



Charting Nursing's Future

Reports on Policies That Can Transform Patient Care

Improving Patient Access to High-Quality Care: How to Fully Utilize the Skills, Knowledge, and Experience of Advanced Practice Registered Nurses

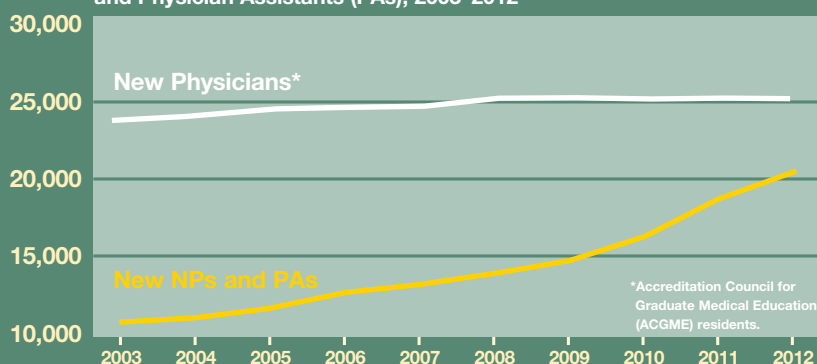
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Spurred by increased demand resulting from health care reform measures, looming workforce shortages, and concerns about access and barriers to care, many leaders are focused on transforming the delivery of health care in ways that promote interprofessional collaboration, with everyone—including nurses—practicing to the full extent of their education and training (see fig. 1, below). This brief, the 20th in the *Charting Nursing's Future (CNF)* series, focuses on advanced practice registered nurses (APRNs);

describing the important roles they play; identifying some of the legal, institutional, and cultural barriers they face; highlighting three models for leveraging their skills, knowledge, and experience in different settings; and digesting recent studies on the capacity, safety, and quality of APRN patient care. Information about barriers faced by registered nurses (RNs) appears on page 5, along with a listing of related *CNF* issues. To access pdfs in the complete *CNF* series archive, visit www.rwjf.org/goto/cnf.

Figure 1 Production of New Physicians, Nurse Practitioners (NPs), and Physician Assistants (PAs), 2003–2012



Between 2003 and 2012, the annual production of new NPs and PAs nearly doubled, while that of new physicians increased by less than one percent per year. Because of their growing presence in the workforce, NPs and PAs are positioned to make even larger contributions to patient care—if they are empowered to work to the full extent of their education and training, deployed optimally, and integrated into effective practice models.

Sources: American Association of Colleges of Nursing; National Commission on Certification of Physician Assistants; and Jolly, P., C. Erikson, and G. Garrison. 2013. U.S. graduate medical education and physician specialty choice. *Academic Medicine* 88 (4): 468–74. ACGME residents in 2011–2012 were estimated at the historic growth rate of 0.9 percent. Some osteopathic physicians were excluded because of inconsistent data tracking.

Issue Number 20

	Page
The Role of APRNs in Expanding Access to Care	2
Types of APRNs	2
Table 1. Preparation for Advanced Practice Nursing	3
Barriers to Patient-Centered Care	4
Figure 2. Nurse Practitioner Scope-of-Practice Authority, 2012	5
Innovative Models That Leverage APRNs' Skills and Experience	
U.S. Department of Veterans Affairs	6
The Transitional Care Model	6
Duke Heart Center	7
Research on the Capacity, Safety, and Quality of APRN Care	8

The Value of Nursing

The work of Julie Marcum, APRN-BC, CCRN, has many facets. As a critical care clinical nurse specialist at the Boise VA Medical Center, she cares for a panel of about 102 implantable cardioverter defibrillator (ICD) patients throughout Idaho and Eastern Oregon; collaborates with Portland VA nurse practitioners and cardiologists in a telemedicine clinic twice a month; reviews remote transmissions sent by the ICD patients, who transmit data from their devices every three months; and as needed, manages daily patient contacts to troubleshoot issues and adjust medications. She also collaborates with nurse managers to develop and assess the critical thinking, interpersonal, and technical skills of staff nurses on the critical care units, incorporating the best evidence available.

"My responsibilities include program development, system analysis, problem solving, direct patient care, and quality improvement activities, with the ultimate goal of providing safe, cost-effective care to our veterans," says Marcum. She is a member of the VA's Advanced Practice Nurse Advisory Group, which has been involved in developing a new policy that will expand core privileges for APRNs systemwide. For more information, see page 6.



