



Broadening the Scope of Nursing Practice

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The Affordable Care Act promises to add 32 million Americans to the rolls of the insured at a time when there is a shortage of primary care providers. There is broad consensus that the next

phase of reform must slow the growth of health care costs and improve value through payment reforms, including bundling of payments and payments for episodes of care. Some savings will derive from implementation of innovative models of care, such as accountable care organizations, medical homes, transitional care, and community-based care. We believe that if we are to bridge the gap in primary care and establish new approaches to care delivery, all health care providers must be permitted to practice

to the fullest extent of their knowledge and competence. This will

require establishing a standardized and broadened scope of practice for advanced-practice registered nurses — in particular, nurse practitioners — for all states.

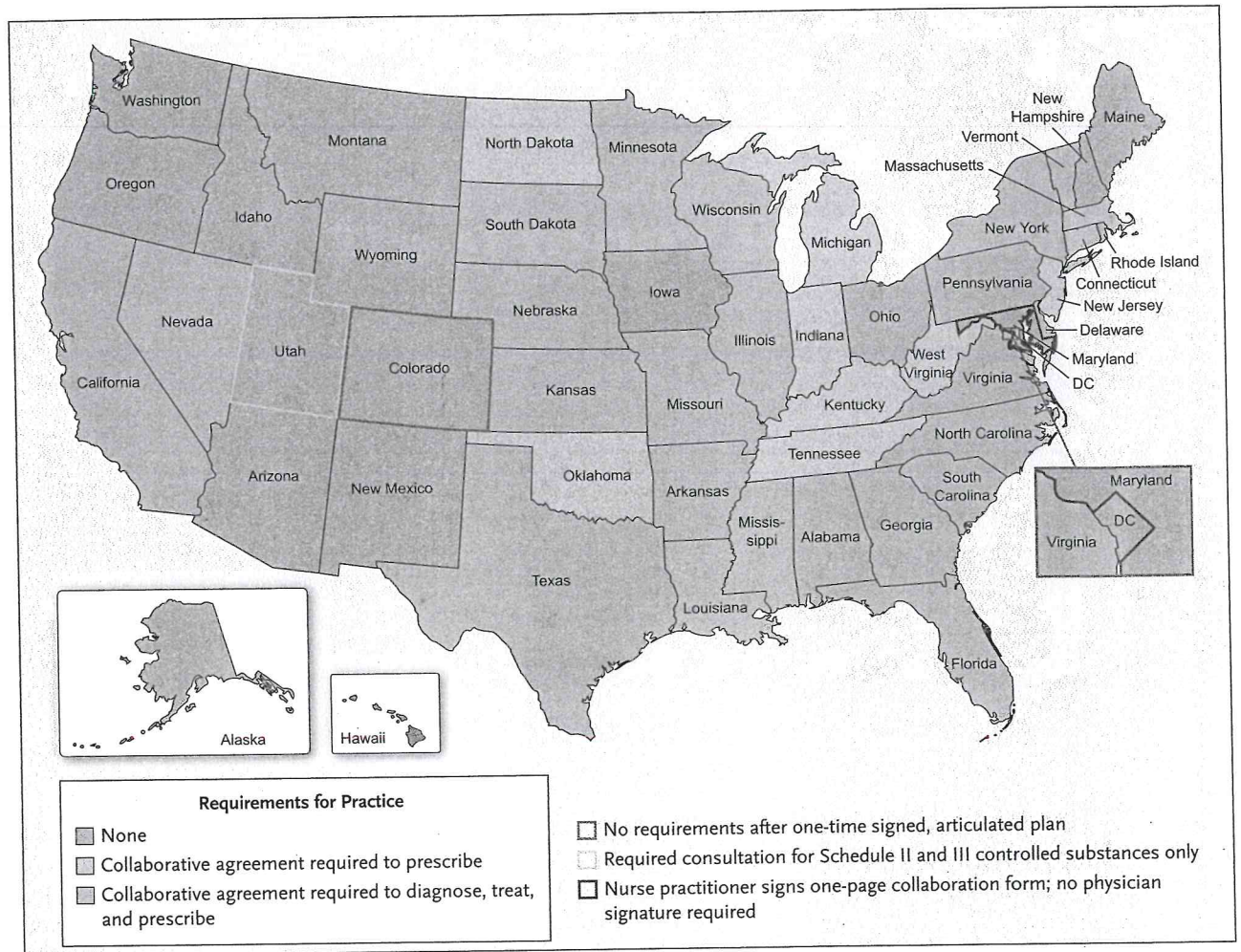
Nurses' role in primary care has recently received substantial scrutiny, as demand for primary care has increased and nurse practitioners have gained traction with the public. Evidence from many studies indicates that primary care services, such as wellness and prevention services, diagnosis and management of many common uncomplicated acute illnesses, and management of chronic diseases such as diabetes can be

