

# Preparing the Nursing Workforce for a Changing Health System: The Role of Graduate Nursing Education

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## Overview

**The** nursing profession, with approximately 3 million licensed and practicing nurses in the U.S., comprises the largest segment of the nation's health care workforce. However, efforts are underway to rethink nursing education and training so that it meets the needs of an aging population with increasingly complex chronic diseases. Moreover, the capacity of today's health care workforce may need to be strengthened to meet growing demand brought about by recent coverage expansions. In light of these needs, there is consensus among experts that nursing education should be modernized to train a greater percentage of nurses at the graduate level and provide the skills nurses need as today's health care delivery system continues to evolve towards more team-based, data-driven, and coordinated care.

**Demand for registered nurses is projected to grow 19 percent from 2012 to 2022**

This toolkit is intended to provide policy-makers with a primer on today's nursing workforce, expert views on how nursing education should evolve to meet the needs of a changing health system, and the role of federal policy in advancing nursing education. It includes the following sections:

- The U.S. Nursing Workforce
- Outlook and Recommendations for Nursing Education
- Role of Federal Policy
- Resources

## The U.S. Nursing Workforce

An estimated 2.7 million registered nurses (RNs) were active in the workforce in 2012. [The Bureau of Labor Statistics](#) projects that 1.1 million job openings will be available for RNs and advance practice RNs by 2022, and demand for registered nurses is projected to grow 19 percent from 2012 to 2022.<sup>1</sup> Meanwhile, demand for nurse anesthetists, nurse midwives, and nurse practitioners is projected to grow 31 percent by 2022.<sup>2</sup> The demand for additional nursing services is expected to be driven by factors such as the aging population, the expected retirement of a significant percentage of the nursing workforce, and changes in care delivery models that could require nurses to spend more time on duties such as care coordination and prevention of acute health problems.<sup>3</sup>

According to the [Health Resources and Services Administration \(HRSA\)](#), the projected changes in supply and demand for nurses vary substantially by state. Nationally, if RNs continue to train at current levels, the supply of RNs is projected to outpace the expected demand for nursing services by 2025. However, national figures mask expected shortages based on geography, and disparities may still exist in terms of the supply of nurses at the state level. In the next decade, thirty-four states are expected to experience a growth in the supply of nurses that will exceed demand, but sixteen states are projected to experience a shortage of nurses.<sup>4</sup>

Relative to physicians, the number of nurse practitioners and physician assistants is expected to be much higher than the projected number of primary care doctors in the



coming years. [The Association of American Medical Colleges](#) projects a shortage of 45,000 primary care physicians by 2020.<sup>5</sup> As a result, analysts are looking to nurse practitioners to play an important role in alleviating this shortage under new models emphasizing team-based care, such as the patient-centered medical home, particularly in certain settings.<sup>6</sup> According to a [national survey](#) of primary care nurse practitioners and primary care physicians, nurse practitioners are more likely to provide primary care in a wider range of community settings such as urban and rural areas, and provide proportionally more care to Medicaid enrollees, racial and ethnic minorities, and uninsured populations.<sup>7</sup>

The diversity of the nursing workforce is also important for ensuring access to care. Underrepresented groups in nursing include men and individuals with African American, Hispanic, Asian, American Indian, and Alaska Native backgrounds. While the proportion of non-white RNs increased from 20 to 25 percent over the past decade, the proportion of men in the RN workforce increased by about a percentage point and is currently 9 percent.<sup>8</sup>

**Nursing programs turned away 78,089 qualified applicants due to faculty shortages, lack of clinical training sites, and budget constraints, in 2013.**

### Outlook and Recommendations for Nursing Education

Unlike other health professions training, multiple education entry points to nursing exist and requirements for nursing levels vary. The different levels of nursing qualifications include:

- [Registered Nurse \(RN\)](#), a status that can be obtained through an associate's degree, bachelor's degree, or a three-year hospital training diploma program;
- [Advanced Practice Registered Nurse \(APRN\)](#), graduate-prepared nurses including nurse practitioners, certified nurse-midwives, certified registered nurse anesthetists, and clinical nurse specialists, require a master's degree; and
- [Doctorate Degree in Nursing](#).