Photo: Michael Shipman/Blue Planet Photography

Almost 50 years have passed since the first program to educate public health nurses for advanced clinical practice was established by Loretta C. Ford, EdD, RN, PNP, professor and dean emeritus, University of Rochester School of Nursing, and her colleague at the University of Colorado, pediatrician Henry K. Silver, MD. Ford had worked as a public health nurse assigned to Colorado's remote mountain communities. As she made the rounds immunizing infants and tracking communicable diseases, she was struck by the fact that she was the only contact many of her patients had with a health care provider. She suspected that investments in additional education and training for practitioners like herself—uniquely positioned to bring prevention and health maintenance efforts into communities—could have huge returns in access to quality care.

Ford and Silver put this hypothesis to the test several years later, after Ford joined the University of Colorado faculty. In 1965, they launched a pilot program to give practicing public health nurses who were already educated at the baccalaureate level the additional skills they would need to effectively provide well-baby and well-child care. In the process, a new health care provider was born: the pediatric nurse practitioner.

Types of Advanced Practice Registered Nurses

Nurse practitioners (NPs) take health histories and conduct physical examinations, diagnose and treat acute and chronic problems, interpret laboratory results, prescribe and manage medications and other therapies, plan and run disease prevention and health maintenance programs, make appropriate referrals to other health care professionals, and conduct research. Practice settings include primary and specialty care practices, retail health clinics, hospitals, school-based health centers, long-term care facilities, and patients' homes. (Refer to CNF 9 for more information about the NP workforce.)

Clinical nurse specialists (CNSs) provide case management services, conduct research, design and implement quality improvement programs, mentor other nurses, and serve as educators and consultants. Focusing on a specific population (e.g., children), disease (e.g., diabetes), or type of care (e.g., wound care), CNSs are employed in hospitals, rehabilitation facilities, nursing homes, and other settings.

Certified registered nurse anesthetists (CRNAs) administer anesthesia before, during, and after surgical, therapeutic, diagnostic, and obstetrical procedures and provide pain management and emergency services, including airway management. They work in hospital operating rooms, dental offices, and outpatient surgical centers.

Certified nurse midwives (CNMs) provide primary care to women, including gynecological exams, family planning advice, prenatal care, management of low-risk labor and delivery, and neonatal care. Practice settings include hospitals, birthing centers, community clinics, and patients' homes.

Source: Adapted from AARP 2010 Policy Supplement *Scope of Practice for Advanced Practice Registered Nurses*.

“Although research suggests that APRNs are well equipped to deliver safe and effective care, legal, regulatory, institutional, and cultural barriers prevent many from practicing to the full extent of their training and education. We need to change that to make the best use of health care's human capital.”

Lloyd H. Dean, CEO, Dignity Health, and member, strategic advisory committee, *The Future of Nursing: Campaign for Action*



“It created quite a stir for the nurse to move the stethoscope from the arm for the blood pressure to the chest to listen to the heart,” says Ford, but she recalls that right from the beginning, the nurses who acquired these basic diagnostic skills and expanded knowledge of treatment were well received by their patients.

Today, nurse practitioner (NP) practice extends to patients of all ages, and three other types of APRNs have emerged (see “Types” box, at left). Yet a variety of barriers hamper their practice. “Although research suggests that APRNs are equipped to deliver safe, effective care, legal, regulatory, institutional, and cultural barriers prevent many from practicing to the full extent of their education and training,” says Lloyd Dean, CEO, Dignity Health, and member, strategic advisory committee, *The Future of Nursing: Campaign for Action*. “We need to change that to make the best use of health care's human capital.” (See pp. 4, 5, and 8 for more.)

Health policy experts concerned about workforce shortages also believe that overcoming these barriers must become a priority. “The increased need for physician services can be met by better use of the physicians we have now ... and by the increased use of nurse practitioners and physician assistants in primary care and specialty care settings,” says Fitzhugh Mullan, MD, the Murdock Head Professor of Medicine and Health Policy at the George Washington University School of Public Health. “The important principle underlying this latter strategy is that all clinicians should work to the maximum of their training and licensure,” he says (see fig. 2, p. 3, for APRN preparation).

This principle is at work in the three innovative models profiled in this brief (see pp. 6–7). All fully leverage APRN skills, knowledge, and experience and represent a variety of contexts: the nation's largest integrated health care system, the Veterans Health Administration; the transition from acute care to other settings; and a specialty practice within a university health system. The diversity of these models suggests that this principle is widely applicable.

