. In 2002, the Joint Commission recommended the development of nurse residency programs—planned, comprehensive periods of time during which nursing graduates can acquire the knowledge and skills to deliver safe, quality care that meets defined (organization or professional society) standards of practice. Residency programs are supported predominantly in

hospitals and larger health systems, with a focus on acute care. This has been the area of greatest need since most new graduates gain employment in acute care settings, and the proportion of new hires (and nursing staff) that are new graduates is rapidly increasing. It is essential, however, that residency programs outside of acute care settings be developed and evaluated. Much of the evidence supporting the success of residencies has been produced through self-evaluations by the residency programs themselves. For example, one organization, Versant,² has demonstrated a profound reduction in turnover rates for new graduate registered nurses—from 35 to 6 percent at 12 months and from 55 to 11 percent at 24 months—compared with new graduate registered nurse control groups hired at a facility prior to implementation of the residency program.

Key Message #2: Nurses Should Achieve Higher Levels of Education and Training Through an Improved Education System That Promotes Seamless Academic Progression (Chapter 4)

Major changes in the U.S. health care system and practice environment will require equally profound changes in the education of nurses both before and after they receive their license. An improved education system is necessary to ensure that the current and future generations of nurses can deliver safe, quality, patient-centered care across all settings, especially in such areas as primary care and community and public health.

Nursing is unique among the health professions in the United States in that it has multiple educational pathways leading to an entry-level license to practice. The qualifications and level of education required for entry into the nursing profession have been widely debated by nurses, nursing organizations, academics, and a host of other stakeholders for more than 40 years. During that time, competencies needed to practice have expanded, especially in the domains of community and public health, geriatrics, leadership, health policy, system improvement and change, research and evidence-based practice, and teamwork and collaboration. These new competencies have placed increased pressures on the education system and its curricula.

Care within hospital and community settings also has become more complex. In hospitals, nurses must make critical decisions associated with care for sicker, frailer patients and work with sophisticated, life-saving technology. Nurses are being called upon to fill primary care roles and to help patients manage chronic illnesses, thereby preventing acute care episodes and disease progression. They are expected to use a variety of technological tools and complex information management systems that require skills in analysis and synthesis to improve the quality and effectiveness of care. Across settings, nurses are being called upon to coordinate care and collaborate with a variety of health professionals, including physicians, social workers, physical and occupational therapists, and pharmacists, most of whom hold master's or doctoral degrees. Shortages of nurses in the positions of primary care providers, faculty, and researchers continue to be a barrier to advancing the profession and improving the delivery of care to patients.

To respond to these demands of an evolving health care system and meet the changing needs of patients, nurses must achieve higher levels of education and training. One step in realizing this goal is for a greater number of nurses to enter the workforce with a baccalaureate degree or progress to this degree early in their career. Moreover, to alleviate shortages of nurse faculty, primary care providers, and researchers, a cadre of qualified nurses needs to be ready to advance

² Versant is a nonprofit organization that provides, supervises, and evaluates nurse transition-to-practice residency programs for children's and general acute care hospitals. See <http://www.versant.org/item.asp?id=35>.

to the master's and doctoral levels. Nursing education should therefore include opportunities for seamless transition to higher degree programs—from licensed practical nurse (LPN)/licensed vocational nurse (LVN) degrees, to the associate's degree in nursing (ADN) and bachelor's of science in nursing (BSN), to master's of science in nursing (MSN), and to the PhD and doctor of nursing practice (DNP). Further, nursing education should serve as a platform for continued lifelong learning. Nurses also should be educated with physicians and other health professionals as students and throughout their careers. Finally, as efforts are made to improve the education system, greater emphasis must be placed on increasing the diversity of the workforce, including in the areas of gender and race/ethnicity, as well as ensuring that nurses are able to provide culturally relevant care.

While the capacity of the education system will need to expand, and the focus of curricula will need to be updated to ensure that nurses have the right competencies, a variety of traditional and innovative strategies already are being used across the country to achieve these aims. Examples include the use of technologies such as online education and simulation, consortium programs that create a seamless pathway from the ADN to the BSN, and ADN-to-MSN programs that provide a direct link to graduate education. Collectively, these strategies can be scaled up and refined to effect the needed transformation of nursing education.

Key Message #3: Nurses Should Be Full Partners, with Physicians and Other Health Professionals, in Redesigning Health Care in the United States (Chapter 5)

Strong leadership is critical if the vision of a transformed health care system is to be realized. To play an active role in achieving this vision, the nursing profession must produce leaders throughout the system, from the bedside to the boardroom. These leaders must act as full partners with physicians and other health professionals, and must be accountable for their own contributions to delivering high-quality care while working collaboratively with leaders from other health professions.

