Expanding America’s Capacity to Educate Nurses: Diverse, State-Level Partnerships Are Creating Promising Models and Results

Experts now predict that the United States will be short substantially more than 260,000 registered nurses by 2025 unless it expands nursing education capacity quickly and dramatically. Lack of faculty and clinical placements, as well as other capacity deficits, are causing prelicensure nursing programs nationwide to reject tens of thousands of qualified applications annually (see figure 1 for baccalaureate program data). Diverse, state-level partnerships are indispensable to solving capacity problems. This issue of the series describes the capacity innovations of 12 partnerships; all participated in extensive coalition-building and planning activities at two national Nursing Education Capacity Summits sponsored in 2008 and 2009 by the Robert Wood Johnson Foundation, in collaboration with the Center to Champion Nursing in America, the Department of Labor, and the Health Resources and Services Administration (HRSA).

The Value of Nursing Education

Clinical Placements

Two Florida International University nursing students check a young patient’s heart sounds and provide respiratory therapy during a pediatric clinical placement at Miami Children’s Hospital. Good clinical placements can offer students powerful skill-building opportunities with real patients and the health care team. The limited supply of clinical placements is a major obstacle to expanding prelicensure nursing programs (see figure 2, p. 2 for other obstacles).

To use scarce clinical resources more efficiently, the Nursing Consortium of South Florida employs a regional clinical placement system that is both centralized and electronic. To expand clinical education opportunities, experts recommend developing more clinical placements outside acute care settings, big cities, and traditional hours. Many schools are expanding the use of technology to build clinical skills through simulation, virtual health care facilities, robot technology, and more (see pp. 6–7).

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Figure 1  Qualified Applications Rejected from Entry-Level Baccalaureate Nursing Programs: 2002–2009*

<table>
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</table>

*The number of “qualified not accepted” baccalaureate program applicants is not available and cannot be precisely derived from counting applications because some applicants apply to more than one school.

Source: Based on a data display provided by the American Association of Colleges of Nursing, Research and Data Center.
The first wave of baby boomers will turn 65 in 2011, and between 2014 and 2019 the nation will complete the implementation of recently enacted health care overhaul legislation. These changes “are highly likely to increase demand for health care services and hence for nurses,” says Peter I. Buerhaus, PhD, RN, FAAN, Valere Potter Professor of Nursing, Vanderbilt University School of Nursing. Buerhaus predicts that his next nursing shortage forecast will be well above his widely quoted “260,000 by 2025” projection.

To address a growing shortage, the nation will need to expand its educational capacity quickly, an effort that faces huge obstacles (see figure 2). This can only happen through a brave embrace of new partners in change, new educational paradigms, and new policy. So say leading experts and members of 49 state-level coalitions who participated in two national Nursing Education Capacity Summits (June 26–27, 2008, and February 4–5, 2009).

The Summits offered inspiration and opportunities to share best practices, imagine new approaches and coalition plans, and build skills in four critical dimensions of change:

- Developing strategic, diverse partnerships and aligning resources (e.g., through asset mapping, regionalization, and new alliances with business and others);
- Creating more effective advocacy for policy and regulatory change (e.g., regarding educational standards as well as faculty training and compensation);
- Redesigning education (e.g., with new technology, curricula, and clinical education models); and
- Increasing faculty capacity and diversity (e.g.,

Policy Recommendations

State-Level Policy

Appropriate state funds to
- make nursing faculty salaries, benefits, and work culture attractive;
- spread technologies such as simulation centers and electronic portals for clinical placement and faculty hiring and train faculty in their use (see pp. 1, 4, 6, and 7);
- support nursing workforce data centers (see pp. 3 and 7);
- spur innovation and partnerships by tying state nursing education funds to performance outcomes such as better graduation rates (see page 3);
- enlarge and sustain nursing programs reaching rural and minority populations (see p. 8).

Use earmarks on nurse licensure fees to raise additional funding for nursing education and support state chief nurse executives (see p. 4).