These models also embrace the new paradigm of inter-professional collaborative care (see CNF 17). The growing adoption of this patient-centered, team-based approach may create additional incentives to eliminate barriers

continued on page 3

preventing all practitioners from maximizing access to care.

“I don’t perceive that any one profession—whether it’s a physician, a pharmacist, a social worker, or a nurse—can be totally independent,” says Ford, who encouraged her first NP students to see themselves as full professionals prepared to engage in collegial relationships with physicians. “We have to move to interdependence, which is the highest level of functioning, in the interest of public good.”

What will it take to achieve this vision? In Ford’s view, “Statesmanship on the part of both medicine and nursing and other professions that see the big picture and have a vision of what could be—in prevention and health promotion and serving people who are really in need.”

The Value of Nursing

Amy Rowe, P/FNP, a pediatric and family NP, examines a student at the Dewitt Clinton High School school-based health center (SBHC), part of Montefiore Medical Center’s School Health Program, which provides comprehensive primary care to 27,000 New York City students living in the Bronx.

An estimated 2,000 plus SBHCs serve at least 1.7 million students nationwide. SBHCs are typically staffed by an NP or a physician assistant (PA), often in partnership with a mental health professional, and situated in poor communities where residents have limited access to care. NPs and PAs are more likely than physicians to practice in underserved remote and rural areas and constitute a significant portion of the nation’s safety net providers. The more rural the hospital location, the greater the likelihood that patients will receive care from an APRN. (For more information, see www.cdc.gov/nchs/data/databriefs/db77.htm.)



Photo: Courtesy of Montefiore Medical Center

Table 1 **Preparation for Advanced Practice Nursing**

(as of December 2012)

	<i>Nurse Practitioner (NP)</i>	<i>Clinical Nurse Specialist (CNS)</i>	<i>Certified Registered Nurse Anesthetist (CRNA)</i>	<i>Certified Nurse Midwife (CNM)</i>
Undergraduate Education	Bachelor’s degree in nursing from an accredited program or an associate’s degree in nursing plus additional undergraduate course work acceptable for entry into graduate programs			
Licensure	Current licensure as a registered nurse. Achieved by graduating from a nursing program accepted by the state board of nursing, passing a national standardized exam (NCLEX), and meeting additional state board of nursing requirements			
Graduate Education	Master’s degree, postgraduate certificate, or practice doctorate from an accredited program, with advanced course work in physical/health assessment, pharmacology, and pathophysiology			
	Content in health promotion, disease prevention, differential diagnosis, and disease management, plus advanced course work related to the population served	Advanced course work related to the population served	Advanced course work related to anesthesia. CRNA students must complete at least one year of nursing in an acute care setting prior to enrolling	Advanced course work related to midwifery, care of newborns, primary and reproductive health care for women, and treatment of sexually transmitted diseases in male partners
Graduate-Level Clinical Training	A minimum of 500 faculty-supervised clinical hours	A minimum of 500 faculty-supervised clinical hours	A minimum of 550 cases across designated categories (2,500 hours on average)	As many hours as needed to attain core competencies
Certification	National examination	National examination	National examination	National examination
Postcertification Professional Development	Clinical practice and continuing education hours required for periodic recertification. Specific requirements vary by role, population focus, specialty, and credentialing body and, in some cases, include reexamination.			

Sources: American Academy of Nurse Practitioners Certification Program, American Association of Diabetes Educators, American Association of Nurse Anesthetists, American College of Nurse Midwives, American Midwifery Certification Board, American Nurses Credentialing Center, National Council of State Boards of Nursing, Pediatric Nursing Certification Board, and the National Certification Corporation.

APRN Barriers Pose Challenges for Patients

“Before I started offering chronic pain management, patients in this part of Texas had to drive at least an hour for that service. I got lots of referrals, but then the problems began. A doctor might prescribe one kind of injection, but in evaluating the patient, I might realize that another was more appropriate. To make that change, I need a physician’s order. I remember times when the patient went home in pain because their physician was on vacation.

I had another patient I’d treated regularly. I wanted her to see a physical therapist, but then someone questioned whether I had the authority to make the referral. This patient was in pain and had to go home and come back another day just because someone was confused.

I hung in for four years and saw some really good results, but I couldn’t resolve all these problems. Now I limit my practice to anesthesia.”