Being a full partner transcends all levels of the nursing profession and requires leadership skills and competencies that must be applied within the profession and in collaboration with other health professionals. In care environments, being a full partner involves taking responsibility for identifying problems and areas of waste, devising and implementing a plan for improvement, tracking improvement over time, and making necessary adjustments to realize established goals. Moreover, being a full partner translates more broadly to the health policy arena. To be effective in reconceptualized roles, nurses must see policy as something they can shape rather than something that happens to them. Nurses should have a voice in health policy decision making and be engaged in implementation efforts related to health care reform. Nurses also should serve actively on advisory committees, commissions, and boards where policy decisions are made to advance health systems to improve patient care.

Strong leadership on the part of nurses, physicians, and others will be required to devise and implement the changes necessary to increase quality, access, and value and deliver patient-centered care. While not all nurses begin their career with thoughts of becoming a leader, leadership is fundamental to advancing the profession. To ensure that nurses are ready to assume leadership roles, leadership-related competencies need to be embedded throughout nursing education, leadership development and mentoring programs need to be made available for nurses at all levels, and a culture that promotes and values leadership needs to be fostered. Equally important, all nurses—from students, to bedside and community nurses, to chief nursing officers and members of nursing organizations, to researchers—must take responsibility for their

personal and professional growth by developing leadership competencies. They must exercise these competencies in a collaborative environment in all settings, including hospitals, communities, schools, boards, and political and business arenas, both within nursing and across the health professions. And in doing so, they must not only mentor others along the way, but develop partnerships and gain allies both within and beyond the health care environment.

Key Message #4: Effective Workforce Planning and Policy Making Require Better Data Collection and an Improved Information Infrastructure (Chapter 6)

Achieving a transformation of the health care system and the practice environment will require a balance of skills and perspectives among physicians, nurses, and other health professionals. However, strategic health care workforce planning to achieve this balance is hampered by the lack of sufficiently reliable and granular data on, for example, the numbers and types of health professionals currently employed, where they are employed and in what roles, and what types of activities they perform. These data are required to determine regional health care workforce needs and to establish regional targets and plans for appropriately increasing the supply of health professionals. Additionally, understanding of the impact of innovations such as bundled payments, medical homes, accountable care organizations, health information technology, and comparative effectiveness will be incomplete without information on and analysis of the necessary contributions of the various types of health professionals. Data collection and analysis across the health professions will also be essential because of the overlap in scopes of practice for primary care providers such as physicians, physician assistants, and nurse practitioners and the increasing shift toward team-based care. In the specific context of this study, planning for fundamental, wide-ranging changes in the education and deployment of the nursing workforce will require comprehensive data on the numbers and types of nurses currently available and required to meet future needs. Once an infrastructure for collecting and analyzing workforce data is in place, systematic assessment and projection of nursing workforce requirements by role, skill mix, region, and demographics will be needed to inform necessary changes in nursing practice and education.

The ACA mandates the creation of a National Health Care Workforce Commission whose mission is, among other things, to “[develop] and [commission] evaluations of education and training activities to determine whether the demand for health care workers is being met,” and to “[identify] barriers to improved coordination at the Federal, State, and local levels and recommend ways to address such barriers.”³ The ACA also authorizes a National Center for Workforce Analysis, as well as state and regional workforce centers, and provides funding for workforce data collection and studies. A priority for these new structures and resources should be systematic monitoring of the supply of health care workers across profession, review of the data and methods needed to develop accurate predictions of future workforce needs, and coordination of the collection of data on the health care workforce at the state and regional levels. To be most useful, the data and information gathered must be timely and publicly accessible.

³ *Patient Protection and Affordable Care Act*, H.R. 3590 § 5101, 111th Congress.

RECOMMENDATIONS

Recommendation 1: Remove scope-of-practice barriers. *Advanced practice registered nurses should be able to practice to the full extent of their education and training. To achieve this goal, the committee recommends the following actions.*

For the Congress:

- Expand the Medicare program to include coverage of advanced practice registered nurse services that are within the scope of practice under applicable state law, just as physician services are now covered.
- Amend the Medicare program to authorize advanced practice registered nurses to perform admission assessments, as well as certification of patients for home health care services and for admission to hospice and skilled nursing facilities.
- Extend the increase in Medicaid reimbursement rates for primary care physicians included in the ACA to advanced practice registered nurses providing similar primary care services.
- Limit federal funding for nursing education programs to programs in states that have adopted the National Council of State Boards of Nursing advanced practice registered nurse model rules and regulations (Article XVIII, Chapter 18).