Provide incentives to hospitals that offer clinical placement sites and master’s-prepared instructors.

Make BSN completion within 10 years of graduation a requirement for nurses with an ADN degree.

Fund statewide collaboration between nursing programs to
- share curricula and technology;
- create seamless educational pathways that increase graduation rates from BSN and graduate nursing programs (see pp. 6 and 7).

Revise state board regulations to
- permit MSN and PhD students to teach as nursing faculty interns—with mentoring by faculty (see p. 8);
- allow simulation to fulfill a portion of clinical hours (see p. 7);
- foster new curricula that emphasize geriatrics, treatment of chronic conditions, quality and safety, cultural competence, and the economics of care; create residency or internship requirements for nurses (see pp. 4, 5, 6A, and 6B).

Federal-Level Policy

Replicate the Troops-to-Teachers program for retired military nurses.

Consolidate federal funding for nursing education and workforce into block grants to states (like Maternal Child Health grants).

Institute a federal Nursing Faculty Corps with stipends and return-of-service agreements to accelerate MSN and PhD completion (see p. 4).

Support research to answer key education policy questions, such as What is the appropriate balance of clinical, virtual, and simulation education policy questions?

Expand grants to fund the use of standardized patients in nursing education programs (see p. 5).
In 2009, Texas was facing an immediate nursing shortage of 22,000 and a staggering projection: by 2019, the shortage would grow to 70,000. Though the legislature had been building nursing education capacity since 2002 (see table 1), graduation rates had not kept pace with demand.

Expanding the Shortage Coalition

Fresh from the Summits, leaders of the Texas Workforce Shortage Coalition determined that they would have to double the number of nursing graduates by 2013. This would require more than tripling state appropriations for capacity building in the 2010-11 biennium. To achieve such a victory from the state’s conservative legislature, the coalition radically expanded its membership, attracting new representation from the powerful Texas Association of Business (TAB) and many chambers of commerce.

Business in fact played a key role in hammering out the expanded coalition’s legislative proposal. “The coalition wasn’t coming to business after a legislative position was taken,” says Patti Clapp, vice president of the Dallas Regional Chamber. “We worked together to develop a position.”

“The TAB’s bottom line for support was that funding had to be pay-for-performance, and there had to be accountability,” says Ron Luke, PhD, president of RPC Consulting and chair of the TAB’s health policy committee. This view set new plan parameters.

A Pay-for-Performance Plan

With data from the Texas Nursing Workforce Center, the coalition zeroed in on the graduation rates of all state nursing programs, discovering a troubling range: 22 to 98 percent.

The resulting legislative proposal divided nursing programs into high grad producers (70 percent or more) and lower producers (below 70 percent) and asked the legislature for $60 million in new and continuing funding. Most of new money was to go to the high producers to expand enrollment; the lower producers would receive much less new money to improve graduation rates. Schools in both groups that failed to meet set target percentages would have to return state money on a pro rata basis. All schools would be held harmless for continuing funding.

Persuaded by the approach, and by a statewide publicity campaign and business-led lobbying effort, the legislature appropriated $49.7 million in new and continuing capacity-building funds. High-producing schools would receive approximately $20.5 million over two years in new money, while lower producers would receive approximately $9.5 million (see table 1 for details).†

Both groups of schools are free to expand capacity in innovative ways.

The Texas Nurses Association (TNA) is supportive of the legislative outcome: “Hearing that all schools aren’t equally productive and deserving of money was hard but important,” says Clair Jordan, TNA executive director and long-time coalition member.

“You should never underestimate the power of a broad coalition,” says State Representative Lois W. Kolkhorst (R-District 13), who shepherded the bill to passage.

A strong ally of the health professions and results-based funding, Kolkhorst is monitoring the bill’s outcomes closely. “I share concerns that schools with bigger appropriations could just steal faculty from poorer Texas schools.” The emphasis on “bodies” rather than quality, and short-term (biennial) thinking worries others. Yet Kolkhorst is upbeat about the approach: “The legislature is trying to move pay-for-performance throughout higher education.”