Juan Quintana, CRNA, DNP, MHS, president, Sleepy Anesthesia Associates



“In Michigan, where I practice, CNMs do not have prescriptive authority. That seriously impacts the women who come to me for birth control. I

can place IUDs and implant contraceptives that are inserted under the skin, but most insurance plans won’t reimburse me for the devices, which can cost up to \$800. I can refer my patients to a physician, who does get reimbursed, but many patients don’t want to visit another provider’s office and choose less effective methods instead.

My Medicaid clients have a similar issue with Depo-Provera (a long-acting injectable contraceptive). Medicaid will not reimburse my office for Depo, so my patients have to go to a pharmacy, pick up the medication, then bring it to my office for the injection.

Katie Lavery, CNM, MS, Everyday Blessings Midwifery Women’s Health Care

Barriers to Patient-Centered Care

Many patients and their families have to travel long distances, experience delays or discontinuities, and incur higher out-of-pocket costs because of barriers faced by APRNs who are well qualified to provide needed services (see p. 8 for findings on APRN care safety and quality). These barriers—legal/regulatory, institutional, and cultural—unnecessarily restrict access to high-quality care by preventing APRNs from practicing to the full extent of their education and training.

Legal/Regulatory Barriers

- The majority of states (see fig. 2, p. 5) require most APRNs to have a joint protocol with a collaborating physician in order to diagnose, treat, and/or prescribe. Yet there is no evidence that these requirements result in better outcomes, according to the IOM’s 2010 report, *The Future of Nursing: Leading Change, Advancing Health*. Further, some physicians charge fees for their services that APRNs cannot afford. *The risk of delays in care is high when collaborating physicians are not readily available.*
- Under some Medicare programs, APRNs are not allowed to admit patients, serve as personal care physicians (PCPs), or sign orders for long-term care services. *For patients who have already established a good relationship with an APRN, admission restrictions can compromise continuity of care.*
- In some states, Medicaid won’t reimburse APRNs for certain codes or pharmacy supplies. *Restrictive reimbursement practices can force patients to pay out of pocket or find a different provider.*
- In some parts of the country, APRNs are not recognized as PCPs by Medicare or private health insurance companies. *Excluding APRNs from panels can limit the supply of available clinicians in a time of growing demand.*



“For reasons ranging from natural disaster relief to living and working in communities that straddle state borders,

nurses need to be able to cross state lines easily to deliver care. They can’t do that now because practice acts vary.”

Catherine Dower, JD, associate director, Center for the Health Professions at the University of California, San Francisco, and a member of the committee that helped draft the IOM’s 2010 report, *The Future of Nursing: Leading Change, Advancing Health*

Institutional Barriers

- In states with joint protocol mandates for APRNs (see “Legal/Regulatory,” left), some hospital policies restrict the pool of collaborating physicians, by, for example, requiring them to have full medical staff privileges. *Institutional barriers further restrict access in states where mandates exist.*
- At some hospitals, medical staff bylaws prohibit APRNs from admitting patients or performing certain procedures (e.g., only anesthesiologists can do invasive monitor placements). *At some hospitals, patients might have to wait for treatment even if a qualified APRN is available.*

Cultural Barriers

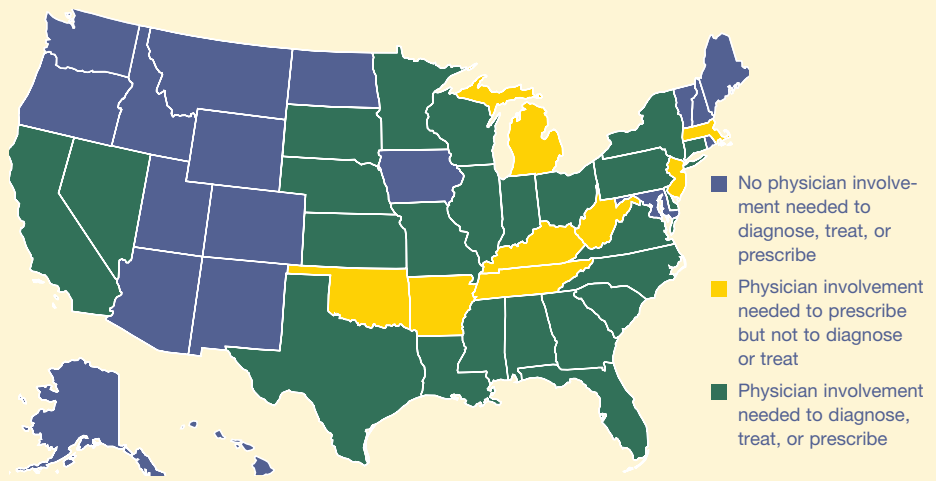
- While the benefits of team-based interprofessional care are well documented, implementation remains a challenge, because some patients prefer care by doctors only and because old authoritarian leadership models persist in some organizations. *“Achieving a cultural shift to allow utilization of APRNs as full partners can bring marked increases in patient satisfaction and timeliness of care,”* says Allison Dimsdale, DNP, RN, NP, who is helping to change the way services are delivered to cardiology patients at Duke University Health System (see “Team-Based Care,” p. 7).