provided by nurse practitioners at least as safely and effectively as by physicians.¹ After reviewing the issue, an Institute of Medicine (IOM) panel recently reiterated this conclusion and called for expansion of nurses' scope of practice in primary care.²

Some physicians' organizations argue that physicians' longer, more intensive training means that nurse practitioners cannot deliver primary care services that are as high-quality or safe as those of physicians. But physicians' additional training has not been shown to result in a measurable difference from that of nurse practitioners in the quality of basic primary care services.^{1,2} We are not arguing that nurse practitioners are substitutes for these physicians, but rather that we should consider how primary care services can be more effective.



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Scope-of-Practice Regulations for Nurse Practitioners, According to State.

Data are from the AARP (<http://championnursing.org/aprnmap>).

tively provided to more people with the use of the full primary care workforce.

The critical factors limiting nurse practitioners' capacity to practice to the full extent of their education, training, and competence are state-based regulatory barriers. States vary in terms of what they allow nurse practitioners to do, and this variance appears not to be correlated with performance on any measure of quality or safety. There are no data to suggest that nurse practitioners in states that impose greater restrictions on their prac-

tice provide safer and better care than those in less restrictive states or that the role of physicians in less restrictive states has changed or deteriorated.

There is variation in several aspects of practice, including requirements for prescribing privileges, oversight and chart reviews, and the maximum "collaboration ratios" for nurse practitioners working with physicians. In some states, nurses cannot certify home health care visits or stays in skilled nursing facilities or hospice, order durable equipment, admit patients to hospitals

without a physician's supervision or collaborative agreements, or prescribe medications without physician oversight. Nurses tend to move from more restrictive to less restrictive states, and from primary to specialist care, with a resulting loss of access to care for patients. Credentialing and payment are also linked to state regulations: more restrictive states are less likely than those allowing independent practice to credential nurse practitioners as primary care providers.^{2,3}

Sixteen states plus the District of Columbia have already

liberalized and standardized their scope-of-practice regulations and allow nurse practitioners to practice and prescribe independently (see map). Several other states are reconsidering their laws to allow independent practice and to adopt the Advance Practice Nurse (APRN) Model Act generated by the National Council of State Boards of Nursing. Under such laws, nurse practitioners may practice independently and be accountable "for recognizing limits of knowledge and experience, planning for the management of situations beyond [their] expertise; and for consulting with or referring patients to other health care providers as appropriate."⁴

The trend toward easing restrictions is propelled by recent reports from several blue-ribbon panels. In addition to the IOM report, which specifically targets regulatory barriers, several policy briefs from other organizations, including the Macy Foundation, support broader scope-of-practice boundaries. One of the largest consumer groups, the AARP (formerly the American Association of Retired Persons), also supports an expanded role for nurse practitioners in primary care.