For state legislatures:

- Reform scope-of-practice regulations to conform to the National Council of State Boards of Nursing advanced practice registered nurse model rules and regulations (Article XVIII, Chapter 18).
- Require third-party payers that participate in fee-for-service payment arrangements to provide direct reimbursement to advanced practice registered nurses who are practicing within their scope of practice under state law.

For the Centers for Medicare and Medicaid Services:

- Amend or clarify the requirements for hospital participation in the Medicare program to ensure that advanced practice registered nurses are eligible for clinical privileges, admitting privileges, and membership on medical staff.

For the Office of Personnel Management:

- Require insurers participating in the Federal Employees Health Benefits Program to include coverage of those services of advanced practice registered nurses that are within their scope of practice under applicable state law.

For the Federal Trade Commission and the Antitrust Division of the Department of Justice:

- Review existing and proposed state regulations concerning advanced practice registered nurses to identify those that have anticompetitive effects without contributing to the

health and safety of the public. States with unduly restrictive regulations should be urged to amend them to allow advanced practice registered nurses to provide care to patients in all circumstances in which they are qualified to do so.

Recommendation 2: Expand opportunities for nurses to lead and diffuse collaborative improvement efforts. *Private and public funders, health care organizations, nursing education programs, and nursing associations should expand opportunities for nurses to lead and manage collaborative efforts with physicians and other members of the health care team to conduct research and to redesign and improve practice environments and health systems. These entities should also provide opportunities for nurses to diffuse successful practices.*

To this end:

- The Center for Medicare and Medicaid Innovation should support the development and evaluation of models of payment and care delivery that use nurses in an expanded and leadership capacity to improve health outcomes and reduce costs. Performance measures should be developed and implemented expeditiously where best practices are evident to reflect the contributions of nurses and ensure better-quality care.
- Private and public funders should collaborate, and when possible pool funds, to advance research on models of care and innovative solutions, including technology, that will enable nurses to contribute to improved health and health care.
- Health care organizations should support and help nurses in taking the lead in developing and adopting innovative, patient-centered care models.
- Health care organizations should engage nurses and other front-line staff to work with developers and manufacturers in the design, development, purchase, implementation, and evaluation of medical and health devices and health information technology products.
- Nursing education programs and nursing associations should provide entrepreneurial professional development that will enable nurses to initiate programs and businesses that will contribute to improved health and health care.

Recommendation 3: Implement nurse residency programs. *State boards of nursing, accrediting bodies, the federal government, and health care organizations should take actions to support nurses' completion of a transition-to-practice program (nurse residency) after they have completed a prelicensure or advanced practice degree program or when they are transitioning into new clinical practice areas.*

The following actions should be taken to implement and support nurse residency programs:

- State boards of nursing, in collaboration with accrediting bodies such as the Joint Commission and the Community Health Accreditation Program, should support nurses' completion of a residency program after they have completed a prelicensure or advanced practice degree program or when they are transitioning into new clinical practice areas.

- The Secretary of Health and Human Services should redirect all graduate medical education funding from diploma nursing programs to support the implementation of nurse residency programs in rural and critical access areas.
- Health care organizations, the Health Resources and Services Administration and Centers for Medicare and Medicaid Services, and philanthropic organizations should fund the development and implementation of nurse residency programs across all practice settings.
- Health care organizations that offer nurse residency programs and foundations should evaluate the effectiveness of the residency programs in improving the retention of nurses, expanding competencies, and improving patient outcomes.

Recommendation 4: Increase the proportion of nurses with a baccalaureate degree to 80 percent by 2020. *Academic nurse leaders across all schools of nursing should work together to increase the proportion of nurses with a baccalaureate degree from 50 to 80 percent by 2020. These leaders should partner with education accrediting bodies, private and public funders, and employers to ensure funding, monitor progress, and increase the diversity of students to create a workforce prepared to meet the demands of diverse populations across the lifespan.*