Experts in the nursing community concur that higher levels of nursing education and training are imperative to ensuring a high quality, patient-centered system. [The Institute of Medicine \(IOM\)](#) recommends increasing the proportion of nurses with a baccalaureate degree to 80 percent by 2020 and doubling the number of nurses with a doctorate by 2020. Recommended strategies for accomplishing these goals include core competencies emphasizing leadership, health policy, system improvement, research and evidence-based practice, teamwork, technological skills and health information management. [The IOM](#) also recommends creating opportunities for a seamless transition into higher nursing degree programs, encouraging interprofessional collaboration, producing more diversity in the workforce, and establishing residency programs in community settings to help manage the transition from nursing school to practice.<sup>9</sup>

### Training Challenges: Faculty Shortages and Budget Constraints

Some of the longstanding challenges to training more graduate-level nurses include securing both the necessary funding and also the faculty to conduct the training. Despite a large pool of qualified nursing applicants, there are not enough faculty members or facilities to train them, and that shortage is expected to worsen. According to the [American Association of Colleges of Nursing \(AACN\)](#), baccalaureate and graduate nursing programs turned away 78,089 qualified applicants due to faculty shortages, lack of clinical training sites, and budget constraints, in 2013.<sup>10</sup> At the same time, about half of nursing school faculty members are expected to reach retirement age within the next ten years.<sup>11</sup> According to an [AACN survey](#) conducted on vacant faculty positions for the 2013-2014 academic year, two-thirds of nursing schools surveyed reported insufficient funding to hire new faculty as one of the biggest barriers.<sup>12</sup> Furthermore, higher compensation in clinical and private-sector settings may be discouraging qualified graduates from becoming nurse educators.<sup>13</sup>

Currently, 55 percent of RNs hold a bachelor's or higher degree, where an associate's degree in nursing was the first degree for many of these nurses.<sup>14</sup> To qualify for faculty positions, however, most schools either require or prefer doctorally prepared faculty members.<sup>15</sup> The multiple layers of degrees necessary to reach this level may present a challenge to many nurses, especially those who start with the minimal requirement of an associate's degree.

## The Role of Federal Policy

The main federal source of nursing education funding comes from [Title VIII of the Public Health Service Act](#), administered by the Health Resources and Services Administration (HRSA). The major grant program areas are: Advanced Education Nursing; Workforce Diversity Grants; Nurse Education, Practice, and Retention Grants; National Nurse Service Corps; Nurse Faculty Loan Program and Comprehensive Geriatric Education Grants.<sup>16</sup> [The funding for Title VIII](#) in fiscal year 2015 is \$232 million, which is a 3.5 percent increase over FY 2014 operating levels of \$224 million, but not significantly more than the FY 2012 level of \$231 million, and still less than the FY 2011 level of \$242 million.<sup>17</sup>

Medicare already has a well-established [program](#) for funding entry level nursing education via diploma programs, although many of these programs closed in the 1980s. This was most likely due to increased support for baccalaureate nursing education and difficulties faced by hospitals to rely on federal funds.<sup>18</sup> In addition, in 2012, the Centers for Medicare and Medicaid Services' Center for Medicare and Medicaid Innovation (CMMI) awarded \$200 million each to five hospitals to fund a [four-year demonstration project](#) aimed at supporting training and increasing the supply of APRNs who provide services to the growing number of Medicare beneficiaries. The focus of the training is on primary care and chronic care management, and at least half of the funding supports training in community-based settings. The Hospital of the University of Pennsylvania, Duke University Hospital, Scottsdale Healthcare Medical Center, Rush University Medical Center, and Memorial Hermann-Texas Medical Center Hospital received grants.<sup>19</sup>

## Resources Overview

### The Future of Nursing: Leading Change, Advancing Health

Institute of Medicine (IOM). October 5, 2010  
<http://goo.gl/KxxvJ>

This report examines the role of nurses in the health care system and provides recommendations focusing on nursing workforce readiness while meeting complex patient health needs. Recommendations include advancing education transformation, leveraging nurse leadership, removing barriers to practice and care, promoting nursing diversity, and fostering interprofessional collaboration.