continued on page 5

Figure 2 **Nurse Practitioner Scope-of-Practice Authority, 2012**

The majority of states require NPs to enter into collaborative agreements (or joint protocols) with physicians to do things they have already been trained and educated to do, such as prescribing controlled substances, diagnosing diseases, and treating patients. Finding a physician willing to collaborate is not always easy, furthermore, and waiting for a doctor to sign off on orders can delay treatment and undermine continuity of care.

North Dakota eliminated its collaborative agreement requirement for prescriptive authority in 2011. “It wasn’t helping us provide safe, timely, patient-centered care ... [so] we capitalized on our positive relationships with physicians and other providers to mobilize widespread support for getting rid of this regulatory barrier,” explains Billie Madler, DNP, NP, FNP, director of Graduate Nursing Programs at the University of Mary and president of the North Dakota Nurse Practitioner Association, which organized a grassroots campaign to educate state legislators about factors jeopardizing access to care. Coalitions are working on similar reforms in other states, many with support from the Center to Champion Nursing in America, an initiative of AARP, the AARP Foundation, and the Robert Wood Johnson Foundation.



Map source: The Pearson Report 2012, Linda Pearson, DNSc, MSN, APRN-BC, FAANP, www.webnponline.com.

For More Information

- For more on state-level scope-of-practice initiatives, visit www.championnursing.org.
- For a discussion of scope-of-practice reform, see *Health Policy Brief: Nurse Practitioners and Primary Care*, *Health Affairs*, October 25, 2012.
- To explore cultural barriers related to patient preferences, see Laurant, M. G., et al. 2008. An overview of patients' preferences for, and satisfaction with, care provided by general practitioners and nurse practitioners. *Journal of Clinical Nursing* 17 (20): 2690–98.

Maximizing the Potential of Registered Nurses

RNs, like APRNs, face barriers that prevent them from working to the full extent of their education and training. Although more research on RN barriers is needed, many compelling anecdotes show that patients and their families pay a high price when RNs are barred from doing what they are qualified to do.

Gary Chisamore understands this from personal experience, as the principal supervisor of his wife Wendy's care during her decade-long struggle with ovarian cancer. “I remember having to carry my very sick wife to our car in the middle of winter to get her to a doctor's appointment, drive her to her doctor's parking lot, and watch the doctor examine her through a passenger-side door.”

Repeated hospital readmissions had led to atrophied calf muscles, making it hard for her to walk. The

“If we continue to cripple the mass of RNs with barriers to full practice, we will further increase health care costs, treatment delays, and human suffering.”

Diana Mason, RN, PhD, FAAN, Rudin Professor of Nursing and codirector of the Center for Health, Media, and Policy at Hunter College of the City University of New York, and strategic adviser, *The Future of Nursing: Campaign for Action*

standard treatment for this condition is styrofoam boots worn in bed to prevent “foot drop.” “Why couldn't Wendy's home health nurses prescribe those boots?” Chisamore wonders.

His question is apt, says Diana Mason, RN, PhD, FAAN, Rudin Professor of Nursing and codirector of the Center for Health, Media, and Policy at Hunter College of the City University of New York, and strate-

gic adviser, *The Future of Nursing: Campaign for Action*. “So much could be done in cases like this, with a standing physician order allowing RNs to prescribe a standard treatment.”

RN barriers fall into three categories, says Mason: (1) problematic state and federal regulations; (2) organizational policies and cultures that don't understand what nurses can safely do or that hark back to outmoded thinking about RN roles; (3) nurses' fears about challenging unnecessary workplace barriers to full practice and, in some cases, nurses' lack of full awareness of their scope of practice.

Mason calls for a broad conversation about RN barriers and their patient impacts and more research to guide advocacy for change.

For More Information

- For more on RN barriers and solutions, see *CNF* 3, 5, 10, 11, 14, 15, 17, and 18.