In addition to the data on the quality of care, the expected dramatic increase in demand for primary care services from Americans with insurance, and the impending shortage of primary care providers, there are several other reasons to relax state regulations. Effective implementation of new delivery models, such as medical homes and accountable care organizations, which would provide chronic disease management and transitional care, requires the establishment of in-

terdisciplinary teams in which nurses provide a range of services, from case management to health and illness management. Such an expanded scope of practice and team-based approaches including nurse practitioners have been shown to improve quality and patient satisfaction and reduce costs at the Veterans Administration Health System, Geisinger Health System, and Kaiser Permanente.²

Reductions in cost associated with broadening nurse practitioners' scope of practice can be seen elsewhere as well. In U.S. retail clinics, where cost savings have been documented, nurse practitioners provide most of the care. But retail clinics have been slow to expand in states with more restrictive scope-of-practice regulations. Research in Massachusetts shows that using nurse practitioners or physician assistants to their full capacity could save the state \$4.2 billion to \$8.4 billion over 10 years and that greater use of retail clinics staffed primarily by nurse practitioners could save an additional \$6 billion.³

Since nurse practitioners' education is supported by federal and state funding, we are underutilizing a valuable government investment. Moreover, nurse practitioner training is the fastest and least expensive way to address the primary care shortage. Between 3 and 12 nurse practitioners can be educated for the price of educating 1 physician, and more quickly.⁵

Despite the robust rationale for broadening nurse practitioners' scope of practice, key medical organizations oppose the idea. The American Medical Association, the American Osteopathic Association, the American Acad-

emy of Pediatrics, and the American Academy of Family Physicians all support requiring direct supervision of nurse practitioners by physicians. As health care reform advances, implementation of payment reforms — including global or bundled team-based payments and medical home-based payments — may ease professional tensions and fears of substitution while enhancing support for an increased scope of nursing practice.

Legal considerations also seem to favor such a trend. The Federal Trade Commission recently evaluated proposed laws in three states and found several whose stringent requirements for physician supervision of nurses might be considered anticompetitive. The agency has also investigated proposed state policies that would protect professional interests rather than consumers.²

This is a critical time to support an expanded, standardized scope of practice for nurses. Economic forces, demographics, the gap between supply and demand, and the promised expansion of care necessitate changes in primary care delivery. A growing shortage of primary care providers seems to ensure that nurses will ultimately be required to practice to their fullest capacity. Fighting the expansion of nurse practitioners' scope of practice is no longer a defensible strategy. The challenge will be for all health care professionals to embrace these changes and come together to improve U.S. health care.

The views expressed in this article are those of the authors and do not necessarily represent those of their institutions.

Disclosure forms provided by the authors are available with the full text of this article at NEJM.org.

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Nurses for the Future

Linda H. Aiken, Ph.D., R.N.

On October 5, 2010, the Institute of Medicine (IOM) issued a report in which it recommended that the proportion of nurses in the United States who hold at least a bachelor's degree be increased from its current level of 50% to 80% by 2020.¹ The education of nurses may seem to be a less pressing matter than providing access to care for millions of uninsured Americans and making care affordable, effective, and safe for all. Yet if we don't alter the historical patterns of nursing education, the country's nursing resources will be crippled for the foreseeable future — with repercussions for all those patient-focused goals.

Nursing schools are turning away tens of thousands of qualified applicants because of budget constraints and a worsening faculty shortage. Within the next 10 years, half of nursing-school faculty members will reach retirement age; the anticipated attrition represents a crisis in the making, with potentially far-reaching consequences for the replenishment of the nurse workforce, which is itself on the verge of losing some 500,000 nurses to retirement.