Policy needs a metric to measure results. So we told nursing schools, ‘We’ll fund you based on the number of graduates you produce.’ The coalition brought us this vision.”

State Representative Lois W. Kolkhorst (R-District 13)

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Table 1

<table>
<thead>
<tr>
<th>Bienniums Appropriated</th>
<th>Bienniums Appropriated</th>
<th>Total</th>
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<tr>
<td>Dramatic Enrollment Growth Funding (Capacity Building)</td>
<td>$10.9 mil</td>
<td>$5.8 mil</td>
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<tr>
<td>Professional Nursing Shortage Reduction Funding (Capacity Building)</td>
<td>$6.0 mil</td>
<td>$14.7 mil</td>
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<tr>
<td>Total</td>
<td>$10.9 mil</td>
<td>$5.8 mil</td>
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*This table shows funding for education capacity building only; between 2001 and 2009, the legislature appropriated $20–25 million for other nursing purposes.

†High-producing schools will receive $20,517,888 in new funds over two years at the rate of $10,000 per additional enrollee per year, while lower producers will receive $9,482,112 over two years at the rate of $10,000 per graduate per year, based on each school’s projected number of additional nursing graduates by the end of 2011. Another $14,606,999 for fiscal years 2010–2011 will be divided among nursing programs that have shown any increase in graduates between 2008 and 2009 (maximum possible award: $11,850 per additional graduate). The University of Texas at Arlington received a separate sum of $5,000,000 for its simulation learning lab.

Source: Chart data adapted from the Texas Nurses Association’s “Five Session Initiative (2001–2009) to Address RN Shortage”; footnote data drawn from Professional Nursing Shortage Reduction Program announcements (2009), provided by the Texas Higher Education Coordinating Board.

For More Information

- To learn about New Jersey’s Business Alliance for Nursing, contact Dana Egreczky at dana@njchamber.com.
- For more on the Texas story, write to ed.buchanan@thecb.state.tx.us.
While many state nursing coalitions must look outside government for funding and leadership, Gov. Jennifer M. Granholm has made nursing education a major priority: “Michigan is striving to lead the nation in investment, innovation, and tangible outcomes from our initiatives to address the nursing shortage and other workforce needs of our state.”

One of Granholm’s first investments was creating the Office of the Chief Nurse Executive (OCNE) and naming Jeanette Wrona Klemczak, RN, BSN, MSN, to the post in 2004. Klemczak assumed her duties in what she calls “a perfect storm”: a projected shortage of 18,000 nurses by 2015, just as the state was suffering massive job losses in manufacturing. With health care emerging as the largest economic growth sector, she has presided—in concert with the Labor and Economic Growth Department—over the investment of tens of millions of dollars to increase the nurse faculty and nursing workforce.

**Primed the Pipeline**

**Second-Degree Programs**

“When legislators think about capacity, they think ‘seats’ in nursing schools, but seats alone don’t solve the problem,” says Klemczak. “There have to be programs and supports in place to assist students with timely completion of degrees.”

To remove barriers to completing degrees, the governor has invested $30 million in accelerated second-degree programs that have attracted a diverse demographic of displaced auto workers, engineers, lab technicians, and architects (14 percent African American and 15 percent male). The funds were granted to partnerships among schools, hospitals, and the Regional Skills Alliance (local and state workforce collaboratives).