Visionary Nurse a Leader in the Nation's Largest Integrated Health System



Charting Nursing's Future salutes Cathy E. Rick, RN, MSN, FAAN, chief officer, Office of Nursing Services, U.S. Department of Veterans Affairs (VA)

With 80,000 nurses in her charge, Cathy Rick is keenly aware of their value to patient-centered care and highly motivated to ensure that the nation's largest integrated health care system can fully utilize their diverse capabilities. She has been instrumental in creating a program to develop nursing leaders within the VA, fostering the role of the nursing care manager within primary care, and developing a training academy for new hires that has markedly increased the VA's ability to retain nurses.

"She advocates on behalf of the nursing staff, which, in general, is advocating on behalf of patients," says Robert L. Jesse, MD, PhD, principal deputy undersecretary for health at the VA. He describes her as a "major driver of the VA's efforts to transform the currency of health care from encounters to relationships," a shift he says involves significant investments in the nursing workforce.

One of her signature accomplishments is the Advanced Practice Nurse Advisory Group (APNAG), which facilitates communication, policy development, and continuing education among the VA's more than 5,000 APRNs.

Recent APNAG chair Mary E. Falls, RN, MSN, APNP-BC, praises Rick's leadership in this area. "She has the ability to look into the future, see what changes are coming for health care, and place nursing in the forefront," Falls says. "To have that vision and support from the top—it's phenomenal."

Innovative Models That Leverage APRNs' Skills and Experience

Expanded Core Privileges: The U.S. Department of Veterans Affairs (VA)

The VA employs more than 5,000 APRNs to deliver primary, specialty, acute, ambulatory, telehealth, and home health care services across the nation. While a single unrestricted license allows these APRNs to work at any VA facility—traveling between a medical center and a community clinic, for example—rules concerning prescriptive authority, admissions, physician supervision, etc., vary. This means that APRNs have to change the way they practice when they change their location, even when they are treating the same patients.

To eliminate confusion and standardize care, the VA has developed a new policy, slated for systemwide implementation in 2013, that allows all APRNs who meet certain criteria to practice to the full extent of their education and training without direct supervision from a physician, even in states that do not recognize APRNs as independent practitioners. The VA believes the policy's linchpin is federal supremacy, which gives the VA the authority to supersede state laws.

Along with this new policy, the VA will issue guidance concerning an expanded list of APRN core privileges that includes signing admission and discharge orders, making patient rounds, preparing progress notes, and carrying out other tasks advanced clinicians are equipped to perform safely and effectively.

"We see this as a way to align our system to fully utilize the talent we have," says Cathy E. Rick, chief officer

in the VA's Office of Nursing Services. "The timing is right, thanks to the good work the Robert Wood Johnson Foundation did in conjunction with the IOM [Future of Nursing] report."

Rick's team has solicited input from APRNs, physicians, and regional quality management officers to develop an internal communication plan that addresses questions and concerns about patient care, license protection, etc. They have also worked with the National Council of State Boards of Nursing and Joint Commission to try to anticipate potential issues and challenges.

"My hope and expectation is we will provide a new model for health care reform," says Rick. "Rather than restricting practice, we should be supporting nursing and holding nurses accountable for what they are able to do."

The Transitional Care Model

In 1981, a team of researchers at the University of Pennsylvania led by Dorothy Brooten, PhD, RN, FAAN (now at Florida International University) developed and began testing a new model of care designed to cut health care costs by smoothing the transition between acute care and other settings. Cost controls instituted at that time were reducing the length of hospital stays, but postdischarge complications often led to rehospitalization and undermined the cost effectiveness of earlier discharge.

The Transitional Care Model (TCM), as it is now known, uses APRN specialists to design and implement comprehensive discharge plans that

continued on page 7

Nurse Managed Health Clinics (NMHCs)

"Recognizing that advanced practice nurses are a powerful tool to expand access to primary care services, I supported the establishment of the NMHC program authorized by the Affordable Care Act. NMHCs improve access to primary health care, disease prevention, and health promotion in medically underserved areas while enhancing nursing practice through expansion of clinical sites for undergraduate and graduate nursing education. In fiscal year 2010, the Health Resources and Services Administration awarded 10 grants totaling \$15 million to expand NMHCs in nine states."

Senator Daniel K. Inouye, D-HI

include regular phone contact and home visits while patients convalesce.