- The Commission on Collegiate Nursing Education, working in collaboration with the National League for Nursing Accrediting Commission, should require all nursing schools to offer defined academic pathways, beyond articulation agreements, that promote seamless access for nurses to higher levels of education.
- Health care organizations should encourage nurses with associate's and diploma degrees to enter baccalaureate nursing programs within 5 years of graduation by offering tuition reimbursement, creating a culture that fosters continuing education, and providing a salary differential and promotion.
- Private and public funders should collaborate, and when possible pool funds, to expand baccalaureate programs to enroll more students by offering scholarships and loan forgiveness, hiring more faculty, expanding clinical instruction through new clinical partnerships, and using technology to augment instruction. These efforts should take into consideration strategies to increase the diversity of the nursing workforce in terms of race/ethnicity, gender, and geographic distribution.
- The U.S. Secretary of Education, other federal agencies including the Health Resources and Services Administration, and state and private funders should expand loans and grants for second-degree nursing students.
- Schools of nursing, in collaboration with other health professional schools, should design and implement early and continuous interprofessional collaboration through joint classroom and clinical training opportunities.
- Academic nurse leaders should partner with health care organizations, leaders from primary and secondary school systems, and other community organizations to recruit and advance diverse nursing students.

Recommendation 5: Double the number of nurses with a doctorate by 2020. *Schools of nursing, with support from private and public funders, academic administrators and university trustees, and accrediting bodies, should double the number of nurses with a doctorate by 2020 to add to the cadre of nurse faculty and researchers, with attention to increasing diversity.*

- The Commission on Collegiate Nursing Education and the National League for Nursing Accrediting Commission should monitor the progress of each accredited nursing school to ensure that at least 10 percent of all baccalaureate graduates matriculate into a master's or doctoral program within 5 years of graduation.
- Private and public funders, including the Health Resources and Services Administration and the Department of Labor, should expand funding for programs offering accelerated graduate degrees for nurses to increase the production of master's and doctoral nurse graduates and to increase the diversity of nurse faculty, scientists, and researchers.
- Academic administrators and university trustees should create salary and benefit packages that are market competitive to recruit and retain highly qualified academic and clinical nurse faculty.

Recommendation 6: Ensure that nurses engage in lifelong learning. *Accrediting bodies, schools of nursing, health care organizations, and continuing competency educators from multiple health professions should collaborate to ensure that nurses and nursing students and faculty continue their education and engage in lifelong learning to gain the competencies needed to provide care for diverse populations across the lifespan.*

- Faculty should partner with health care organizations to develop and prioritize competencies so curricula can be updated regularly to ensure that graduates at all levels are prepared to meet the current and future health needs of the population.
- The Commission on Collegiate Nursing Education and the National League for Nursing Accrediting Commission should require that all nursing students demonstrate a comprehensive set of clinical performance competencies that encompass the knowledge and skills needed to provide care across settings and the lifespan.
- Academic administrators should require all faculty to participate in continuing professional development and to perform with cutting-edge competence in practice, teaching, and research.
- All health care organizations and schools of nursing should foster a culture of lifelong learning and provide resources for interprofessional continuing competency programs.
- Health care organizations and other organizations that offer continuing competency programs should regularly evaluate their programs for adaptability, flexibility, accessibility, and impact on clinical outcomes and update the programs accordingly.

Recommendation 7: Prepare and enable nurses to lead change to advance health. *Nurses, nursing education programs, and nursing associations should prepare the nursing workforce to assume leadership positions across all levels, while public, private, and governmental health care decision makers should ensure that leadership positions are available to and filled by nurses.*

- Nurses should take responsibility for their personal and professional growth by continuing their education and seeking opportunities to develop and exercise their leadership skills.
- Nursing associations should provide leadership development, mentoring programs, and opportunities to lead for all their members.
- Nursing education programs should integrate leadership theory and business practices across the curriculum, including clinical practice.
- Public, private, and governmental health care decision makers at every level should include representation from nursing on boards, on executive management teams, and in other key leadership positions.

Recommendation 8: Build an infrastructure for the collection and analysis of interprofessional health care workforce data. *The National Health Care Workforce Commission, with oversight from the Government Accountability Office and the Health Resources and Services Administration, should lead a collaborative effort to improve research and the collection and analysis of data on health care workforce requirements. The Workforce Commission and the Health Resources and Services Administration should collaborate with state licensing boards, state nursing workforce centers, and the Department of Labor in this effort to ensure that the data are timely and publicly accessible.*