“Some programs decreased time-in-school by 50 percent, yet graduates had National Council Licensure Examination (NCLEX) pass rates that equaled or surpassed their traditional counterparts,” says Klemczak. The partnership programs alone have produced 4,000 nurses, 3,000 new clinical placements, and 277 clinical instructors since 2005. The Michigan Nursing Corps Half of the nursing faculty in many state schools are now eligible to retire. Yet students preparing for faculty roles often have work obligations that prevent timely completion of graduate degrees. To counter these trends, the governor established the Michigan Nursing Corps, with

**Michigan State Policy Wins**

- Established the Michigan Center for Nursing to collect and report on nursing workforce data.
- Created the Office of the Chief Nurse Executive.
- Has produced 10,000 new nurses, 3,500 new clinical placements, 277 new clinical instructors, and 150 new faculty-in-training since 2005.
- Created Web-based systems to better manage clinical placements.
- Increased money for nursing education through a nurse licensure earmark.
- Assisted all 56 nursing schools in developing required diversity plans.
- Now advancing major changes in nursing education policy (see “Proposed Policy,” column 3).

$6.8 million in appropriations (2008–2010), to rapidly educate clinical and classroom faculty. Participants receive tuition and stipends in exchange for signed agreements to teach in Michigan nursing programs. At present, 150 have either graduated or are completing MSNs and PhDs.

**Web-Based Management of Clinical Placements**

Two Web-based systems developed by the Michigan Center for Nursing (MCN) are reducing inefficiencies in orienting and matching students to clinical sites in Southeastern Michigan. The ACE Placement system drove a 30 percent increase in sites for 2008–2009, says Carole Stacy, the MCN’s executive director. “Two or three faculty and hospital staff used to do this manually.”

The ACE Passport system offers students one-time, online orientation modules that fulfill various federal training requirements and are accepted by all six member hospitals. More than 4,700 students used the system in 2008–2009. The MCN and both ACE systems are programs of the Michigan Health Council.

**Proposed Policy and Regulation**

With Klemczak’s guidance, a special task force has recommended far-reaching changes to modernize nursing policy and regulation. When implemented, these changes will require all nursing programs to achieve national accreditation, mandate nursing residency programs, embed quality and safety in nursing curricula, increase the numbers of advanced practice registered nurses, and reform nursing education financing.

The $2 earmark on the biannual nurse licensing fee that funds the OCNE has been quadrupled to $8 to support nursing strategic plan initiatives for education and practice.
While Michigan’s nursing policy nerve center is firmly established in the executive branch of state government, Virginia’s is unofficial and largely outside government. In fact, the state’s so-called kitchen cabinet began in 1995 as an informal network of nurses interested in policy and politics.

“Initially, there were no grand schemes; we were just getting together to have some fun,” says Rebecca Bowers-Lanier, EdD, MSPH, MSN, a founding network member who had just finished a stint as deputy director of Colleagues in Caring, a Robert Wood Johnson Foundation grant program aimed at creating collaboratives to build the nursing workforce and establish nursing workforce centers (1996–2002). Many other well-connected nursing leaders soon joined the network’s inclusive and fluid membership. Then a number of state policy losses for nursing galvanized the group into becoming a clear, strong voice in the policy advocacy arena.

The evolving group’s first initiative was to heal splits among nursing organizations and get them to agree to stop fighting publicly about policy. The cabinet also resolved to be wholly nonpartisan, recruiting members from all parties and sectors.

Today, its most important work is creating an easy-to-articulate nursing policy agenda well before elections, after consulting with its own members and a wide array of other stakeholders. It then assigns nurses to educate gubernatorial candidates, governors, and legislators on key health committees, by using disciplined messages and getting other groups to speak on behalf of the agenda.

For a summary of state policy achievements, see “Policy Wins” in column 3. For a Virginia nursing education innovation, see “Using Standardized Patients to Teach Cultural Competence,” below.

Using Standardized Patients to Teach Cultural Competence

Graduating nurses able to care for the diverse patient populations of the 21st century is a major goal of new nursing education curricula.

Their aim is not to produce superficial political correctness but rather to create awareness and sensitivity to how the culture and ethnicity of patients may relate to disease development and treatment.

Old Dominion University (ODU), Norfolk, Virginia, is “at the forefront of nursing schools enhancing students’ cultural competency,” says Richardean Benjamin, PhD, associate dean of the College of Health Sciences.