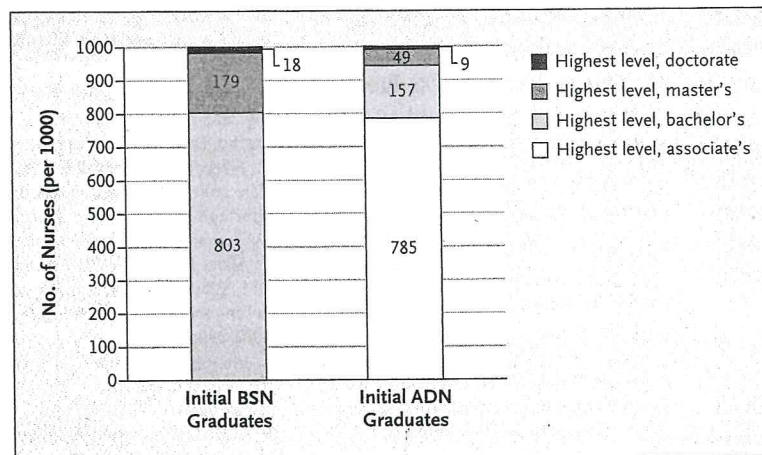
The number of new graduates from nurse-practitioner programs has remained flat, at about 8000 per year, despite rapidly escalating demand. The 80-hour workweek for resident physicians was made possible by teaching hospitals' hiring of thousands of advanced-practice registered nurses (APRNs). More than 3 million American families annually have received care at some 1100 new retail clinics staffed primarily by APRNs. APRNs have facilitated the largest expansion of community health centers since the 1960s, with 7354 sites throughout the country now providing care for more than 16 million people. Nurse anesthetists administer an estimated 30 million anesthetics to patients each year. Moreover, a number of health care reform initiatives are predicated on APRNs' filling a range of new roles in primary care, prevention, and care coordination.

Why has the graduation rate of APRNs stalled when there are so many good employment opportunities for nurses, and why is there a looming shortage of nursing faculty? The answer is simple, although the solution may

not be: to qualify for faculty or APRN positions, most nurses have to return to school after obtaining their basic education and licensure to acquire two or more additional academic degrees — a prospect that is simply not feasible for most practicing nurses.

Approximately 60% of new nurses graduate from associate's degree programs, 36% from bachelor's degree programs, and 3% from hospital-sponsored diploma programs. The creation of multiple educational entry points to nursing has been promoted by public policies designed to optimize access to nursing education for a diverse student body, promote wide geographic distribution in supply, and keep costs affordable. But a serious unintended consequence of permitting the majority of new graduates to enter nursing practice with an associate's degree or less is that too few nurses advance through multiple additional degrees to qualify as faculty or APRNs.

The graph shows the yield of graduate degrees according to the type of basic nursing education received. For every 100 nurses who initially graduate



Highest Degree Attained by Nurses According to Initial Type of Education, per 1000 Graduates, 1974–2004.

ADN denotes associate's degree in nursing, and BSN bachelor of science in nursing. Figures are based on the author's calculations using unpublished data from the 2004 National Sample Survey of Registered Nurses, Health Resources and Service Administration, Bureau of Health Professions, Division of Nursing.

from a bachelor's degree program between 1974 and 1994, almost 200 eventually obtained a master's or higher degree. In contrast, only 58 of every 1000 nurses who initially graduated from an associate's degree program obtained at least a master's degree. Moreover, twice as many nurses with an initial bachelor's degree ultimately obtained a doctorate, a finding that is relevant to the IOM's call for a doubling of the number of doctoral level nurses by 2020.

Of the approximately 72,000 nurses graduating from associate's degree nursing programs in 2010, only about 4000 are likely to ever obtain a master's or higher degree — a yield that cannot produce enough faculty to replenish a workforce of more than 3 million nurses. Had the proportions of registered nurses with initial education in bachelor's and associate's degree programs been reversed between 1974 and 1994, with the larger proportion being bachelor's grad-

uates, there would probably have been 50,000 more nurses today with master's or higher degrees.²

The IOM is recommending the creation of more efficient pathways for nurses to obtain additional education after licensure. Among the benefits of a more highly educated nurse workforce is the potential for improving patient outcomes.³ However, unless patterns of initial education are changed, the stream of nurses into graduate education will not be large enough to avert shortages of faculty and APRNs. There is a limit to the number of degrees nurses can reasonably be expected to obtain after licensure.