- The Workforce Commission and the Health Resources and Services Administration should coordinate with state licensing boards, including those for nursing, medicine, dentistry, and pharmacy, to develop and promulgate a standardized minimum data set across states and professions that can be used to assess health care workforce needs by demographics, numbers, skill mix, and geographic distribution.
- The Workforce Commission and the Health Resources and Services Administration should set standards for the collection of the minimum data set by state licensing boards; oversee, coordinate, and house the data; and make the data publicly accessible.
- The Workforce Commission and the Health Resources and Services Administration should retain, but bolster, the Health Resources and Services Administration's registered nurse sample survey by increasing the sample size, fielding the survey every other year, expanding the data collected on advanced practice registered nurses, and releasing survey results more quickly.
- The Workforce Commission and the Health Resources and Services Administration should establish a monitoring system that uses the most current analytic approaches and data from the minimum data set to systematically measure and project nursing workforce requirements by role, skill mix, region, and demographics.
- The Workforce Commission and the Health Resources and Services Administration should coordinate workforce research efforts with the Department of Labor, state and

regional educators, employers, and state nursing workforce centers to identify regional health care workforce needs, and establish regional targets and plans for appropriately increasing the supply of health professionals.

- The Government Accountability Office should ensure that the Workforce Commission membership includes adequate nursing expertise.

CONCLUSIONS

Nurses are already committed to delivering high-quality care under current regulatory, business, and organizational conditions. But the power to change those conditions to deliver better care does not rest primarily with nurses, regardless of how ably led or educated they are; it also lies with governments, businesses, health care institutions, professional organizations and other health professionals, and the insurance industry. The recommendations presented in this report are directed to individual policy makers; national, state, and local government leaders; payers; health care researchers; executives; and professionals—including nurses and others—as well as to larger groups such as licensing bodies, educational institutions, and philanthropic and advocacy organizations, especially those advocating for consumers. Together, these groups have the power to transform the health care system to provide seamless, affordable, quality care that is accessible to all, patient centered, and evidence based and leads to improved health outcomes.

The Future of Nursing:

LEADING CHANGE, ADVANCING HEALTH

Committee on the Robert Wood Johnson Foundation
Initiative on the Future of Nursing,
at the Institute of Medicine

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The serpent has been a symbol of long life, healing, and knowledge among almost all cultures and religions since the beginning of recorded history. The serpent adopted as a logotype by the Institute of Medicine is a relief carving from ancient Greece, now held by the Staatliche Museen in Berlin.

*“Knowing is not enough; we must apply.
Willing is not enough; we must do.”*
—Goethe



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v

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This report has been reviewed in draft form by individuals chosen for their diverse perspectives and technical expertise, in accordance with procedures approved by the National Research Council's Report Review Committee. The purpose of this independent review is to provide candid and critical comments that will assist the institution in making its published report as sound as possible and to ensure that the report meets institutional standards for objectivity, evidence, and responsiveness to the study charge. The review comments and draft manuscript remain confidential to protect the integrity of the deliberative process. We wish to thank the following individuals for their review of this report:

John Benson, Jr., University of Nebraska Medical Center
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Although the reviewers listed above have provided many constructive comments and suggestions, they were not asked to endorse the conclusions or recommendations nor did they see the final draft of the report before its release. The review of this report was overseen by **Kristine Gebbie**, School of Nursing, Hunter College City University of New York and **Mark R. Cullen**, Stanford University. Appointed by the National Research Council and Institute of Medicine, they were responsible for making certain that an independent examination of this report was carried out in accordance with institutional procedures and that all review comments were carefully considered. Responsibility for the final content of this report rests entirely with the authoring committee and the institution.

Foreword

The founding documents of the Institute of Medicine (IOM) call for experts to discuss, debate, and examine possible solutions for the multitude of complex health concerns that face the United States and the world. Equally important is the timely implementation of those solutions in a way that improves health. The United States is at an important crossroads as health care reforms are being carried out and the system begins to change. The possibility of strengthening the largest component of the health care workforce—nurses—to become partners and leaders in improving the delivery of care and the health care system as a whole inspired the IOM to partner with The Robert Wood Johnson Foundation (RWJF) in creating the RWJF Initiative on the Future of Nursing at the IOM. In this partnership, the IOM and RWJF were in agreement that accessible, high-quality care cannot be achieved without exceptional nursing care and leadership. By working together, the two organizations sought to bring more credibility and visibility to the topic than either could by working alone. The organizations merged staff and resources in an unprecedented partnership to explore challenges central to the future of the nursing profession.

To support this collaborative effort, the IOM welcomed staff from RWJF, as loaned employees, to provide specific content expertise in nursing, research, and communications. Combining staff from two different organizations was an experiment that integrated best practices from both organizations and inspired us to think in fresh ways about how we conduct our work. We are indebted to RWJF for the leadership, support, and partnership that made this endeavor possible.