With more than $2 million in HRSA grants, ODU has established a special training program that uses actors prepared to represent patients with frequently encountered conditions and cultural or ethnic identities (called standardized patients).

While the use of standardized patients is common in medical schools, ODU’s application is pioneering.

In one typical teaching scenario, a poor African American woman enters a doctor’s office complaining of dizzy spells. Students must tease out physical and psychological symptoms but also take into account her cultural characteristics, such as low-income status, living situation, stress, and food choices. Patients rate students on strengths and weaknesses, including nuances such as eye contact and body posture. Scenarios are often videotaped for later review by students and faculty.

“Students speak favorably of this approach,” says Benjamin. “They enter these encounters with lots of apprehension, but they get a chance to make and correct their mistakes in a safe and supportive place.”

The Value of Nursing Education

Standardized Patients

A nursing student at Old Dominion University (Norfolk, Virginia) begins an examination of a standardized patient portrayed by an actor trained to represent a particular cultural group and medical complaint. After the examination, standardized patients provide detailed feedback, with special attention to students’ sensitivity and awareness of the impacts of cultural and ethnic identity on disease development and treatment.
Community colleges prepare roughly two-thirds of all nurses through associate degree programs (ADNs), while universities prepare only a third through the baccalaureate (BSNs). Tensions between the two—fueled by clashes over public funding and competing educational philosophies—have hampered needed cooperation for decades, depriving thousands of nursing students of a clear, efficient route to the BSN (only 15 percent of nurses with an ADN earn a BSN).

Creating a Seamless Pathway
This regrettable turf war is headed for the history books in North Carolina and New York, thanks to a demonstration project called RIBN (the acronym is pronounced “ribbon” and stands for Regionally Increasing Baccalaureate Nurses). Urban academic partners are Queensborough Community College and Hunter College, both part of the City University of New York system; rural partners are Asheville-Buncombe Technical Community College and Western Carolina University (WCU). RIBN is modeled on the Oregon Consortium for Nursing Education (see p. 6A and CNF 4 for more).

Both RIBN pairs are embracing the traditional strengths of each degree program while redesigning their individual ADN and BSN curricula to form connected seamless pathways that expect and encourage students to earn the BSN.

The model marries the strengths of community colleges—large diverse classes, highly supportive learning environments, and a focus on practical skills—with the BSN’s additional competencies and position as a gateway to graduate education as well as faculty and leadership roles.

“We are trying to build a graduate who gets the best of both worlds,” says Vincent Hall, PhD, RN, CNE, director of WCU’s School of Nursing.

RIBN organizers expect the new model to dramatically increase the number of students completing ADN and BSN programs—a way of turning a negative into a positive for patient care, nurses, students, and faculty.”

Darlene Curley, executive director
Jonas Center for Nursing Excellence (New York)

“RIBN is a role model for bridging the communication and expectation gaps between the BSN and to boost diversity. They also predict that RIBN will be widely replicated.

“RIBN is a role model for bridging the communication and expectation gaps between ADN and BSN programs—a way of turning a negative into a positive for patient care, nurses, students, and faculty,” says Darlene Curley, executive director, Jonas Center for Nursing Excellence (New York).

The center is managing RIBN with a $250,000 matching grant from the Robert Wood Johnson Foundation (RWJF) through its Partners Investing in Nursing’s Future initiative (PIN). A collaboration between RWJF and the Northwest Health Foundation, PIN addresses nursing issues at the local level through funding partnerships with community and regional foundations.

North Carolina’s Foundation for Nursing Excellence provides administrative support, coordination, and evaluation for RIBN’s rural partners.

RIBN Nuts and Bolts
RIBN cohorts will begin classes in 2010, dually enrolled in the ADN and BSN programs. Students will spend three years on their community college campus and a fourth year at their university, after passing the NCLEX.