The most promising strategy for producing enough faculty members and APRNs is for all prelicensure nurse-education programs to confer bachelor's degrees. Because of licensure requirements, there is no longer a substantial difference in the time to completion of associate's and bachelor's degrees in nursing: both take about 3 years of full-

time study. The IOM has called for discontinuing hospital diploma programs entirely. Some states now permit community colleges to grant bachelor's degrees in nursing, which is a reasonable solution. Distance learning and simulation technologies, partnerships between educational institutions and clinical organizations, and more creative collaboration between community colleges and universities can facilitate the provision of a bachelor's degree to everyone who enters a prelicensure program. Students will not pass up an opportunity to obtain a bachelor's degree for the same time commitment and cost required for an associate's degree, and nursing schools, including community colleges, will respond to financial incentives that reward them for granting a bachelor's degree as the end point of basic nursing education.

Public funding for nursing education must be used to steer the change in basic nursing education, just as public funding for patient care steers change in health care delivery. More than \$8 billion per year in Perkins funds from the Department of Education (an important source of funding for community colleges but outside the reach of health care workforce planning) could be used as part of a comprehensive federal strategy that would make it possible for all new nurses to graduate with a bachelor's degree. Baccalaureate education is a stated priority for Title 8 funds (annual appropriations administered by the Department of Health and Human Services that support nursing education), but funding levels are inadequate. The Nurse Training Act of 1964 expanded university

education for nurses and laid the groundwork for the development of APRNs.⁴ We need an equivalent effort now. The approximately \$160 million per year in Medicare funding for nursing education should be used to support clinical training of graduate-level APRNs rather than diploma nursing programs.⁵

It will be extremely difficult, if not impossible, to generate enough nursing faculty, APRNs, and nurses to fill leadership and executive roles requiring graduate-level education if entry-level

nursing education does not shift entirely to the baccalaureate level. The stakeholders (educational institutions and students) will respond to financial incentives — which are, after all, the tried-and-true American way of bringing about change.

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Assessing an ACO Prototype — Medicare's Physician Group Practice Demonstration

John K. Iglehart

One of the few major provisions of the Affordable Care Act (ACA) with solid bipartisan support establishes a new delivery model: the accountable care organization (ACO). Congress directed the Department of Health and Human Services (DHHS) to develop an ACO program to improve the quality of care provided to Medicare beneficiaries and reduce its costs while retaining fee-for-service payment. Under this program, medical groups would have to take responsibility for achieving these goals and would share in any savings derived by Medicare.

Despite the burst of interest in ACOs, little attention has been paid to the results of a demonstration project sponsored by the Centers for Medicare and Medicaid Services (CMS) that was the model for the reform law's ACO provisions. In the Medicare Physician Group Practice (PGP) demon-

stration, the CMS contracted with 10 large multispecialty groups with diverse organizational structures, including free-standing physician groups, academic faculty practices, integrated delivery systems, and a network of small physician practices.¹

As a share of total Medicare spending, fee-for-service expenditures for physician services have been relatively stable (13% of \$491 billion in 2009). However, this payment model has been under attack because of its inherent incentive for increasing the quantity, but not necessarily the quality, of physician-delivered care. But policymakers vividly remember the backlash against managed care, whose capitation payments were seen as an incentive to stint on care, so with no new alternative to fee for service in the offing, Medicare's physician-payment policy has remained essentially static.²

In 2000, Congress tasked the DHHS with testing incentive-based payment methods for physicians directing Medicare to encourage care coordination and investment in processes for more efficient service delivery and to reward physicians for improving health care outcomes. In response, the CM designed the PGP project to examine whether care management initiatives could generate cost savings by reducing avoidable hospital admissions, readmission and emergency department visits, while improving quality.¹

The demonstration began April 2005, with 10 large group practices (ranging from 232 to 1291 physicians) operating in various regions of the country. Participating doctors receive their regular Medicare fee-for-service payments, but the group were also eligible for an 8% share of Medicare's savings ("performance payments") if