**Future of Nursing: Campaign for Action Overview**  
 Center to Champion Nursing in America (CCNA).  
 October 8, 2014  
<http://goo.gl/RxhStt>

The Future of Nursing: *Campaign for Action* is an initiative of AARP and The Robert Wood Johnson Foundation, which strives to improve the nation's health care system through maximizing the use of nurses. The *Campaign* has organized coalitions in 50 states and DC to help implement the IOM's evidence-based recommendations.

**American Nursing Education at a Glance (Baccalaureate and Graduate)**  
 American Association of Colleges of Nursing (AACN). June 2014  
<http://goo.gl/JOIJia>

This policy brief provides statistics on the enrollment and graduation of students in baccalaureate and graduate nursing programs. It also provides a snapshot of the nursing workforce and breaks down the various roles of APRNs. The brief cites a growing demand for nurses and barriers to expanding the nation's nursing workforce.

**Supply and Demand Practice Characteristics of Primary Care Nurse Practitioners and Physicians**  
 Nursing Outlook, Peter Buerhaus et al. August, 2014  
<http://goo.gl/vvsHZJ>

This article reports the results of a national survey of primary care nurse practitioners (PCNPs) and primary care physicians (PCMDs), conducted in 2011–2012. The article reports that PCNPs are more likely than PCMDs to practice in urban and rural areas, provide care in a wider range of community settings, and treat Medicaid recipients and other vulnerable populations. The article finds that a strong majority of both types of clinicians reported that if they could choose an ideal primary care practice type, it would be a team practice with physicians and nurse practitioners.

**Job Outlook: Registered Nursing**  
 Bureau of Labor Statistics, U.S. Department of Labor, Occupational Handbook. January 8, 2014  
<http://goo.gl/RPKynV>

According to this report, registered nursing (RN) is listed as one of top occupations in terms of job growth by 2022. The Bureau projects employment of RNs to grow by 19 percent from 2012–2022 due to an aging population and greater demand for health care services.

### **Job Outlook: Nurse Anesthetists, Nurse Midwives, and Nurse Practitioners**

Bureau of Labor Statistics, U.S. Department of Labor, Occupational Handbook. January 8, 2014  
<http://goo.gl/TivzIA>

Employment of nurse anesthetists, nurse midwives, and nurse practitioners is projected to grow 31 percent from 2012–2022. This report provides the job outlook for APRNs with detailed projections.

### **Future of the Nursing Workforce: National and State-level Projections, 2012–2025**

Health Resources and Services Administration (HRSA). December 12, 2014  
<http://goo.gl/vuhdEA>

This brief provides national and state-level projections of the supply of and demand for registered nurses (RNs) and licensed practical/vocational nurses (LPNs). Using data from 2012 and the Health Resources and Services Administration's (HRSA) Health Workforce Simulation Model, the authors present projections for the entire U.S. in 2025. As an example, a key finding shows that between 2012 and 2025 the projected changes in supply and demand for LPNs vary substantially by state.

### **Projecting the Supply and Demand for Primary Care Practitioners through 2020**

Health Resources and Services Administration (HRSA). November 2013  
<http://goo.gl/lmsBA1>

This study highlights the projected growing demand for primary care services due to an aging population. It also discusses the projected increase in the supply of nurse practitioners and physician assistants by 2020 and how utilization of NPs and PAs could alleviate the projected primary care physician shortage, if properly integrated into the system.

### **Highlights from the 2012 National Sample Survey of Nurse Practitioners**

Health Resources and Services Administration (HRSA). 2014  
<http://goo.gl/8jgPyN>

This survey takes an in depth look at the nurse practitioner workforce and profiles education, certification and practice patterns.

### **Nursing Shortage Fact Sheet**

American Association of Colleges of Nursing, Robert Rosseter  
<http://goo.gl/ZHZmU5>

This fact sheet discusses the expected shortage of RNs and capacity barriers in nursing schools to meet growing demands, outlines the current and projected nursing shortage indicators, and describes contributing factors impacting the nursing shortage.

### **Enhancing Diversity in the Nursing Workforce**

American Association of Colleges of Nursing (AACN). January 21, 2014  
<http://goo.gl/ORhC1Y>

The need to attract students from underrepresented groups in nursing — specifically men and individuals from African American, Hispanic, Asian, American Indian, and Alaskan native backgrounds — is gaining in importance given the Bureau of Labor Statistics' projected need for more than a million new and replacement registered nurses by 2020.