I am deeply grateful to the committee, chaired by former Department of Health and Human Services Secretary Donna Shalala, and to the staff, especially Susan Hassmiller, Adrienne Stith Butler, Andrea Schultz, and Katharine Bothner, who produced this report. Their work will serve as a blueprint for how the nursing profession can transform itself into an ever more potent and relevant force for lasting solutions to enhance the quality and value of U.S. health care in ways that will meet the future health needs of diverse populations. The report calls on nurses, individually and as a profession, to embrace changes needed to promote health, prevent illness, and care for people in all settings across the lifespan. The nursing profession cannot make these changes on its own, however. The report calls for multisector support and interprofessional collaboration. In this sense, it calls on all health professionals and health care decision makers to work with nurses to make the changes needed for a more accessible, cost-effective, and high-quality health care system.

Since its foundation 40 years ago, the IOM has produced many reports echoing the theme of high-quality, safe, effective, evidence-based, and patient-centered care. The present report expands on this theme by addressing the critical role of nursing. It demonstrates that achieving a successful health care system in the future rests on the future of nursing.

Harvey V. Fineberg, M.D., Ph.D.
President, Institute of Medicine

Preface

This report is being published at a time of great opportunity in health care. Legislation passed in March 2010 will provide access to health care for 32 million more Americans. The implications of this new demand on the nation's health care system are significant. How can the system accommodate the increased demand while improving the quality of health care services provided to the American public?

Nursing represents the largest sector of the health professions, with more than 3 million registered nurses in the United States. The question presented to the committee that produced this report was: What roles can nursing assume to address the increasing demand for safe, high-quality, and effective health care services? In the near term, the new health care laws identify great challenges in the management of chronic conditions, primary care (including care coordination and transitional care), prevention and wellness, and the prevention of adverse events (such as hospital-acquired infections). The demand for better provision of mental health services, school health services, long-term care, and palliative care (including end-of-life care) is increasing as well. Whether improvements in all these areas of care will slow the rate of growth in health care expenditures remains to be seen; however, experts believe they will result in better health outcomes.

What nursing brings to the future is a steadfast commitment to patient care, improved safety and quality, and better outcomes. Most of the near-term challenges identified in the health care reform legislation speak to traditional and current strengths of the nursing profession in such areas as care coordination, health promotion, and quality improvement. How well nurses are trained and do their jobs is inextricably tied to every health care quality measure that has been targeted for improvement over the past few years. Thus for nursing, health care reform provides an opportunity for the profession to meet the demand for safe, high-quality, patient-centered, and equitable health care services. We believe nurses have key roles to play as team members and leaders for a reformed and better-integrated, patient-centered health care system.

This report begins with the assumption that nursing can fill such new and expanded roles in a redesigned health care system. To take advantage of these opportunities, however, nurses must be allowed to practice in accordance with their professional training, and the education they receive must better prepare them to deliver patient-centered, equitable, safe, high-quality health care services; engage with physicians and other health care professionals to deliver efficient and effective care; and assume leadership roles in the redesign of the health care system. In particular, we believe the search for an expanded workforce to serve the millions who will now have access to health insurance for the first time will require changes in nursing scopes of practice, advances in the education of nurses across all levels, improvements in the practice of nursing across the continuum of care, transformation in the utilization of nurses across settings, and leadership at all levels so nurses can be deployed effectively and appropriately as partners in the health care team.

In 2008, The Robert Wood Johnson Foundation (RWJF) approached the Institute of Medicine (IOM) to propose a partnership between the two organizations to assess and respond to the need to transform the nursing profession to meet these challenges. The resulting collaborative partnership created a unique blend of organizational expertise and content expertise, drawing on the IOM's mission to serve as adviser to the nation to improve health and RWJF's long-standing commitment to ensuring that the nursing workforce has the necessary capacity, in terms of numbers, skills, and competence, to meet the present and future health care needs of the public. Recognizing that the nursing profession faces the challenges outlined above, RWJF and the IOM established a 2-year Initiative on the Future of Nursing. The cornerstone of the initiative is the work of this IOM committee. The Committee on The Robert Wood Johnson Foundation Initiative on the Future of Nursing, at the Institute of Medicine was tasked with producing a report containing recommendations for an action-oriented blueprint for the future of nursing, including changes in public and institutional policies at the national, state, and local levels. The specific charge to the committee is presented in Box P-1.