Both regions have hired success counselors to provide intensive mentoring. The North Carolina Nurse Scholar’s Commission will award NC-RIBN students full scholarships; NY-RIBN students will pay community college tuition for all years.

The RIBN curriculum, though different in each locale, anticipates 21st-century patient needs by emphasizing gerontology, public and community health, leadership and management, informatics, quality improvement, and evidence-based practice.

“RIBN is system change in the educational environment,” says Margaret McClure, EdD, RN, FAAN, RIBN project national coordinator. “And the urban-rural mix will show that it can succeed anywhere.”

For More Information

The Value of Nursing Education

Most nursing programs and many hospitals use electronic simulator mannequins to teach a variety of clinical skills. The two nursing students pictured above are practicing tracheotomy suctioning (left) and listening to breath sounds (right)—without the safety risks, limitations, and downtime often present in real clinical settings. Faculty develop simulation scenarios or purchase scenarios from vendors. They may also make or purchase videotaped simulations for classroom use and uploading to course Web sites, where students may view them anytime.
In a seven-part series, “Uniting States, Sharing Strategies,” the *American Journal of Nursing* examines how strategic collaborations across the country are redesigning nursing education to increase capacity and build a nursing workforce with the skills necessary to meet Americans’ changing health care needs. The series tells success stories and outlines challenges the Center to Champion Nursing in America is encountering and addressing as it provides technical assistance to 30 geographically diverse multi-stakeholder teams with variations in team structure, focus, and strategic direction. The series also presents several best practices and highlights five state exemplars to inform the efforts of others and to provide insights about the impact of technical assistance on expanding and redesigning nursing education at the state level.

The strategies discussed address systemic problems in nursing education and the shortage of nurses overall. According to the American Association of Colleges of Nursing, for the ninth straight year, enrollment in entry-level baccalaureate nursing programs increased, by 3.6 percent in 2009. Despite this trend, nearly 43,000 qualified applications to these programs were rejected, primarily because of insufficient faculty and clinical placement resources (see figures 1 and 2 on pp. 1 and 2 of this issue of *Charting Nursing’s Future*).

### Team Composition and Technical Assistance

Thirty state teams are working to increase nursing education capacity, and to educate, build, and deploy the nursing workforce of the future. Teams comprise representatives from nursing education, health care delivery systems, state workforce entities, consumers (often AARP state offices), local businesses, philanthropies, and others. They are redesigning nursing education in ways that both improve outcomes and accommodate more students and are advocating for private and public support.

Following two national collaborative summits to support this work, the Center to Champion Nursing in America, an initiative of AARP, the AARP Foundation, and the Robert Wood Johnson Foundation, is providing ongoing technical assistance to help teams accomplish critical tasks and is fostering collaborative learning experiences that link the teams and allow them to share best practices and lessons learned with their peers in the other states.

### Featured States

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<td>Oregon</td>
<td>Common Admission Standards and Curriculum Link Community Colleges and University Programs</td>
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<tr>
<td>Massachusetts</td>
<td>New Nurse Competencies Guide for Nursing Education</td>
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<tr>
<td>California</td>
<td>Confronting the Nursing Shortage through Simulation and Regional Collaborations</td>
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<tr>
<td>Hawaii</td>
<td>Technology and Collaborations Help Overcome Geographic Isolation, Reform Curriculum</td>
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<tr>
<td>Mississippi</td>
<td>Learning Why Students and Faculty Drop Out Was Key to Progress</td>
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### Oregon

**Common Admission Standards and Curriculum Link Community Colleges and University Programs**

The Oregon Consortium for Nursing Education (OCNE) has launched a groundbreaking program to increase the number of baccalaureate-prepared nurses. OCNE has created a partnership of eight community colleges and the five Oregon Health & Science University campuses, which now share common admission standards and other resources.

Associate degree and baccalaureate nursing partners have also collaborated on new nursing competencies that improve education outcomes and allow for a seamless curriculum. Oregon is already seeing a significant increase in the number of nurses pursuing bachelor’s degrees.