### **Training Capacity**

#### **Nurses for the Future**

New England Journal of Medicine, Linda Aiken. January 20, 2011  
<http://goo.gl/Eoalg>

The author recommends a change in patterns of initial nursing education. She discusses unintended consequences of allowing the majority of graduates to enter nursing practice with an associate's degree.

### **The Shortage of Doctorally Prepared Nursing Faculty: A Dire Situation**

Nursing Outlook, Linda Berlin and Karen Sechrist. March 2002  
<http://goo.gl/55x0ry>

According to this article, the average retirement age for nurse faculty is 62.5 years, and the average retirement age of doctorally prepared faculty is 53.5 years. It predicts a wave of retirement within the next ten years.

### **Interprofessional Education Collaborative (IPEC)**

<http://goo.gl/A6ZUnK>

This website introduces the Interprofessional Education Collaborative (IPEC). Six national education associations of schools of the health professions established IPEC in 2009 to promote and encourage efforts that prepare the next generation of health care leaders for team-based practice and improved population health outcomes. Resources, funding opportunities, news and announcements can be found on the website.

## Federal Funding

### Justification of Estimates for Appropriations Committees, Fiscal Year 2015

Health Resources and Services Administration (HRSA). March 2014  
<http://goo.gl/fZnOmp>

HRSA is the Federal agency responsible for working to improve access to health care services for the targeted population of uninsured, isolated or medically vulnerable. This document summarizes and highlights HRSA's programs and activities, and provides detailed budget requests for FY2015.

### Graduate Nurse Education Demonstration

Center for Medicare and Medicaid Innovation (CMMI). July 30, 2012  
<http://goo.gl/iy7fGn>

This fact sheet describes the Graduate Nurse Education demonstration under the Center for Medicare and Medicaid (CMMI), which is a model that funds the clinical education of advance practice registered nurses.

### Medicare Graduate Nursing Education Demonstration

Center to Champion Nursing in America. October 9, 2014  
<http://goo.gl/V8I9ld>

This fact sheet provides information on the Medicare Graduate Nurse Education (GNE) Demonstration. The four-year Demonstration, under the Center for Medicare and Medicaid (CMMI), was awarded to five hospitals across the nation. The demonstration aims to increase the supply of advance practice registered nurses (APRNs), including nurse practitioners, certified registered nurse anesthetists, certified nurse midwives, and clinical nurse specialists.

### Course Correction: Better Preparing Today's Nurses For 21st Century Health Care Service

Health Affairs, Kelly Hancock. June 20, 2014  
<http://goo.gl/8j4r4Z>

This publication highlights lack of technical and "soft skills" (critical thinking, problem recognition, prioritization) because of flaws in education and discusses recommendations for improving nursing education and skills. Some examples include establishing nursing residency programs, creating better academic/clinical synergies and increasing clinical competence.

### Medicare Funding of Nursing Education: Proposal for a Coherent Policy Agenda

Nursing Outlook, Kathleen Thies and Doreen Harper 2004  
<http://goo.gl/zl6QqN>

This article provides background on Graduate Medical Education (GME) funding for nursing education and recommendations for a more coherent policy agenda.

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### **Websites**

AARP  
<http://www.aarp.org/>

Alliance for Health Reform  
[www.allhealth.org](http://www.allhealth.org)

American Association of Colleges of Nursing  
<http://www.aacn.nche.edu/>

American Association of Critical Care Nurses  
<http://www.aacn.org/>

American Association of Nurse Anesthetists  
<http://www.aana.com/>

American Association of Nurse Practitioners  
<http://www.aanp.org/>

American College of Nurse-Midwives  
<http://www.midwife.org/>

American Nurses Association

<http://www.nursingworld.org/>

American Nurses Credentialing Center

<http://www.nursecredentialing.org/>

Centers for Medicare & Medicaid Services, Nursing Home Compare

<http://www.medicare.gov/nursinghomecompare/search.html>

Graduate Nurse Education Demonstration, Centers for Medicare and Medicaid Services

<http://innovation.cms.gov/initiatives/GNE/>

Institute of Medicine

<http://www.iom.edu/>

Interprofessional Education Collaborative (IPEC)