The TCM has been tested with high-risk, high-cost, high-volume patients across the life span and shows impressive outcomes. The first randomized clinical trial provided follow-up care by APRN specialists in perinatal or neonatal nursing to infants with very low birthweights. They were released from the hospital an average of 11 days earlier and achieved equivalent health outcomes at a net savings of \$18,560 per patient.

Later trials involving women with high-risk pregnancies prolonged gestation and reduced costs for infants who were born prematurely or at term.

In 1989, Mary D. Naylor, PhD, RN, FAAN, Marian S. Ware Professor in Gerontology and director, NewCourtland Center for Transitions and Health at the University of Pennsylvania School of Nursing, and her multidisciplinary team applied the TCM with chronically ill older adults being treated for common medical and surgical conditions. Three randomized controlled clinical trials that tested the TCM with this population demonstrated improved health outcomes, patient satisfaction, and cost savings (see fig. 3).

A TCM protocol for cognitively impaired older adults (in partnership with their family caregivers) has also had positive outcomes.

The University of Pennsylvania Health System has adopted the TCM, and more than two dozen health systems and communities are using aspects of the model. The TCM evidence base has also influenced provisions of the Affordable Care Act, and more

recently, there have been other policy efforts aimed at using the TCM model to support and coordinate care for beneficiaries as they move from the hospital to their homes or other care settings.

"If brought to scale, the TCM could accelerate efforts within the U.S. to move from a fragmented health care system to an integrated, high-performing one," says Naylor.

Team-Based Care: Duke Heart Center

A new "parallel model" developed by Duke University Health System's Department of Cardiovascular Medicine leverages interprofessional teams to increase access to care and improve patient satisfaction.

Unlike the former tandem-style model—where clinics were run by MDs who handed off specific tasks to



At Duke Health Center at Southpoint, physicians, NPs, and RNs work together on interdisciplinary teams to provide comprehensive care to cardiology patients. Pictured here are Douglas Schocken, MD, Allison Dimsdale, NP, and Jennifer Hervey, RN.

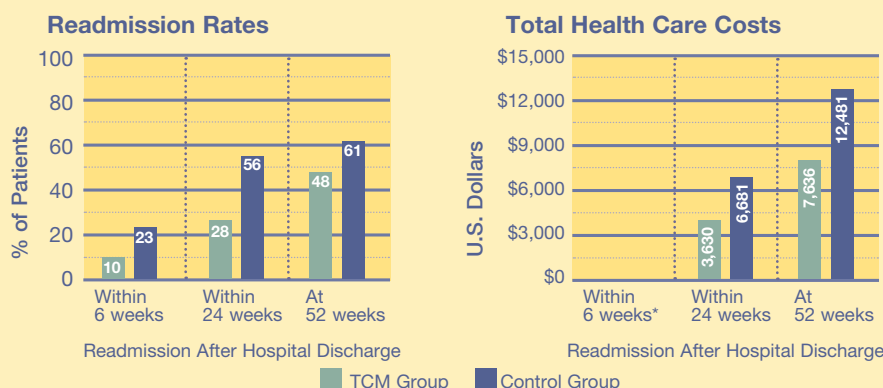
Photo: Jared Lazarus/Duke University Photography

NPs and physician assistants (PAs)—the new model allows everyone to work to the top of their competency and licensure. MDs focus on developing plans of care for new patients, while NPs and PAs see returning or acutely ill patients. RNs, meanwhile, coordinate follow-up care, schedule procedures, and respond to triage calls. Team members consult each other as necessary and appropriate. For example, an RN might turn to an NP for help when lab results are abnormal or a patient calls to report unusual symptoms.

"A model like this requires a cultural shift," says Allison Dimsdale, DNP, RN, NP, who was a collaborative leader on the redesign team. The NPs have to "work harder and think harder" now that they are doing so much more than just follow-up and background work, and the physicians have to recognize and rely on NPs and RNs as teammates. "We couldn't do this without considerable trust and confidence among key players," Dimsdale says.

During a pilot phase, patient response was positive and the average wait time for the next available appointment dropped 57 percent for new patients and 75 percent for returning patients. Dimsdale says the department is starting to look at additional metrics, including patient readmission rates and lengths of stay.

Figure 3 Transitional Care Model Impacts on Hospital Readmission Rates and Total Health Care Costs for Chronically Ill Adults



Source: Adapted from charts available at <http://transitionalcare.info/ToolQual-1801.html>.
*Health care cost data for readmissions within six weeks was not available to researchers.