Oregon is also working to increase nursing faculty numbers. Nurses who become faculty can now take advantage of a loan repayment program recently developed through the leadership and advocacy of the Oregon Center for Nursing.

For more information about the Center to Champion Nursing in America and to find more nursing education capacity solutions, visit [www.championnursing.org](http://www.championnursing.org).
Massachusetts

New Nurse Competencies Guide Nursing Education
To address the nursing shortage and its consequences for health care consumers, the Massachusetts team looked at how the state could graduate more nurses to care for its citizens and what kind of competencies nurses will need for their growing role in health care settings.

To that end, the state developed the Nurse of the Future Core Competencies, a comprehensive framework for educating not only more, but better prepared, nurses. The competencies are a set of standards resulting from extensive research into the science and practice of contemporary nursing that provides a powerful framework that drives outcome-generated policies.

The goal is to standardize the outcomes of education through a focus—across a variety of nursing programs—on the competencies required of future nurses. Several nursing programs have been funded to develop curriculum models to more efficiently transition nurses between all levels of nursing education. Partnerships between education and practice collaboratives are at the heart of all programs and funded projects.

California, continued

with other facilities statewide through the California Simulation Alliance.

The state has also funded three regional clinical simulation laboratories in rural areas: in Northern California, in the Sierra area, and in Sonora. Each is a joint project involving at least one medical center and one college. Finally, nursing graduation rates have been greatly increased through a decade of allocations from the governor.

Hawaii

Technology and Collaborations Help Overcome Geographic Isolation, Reform Curriculum
To decrease isolation and make educational opportunities available for all, regardless of their island of residence, Hawaii has for many years relied on such technology as distance learning and simulation to educate nursing students and practicing nurses.

Innovative educational approaches have made up for faculty shortages and lack of classroom space, which at least half of the eight nursing education programs in Hawaii cite as reasons for rejecting students. Distance learning and Web-based simulation allow educators to reach more students and thus enable more students to participate in nursing programs.

For example, in December 2009, four groups—the Hawaii Medical Service Association Foundation, Hawaii Pacific Health, Kaiser Permanente Hawaii, and Queen’s Medical Center—contributed a total of $1.05 million to the Hawaii Nursing Simulation Center Fund. The University of Hawaii at Manoa is housing and facilitating the creation of the simulation center, which will link existing campus and hospital simulation laboratories statewide. Among features of the new center will be patient simulators, bedside computers, interactive instructional software, and realistic hospital and outpatient practice settings.

Mississippi

Learning Why Students and Faculty Drop Out Was Key to Progress
By the start of the last decade, Mississippi was one of many states experiencing a growing nursing shortage. Before the state began implementing solutions to expand education capacity, such as simulation and education redesign, it wanted to clearly understand the story behind the numbers.

To that end, the Mississippi Office of Nursing Workforce, a group with many collaborating partners (including the Mississippi Nurses Association, Mississippi Hospital Association, Mississippi Board of Nursing, Mississippi State Department of Health, Mississippi Council of Deans and Directors of Schools of Nursing, and others) conducted a series of surveys to determine why students dropped out. Initial survey results indicated that lack of financial support, family issues, inability to balance family and school, and inability to work and go to school simultaneously kept students from graduating.

In response, Mississippi, for example, developed the Mississippi Student Nursing Navigator (http://studentnavigator.org), which directs students to information on financial, tax, utilities, fuel, and transportation assistance; health insurance; legal services; child care; stress management; and academic preparation.

As a result of these and various other efforts, Mississippi has doubled the number of nursing graduates since the 2000–2001 academic year. Graduation rates from both the 16 associate degree and the seven baccalaureate degree programs have been increasing steadily in recent years. With the hiring and retention of more faculty, fewer students are being turned away from nursing education programs.