**BOX P-1
Committee Charge**

An ad hoc committee will examine the capacity of the nursing workforce to meet the demands of a reformed health care and public health system. It will develop a set of bold national recommendations, including ones that address the delivery of nursing services in a shortage environment and the capacity of the nursing education system. In its report, the committee will define a clear agenda and blueprint for action including changes in public and institutional policies at the national, state and local levels. Its recommendations would address a range of system changes, including innovative ways to solve the nursing shortage in the United States.

The committee may examine and produce recommendations related to the following issues, with the goal of identifying vital roles for nurses in designing and implementing a more effective and efficient health care system:

- Reconceptualizing the role of nurses within the context of the entire workforce, the shortage, societal issues, and current and future technology;
- Expanding nursing faculty, increasing the capacity of nursing schools, and redesigning nursing education to assure that it can produce an adequate number of well prepared nurses able to meet current and future health care demands;
- Examining innovative solutions related to care delivery and health professional education by focusing on nursing and the delivery of nursing services; and
- Attracting and retaining well prepared nurses in multiple care settings, including acute, ambulatory, primary care, long term care, community and public health.

The committee held five meetings, which included three technical workshops held to gather information on topics related to the study charge. In addition to these meetings, the committee hosted three public forums on the future of nursing that focused on acute care; care in the community, with emphasis on community health, public health, primary care, and long-term care; and nursing education. Summaries of these forums have been published separately, are available at www.iom.edu/nursing, and are included on the CD-ROM in the back of this report. The committee also conducted a series of site visits in conjunction with each public forum to learn how nurses function in various health care and educational settings. In addition to the workshops, forums, and site visits, the committee collected testimony and welcomed public input throughout the study process, conducted a literature review, and commissioned a series of papers from a research network of esteemed colleagues.

For this committee, the IOM assembled an extraordinary group of professionals, including health experts from business, universities, and nonprofits and health care organizations. The team brought diverse perspectives to the table that went well outside the nursing profession. Most of the members did not have a degree in nursing and were not involved in nursing education, practice, research, or governance. We are grateful to these committee members and to the exceptionally talented staff of the IOM and RWJF, all of whom worked hard with enthusiasm, great skill, flexibility, clarity, and drive.

Donna E. Shalala, Ph.D., FAAN
Chair

Linda Burnes Bolton, Dr.P.H., R.N., FAAN
Vice Chair

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To begin, the committee would like to thank the sponsor of this study. Funds for the committee's work were provided by the Robert Wood Johnson Foundation.

Numerous individuals and organizations made important contributions to the study process and this report. The committee wishes to express its gratitude for each of these contributions, although space does not permit identifying all of them here. Appendix A lists the individuals who provided valuable information at the committee's open workshops and its three forums on the future of nursing. In conjunction with each of the forums, the committee also visited several clinical sites to gather information on the role of nurses in various settings; these visits helped the committee understand the experiences of nurses and other health professionals and administrators. The committee greatly appreciates the time and information provided by all of these individuals.

The committee also gratefully acknowledges the contributions of the many individuals who provided data and research support. The RWJF Nursing Research Network, led by Lori Melichar and coordinated by Patricia (Polly) Pittman with the assistance of Emily Bass of AcademyHealth, created a series of research products that synthesized, translated, and disseminated information to inform the committee's deliberations. Research products from this network were managed by Linda Aiken, University of Pennsylvania; Peter Buerhaus, Vanderbilt University; Christine Kovner, New York University; and Joanne Spetz, University of California, San Francisco.

The committee would like to thank as well the authors whose commissioned papers added to the evidence base for the study: Barbara L. Nichols, Catherine R. Davis, and Donna R. Richardson of the Commission on Graduates of Foreign Nursing Schools International; Barbara J. Safriet, Lewis and Clark Law School; Julie Sochalski, University of Pennsylvania School of Nursing, and Jonathan Weiner, Johns Hopkins University Bloomberg School of Public Health; Linda Cronenwett of the University of North Carolina at Chapel Hill School of Nursing, Christine A. Tanner of Oregon Health & Science University School of Nursing, Catherine L. Gilliss of Duke University School of Nursing, Kathleen Dracup of the University of California, San Francisco School of Nursing, Donald M. Berwick, Institute for Healthcare Improvement, Virginia Tilden, University of Nebraska Medical Center College of Nursing, and Linda H. Aiken of the University of Pennsylvania School of Nursing; and Linda Norlander, Group Health Home Care and Hospice. The committee also thanks the following fellows of the RWJF Executive Nurse Leadership Program: Victoria Niederhauser, Richard C. MacIntyre, Catherine Garner, Cynthia Teel, and Teri A. Murray; Mary Ellen Glasgow, Lynne M. Dunphy, and Rosalie O. Mainous; Jill Fuller and Karen Drenkard; Christina Esperat, Kathryn Fiandt, Gloria McNeal, Loretta Heuer, and Erin Denholm; Suzanne Prevost, Cynda Hylton Rushton, Jody Chrastek, and Jane Kirschling; Wanda Montalvo, Donna Torrison, Tine Hansen-Turton, and Susan Birch; and Maxine Proskurowski, Mary E. Newell, and Marykay Vandriel.