<https://ipeccollaborative.org/>

National Association of Clinical Nurse Specialists

<http://www.nacns.org/>

National Council of State Boards of Nursing

<https://www.ncsbn.org>

Nursing Outlook

<http://www.nursingoutlook.org/>

Oregon Health & Science University School of Nursing

<http://www.ohsu.edu/xd/education/schools/school-of-nursing/>

The Journal of Continuing Education in Nursing

<http://www.healio.com/nursing/journals/jcen>

The Robert Wood Johnson Foundation

<http://www.rwjf.org/>

University of Pittsburgh School of Nursing

<http://www.nursing.pitt.edu/>

University of Washington, School of Nursing

<http://nursing.uw.edu/>

## ENDNOTES

- 1 "Table 8. Occupations with the largest projected number of job openings due to growth and replacement needs, 2012 and projected 2022." Bureau of Labor Statistics, U.S. Department of Labor, December 19, 2013. <http://goo.gl/3VuKCg>
- 2 "Job Outlook: Nurse Anesthetists, Nurse Midwives, and Nurse Practitioners." Bureau of Labor Statistics, U.S. Department of Labor, Occupational Handbook, January 8, 2014. <http://goo.gl/TivzIA>
- 3 "Future of the Nursing Workforce: National and State-level Projections, 2012-2025." Health Resources and Services Administration (HRSA), U.S. Department of Health and Human Services. December 12, 2014. <http://goo.gl/vuhdEA>
- 4 Ibid.
- 5 "Physician Shortages to Worsen Without Increases in Residency Training." AAMC Center for Workforce Studies, June 2010 Analysis. <http://goo.gl/FZHqRF>
- 6 "Projecting the Supply and Demand for Primary Care Practitioners through 2020 In Brief." Health Resources and Services Administration (HRSA), U.S. Department of Health and Human Services, November 2013. <http://goo.gl/lmsBA1>
- 7 Buerhaus, P. et al. "Practice Characteristics of Primary Care Nurse Practitioners and Physicians." Nursing Outlook, August, 2014. <http://goo.gl/vvsHZJ>
- 8 "The U.S. Nursing Workforce: Trends in Supply and Education." Health Resources and Services Administration, Bureau of Health Professions, National Center for Health Workforce Analysis, April 2013. <http://goo.gl/LCwD3K>
- 9 "The Future of Nursing: Leading Change, Advancing Health." Institute of Medicine (IOM), October 5, 2010. <http://goo.gl/KxxvJ>
- 10 American Nursing Education at a Glance (Baccalaureate and Graduate)." American Association of Colleges of Nursing (AACN), June 2014. <http://goo.gl/JOIjia>
- 11 Linda, A. "Nurses for the Future." New England Journal of Medicine, January 20, 2011. <http://goo.gl/Eoalg>
- 12 "American Nursing Education at a Glance (Baccalaureate and Graduate)." American Association of Colleges of Nursing (AACN), June 2014. <http://goo.gl/JOIjia>
- 13 "Nursing Faculty Shortage Fact Sheet." American Association of Colleges of Nursing, August 18, 2014. <http://goo.gl/huYex1>
- 14 "The U.S. Nursing Workforce: Trends in Supply and Education." Health Resources and Services Administration, Bureau of Health Professions, National Center for Health Workforce Analysis, April 2013. <http://goo.gl/LCwD3K>
- 15 "American Nursing Education at a Glance (Baccalaureate and Graduate)." American Association of Colleges of Nursing (AACN), June 2014. <http://goo.gl/JOIjia>
- 16 "Title VIII Funding for Nursing Workforce Development." American Nurses Association, August, 2014. <http://goo.gl/YKU5u6>
- 17 "Title VII and Title VIII Health Professions Programs FY 2015 Funding. HRSA Budget Justification." Association of American Medical Colleges, 2015. <http://goo.gl/12kTj6>
- 18 Thies, K. & D. Harper "Medicare Funding of Nursing Education: Proposal for a Coherent Policy Agenda." Nursing Outlook, 2004 Nov–Dec. <http://goo.gl/zl6QqN>
- 19 "Medicare Graduate Nursing Education Demonstration." Center to Champion Nursing in America, October 9, 2014. <http://goo.gl/V8I9ld>