For More Information

- For a TCM video, select www.aannet.org/rtv-a-nursing-life-serving-the-nation-transitional-care-model.

APRNs are educated and trained to deliver a wide range of services, including some that physicians provide in primary care and other settings. How do capacities and outcomes compare in these areas of overlap? Here is what some of the research says:

NPs and PAs in primary care settings are capable of providing

70 percent or more of the care required for adults and 90 percent of the care for pediatric patients;

they are also providing more of the general care for specialty patients and performing minor specialty procedures, says a 2009 Physicians Foundation report to the president and the Congress.

Cooper, R., et al. 2009. *Physicians and their practices under health care reform: a report to the president and the Congress*. Physicians Foundation.

APRNs provide safe, effective, quality care,

according to a 2011 systematic review involving dozens of studies published over an 18-year period. The research team, led by Robin P. Newhouse, PhD, RN, NEA-BC, professor and chair at the University of Maryland School of Nursing, found strong evidence of comparable or superior care by NPs as measured by patient satisfaction, patient perception of health status, functional status, glucose control, lipid management, blood pressure control, emergency room visits, hospitalization rates, and mortality rates. CNMs are performing well, too, with similar or better results than MDs in cesarean section rates, birth weights, Apgar scores, analgesia use, and breastfeeding.

Newhouse, R. P., et al. 2011. *Advanced practice nurse outcomes 1990-2008: a systematic review*. *Nursing Economic\$* 29 (5): 230-50.

Zero-sum game: Do primary care physicians lose when APRNs gain autonomy?

Noting that economic interests are “rarely discussed openly,” Patricia Pittman, PhD, and Benjamin Williams, MPH, at the George Washington University’s School of Public Health conducted a study to determine what happens to MDs’ wages when restrictions on APRNs are removed. Their analysis of U.S. Bureau of Labor Statistics data concluded that allowing APRNs to practice to the full extent of their education and training does not appear to have a negative financial impact on primary care physicians.

Pittman, P., and B. Williams. 2012. Physician wages in states with expanded APRN scope of practice. *Nursing Research and Practice* 67974. doi: 10.1155/2012/671974.

Health outcomes are comparable for patients treated by primary care NPs and MDs,

according to a literature review led by Mary D. Naylor, PhD, RN, at the University of Pennsylvania School of Nursing. The team also referenced a RAND Corporation analysis for the Commonwealth of Massachusetts that projected state-wide savings of \$4.2–8.4 billion for the period 2010–2020, if NP and PA visits were substituted for physician visits.

Naylor, M. D., and E. T. Kurtzman. 2010. The role of nurse practitioners in reinventing primary care. *Health Affairs (Millwood)* 29 (5): 893–99.

Highly trained CRNAs contribute to good obstetric care,

according to a 2009 study conducted by the UCLA School of Public Health. Researchers compared rates of anesthesia-related deaths, complications, and trauma during delivery at hospitals using only CRNAs with those at hospitals using only anesthesiologists and found similar outcomes.

Needleman, J., and A. F. Minnick. 2009. Anesthesia provider model, hospital resources, and maternal outcomes. *Health Services Research* 44 (2 pt 1): 464–82.

Health care quality, access, and cost savings would increase in Florida if APRNs and PAs were allowed to prescribe controlled substances and bill independently for their services, according to a 2011 briefing published by the Florida

TaxWatch Research Institute, Inc. Annual savings from expanding the scope of NP and PA primary care services alone could potentially reach \$7–44 million for Medicaid, \$744,000–2.2 million for state employee health insurance, and \$399 million across Florida’s entire health care system, the briefing concludes. This analysis assumes that APRNs would begin to provide a majority of services during primary care visits.

Fusillo, D., and R. Weissert. 2011. *Expanding the scope of practice for advanced registered nurse practitioners and physician assistants would generate fiscal savings while enhancing high quality medical care*. Tallahassee: Florida TaxWatch Research Institute, Inc.

A New Look at Existing NP Scope-of-Practice Restrictions

A paper released by the National Governor’s Association in December 2012 concludes that easing state scope-of-practice restrictions and modifying reimbursement policies for NPs are options worthy of consideration by states, both to encourage greater NP involvement in primary care services and to address growing demand for these services.

To access a pdf of the full report, titled *The Role of Nurse Practitioners in Meeting Increasing Demand for Primary Care*, visit www.nga.org, select “NGA Center for Best Practices,” then “Center Publications.”



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