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Acronyms and Abbreviations

AACN	American Association of Colleges of Nursing
AAI	Arkansas Aging Initiative
AAMC	Association of American Medical Colleges
AARP	American Association of Retired Persons
ACA	Affordable Care Act
ACO	accountable care organization
ADN	associate's degree in nursing
AIDS	acquired immune deficiency syndrome
AMA	American Medical Association
ANCC	American Nurses Credentialing Center
AONE	American Organization of Nurse Executives
APRN	advanced practice registered nurse
BSN	bachelor's of science in nursing
CBO	Congressional Budget Office
CHC	community health center
CMA	California Medical Association
CMS	Centers for Medicare and Medicaid Services
CNA	certified nursing assistant
CNL	clinical nurse leader
CNM	certified nurse midwife
CNO	chief nursing officer
CNS	clinical nurse specialist
CRNA	certified registered nurse anesthetist
CSA	California Society of Anesthesiologists
DEU	dedicated education unit
DNP	doctor of nursing practice
DRG	diagnosis-related group
FHBC	Family Health and Birth Center
FQHC	federally qualified health center
FTE	full-time equivalents
GAO	Government Accountability Office
GCHSSC	Gulf Coast Health Services Steering Committee
HealthSTAT	Health Students Taking Action Together
HEET	Hospital Employee Education and Training

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HHS	Health and Human Services
HIT	health information technology
HIV	human immunodeficiency virus
HNC	Harambee Nursing Center
HRSA	Health Resources and Services Administration
ICU	Intensive Care Unit
IHI	Institute for Healthcare Improvement
INLP	Integrated Nurse Leadership Program
INQRI	Interdisciplinary Nursing Quality Research Initiative
IOM	Institute of Medicine
LIFE	Living Independently for Life
LPN/LVN	licensed practical/vocational nurse
MD	medical doctor
MedPAC	Medicare Payment Advisory Commission
MSN	master's of science in nursing
NA	nursing assistant
NAQC	Nursing Alliance for Quality Care
NASA	National Aeronautics and Space Administration
NASN	National Association of School Nurses
NCEMNA	National Coalition of Ethnic Minority Nurse Associations
NCLEX-RN	National Council Licensure Examination for Registered Nurses
NCQA	National Committee for Quality Assurance
NCSBN	National Council of State Boards of Nursing
NFP	Nurse–Family Partnership
NHIT	national health care information technology
NHWC	National Health Workforce Commission
NLN	National League for Nursing
NMHC	nurse-managed health clinic
NNCC	National Nursing Centers Consortium
NP	nurse practitioner
NQF	National Quality Forum
NRN	Nursing Research Network
NSNA	National Student Nurses Association
NSSRN	National Sample Survey of Registered Nurses
OCNE	Oregon Consortium for Nursing Education
OHSU	Oregon Health and Science University
PACE	Program of All-Inclusive Care for the Elderly
PCMH	Patient-Centered Medical Home™
PhD	doctor of philosophy in nursing

RN	registered nurse
RWJF	Robert Wood Johnson Foundation
SAMHSA	Substance Abuse and Mental Health Services Administration
SEIU	Service Employees International Union
SOPP	Scope of Practice Partnership
TCAB	Transforming Care at the Bedside
TCM	Transitional Care Model
TIGER	Technology Informatics Guiding Education Reform
TWU	Texas Woman's University
UAMS	University of Arkansas for Medical Sciences
UHC	University HealthSystem Consortium
UP	University of Portland
UPMC	University of Pittsburgh Medical Center
USF	University of South Florida
UTH	University of Texas Health Science Center at Houston School of Nursing
VA	Department of Veterans Affairs
VANA	Veterans Affairs Nursing Academy
VNACJ	Visiting Nurse Association of Central Jersey
VNSNY	Visiting Nurse Service of New York