Credits

Supplement Funding: American Journal of Nursing
Supplement Text: Center to Champion Nursing in America
“You can’t expect state legislators to give you money to expand nursing education capacity unless you can say, ‘Here’s what we know about the nursing workforce,’” says Mary Lou Brunell, executive director of the Florida Center for Nursing (FCN) and coleader of the state’s Summit team.

Producing credible nursing workforce data is the mission of 34 state workforce centers and their national organization, the Forum of State Nursing Workforce Centers. Center data informs policy and has also guided Summit teams.

One of the most advanced centers, FCN routinely produces authoritative state and regional nursing workforce supply, demand, and education workforce data. FCN trend analyses have established that—absent rapid change—Florida faces by 2020 a shortage of 52,200 full-time employee RNs, 7,000 full-time employee LPNs, and faculty vacancy rates above 20 percent for all nursing degree programs.

Center surveys on the two top causes of these shortages mirror national studies: barriers to hiring faculty and limited clinical sites.

In addition to defining key problems, FCN is working to eliminate them. With $470,000 in matching PIN grants from RWJF and the Blue Foundation for a Healthy Florida, FCN has recently embarked on a two year Gap Analysis “to discern Florida’s current utilization of simulation and to maximize its use for both practicing and new nurses,” says Brunell (see “Using Technology,” below).

Brunell sees potential for simulation training to move medical-surgical nurses up the career ladder into specialties with the most severe shortages. This could help retain experienced nurses and make room for new nurses. More use of simulation in prelicensure nursing programs could reduce the need for clinical sites.

The Florida Board of Nursing allows 25 percent of clinical education to be conducted through simulation, but no one knows if this option is being used, says Brunell. Nor are simulation resource needs clear.

In year one, project leaders will gather data and recommendations from all stakeholders; in year two, they will develop state and regional approaches to promoting simulation, perhaps, Brunell says, through regional simulation centers and Web portals for sharing simulation scenarios and technology support.

To reduce the workload of clinical instructors, some nursing educators are using or contemplating the use of voice thread technologies such as wikis, blogs, and social networking sites for case discussions among students, patients, and clinical experts and for disseminating program information. Web-hosted patient support groups and chat rooms conducted by retired nurse clinical experts are also being imagined as new ways to give students more contact with patients and extend scarce clinical resources.

Online learning management systems allow for posting assignments, class notes, grades, tests, and course documents and can grade exams instantly and accept clinical paperwork.

Web-based nursing degree programs are proliferating. Western Governors University, for example, is a nonprofit private school that offers a variety of majors, including several different undergraduate and graduate nursing degrees. Students do most of their coursework online but complete tests and assessments at special centers and arrange clinical placements locally (visit www.wgu.edu).

Using Technology to Expand Capacity

Smart Hospitals/Sim Centers

Some states have large interdisciplinary facilities that simulate the medical conditions of entire acute care units and have multidisciplinary skill-building scenarios for new employees or students pursuing different health professional degrees, including OT, PT, RN, and MD.

Interactive Audio/Visual Aids

IVNs—interactive video networks—allow for transmission of live lectures, procedures, and discussions in real time across great distances but require participants to travel to specially equipped rooms. Newer software products, such as WIMBA and Adobe Presenter (with webcams and mics) give computers the same capabilities. Using computers, mp4 players, and smart phones, students can view Web-streamed IVN presentations and instructional videos, as well as download reference material.

Mobile devices increase collaborative learning and knowledge production.

Wright State University uses Doctor Robots for health care education. Students with notebook computer joysticks can follow an a/v-equipped robot that moves through a real hospital, viewing clinical activities and interacting with staff. Faculty can participate from home or school.

Online Classrooms and Schools

Web 2.0 Tools for Second Life allow schools to create virtual clinical facilities where, for example, students can practice doing in-home patient assessments and patient nutritional education, through voice-activated conversations with avatars or actors.

Faculty can offer complex Webquest problem-solving assignments to teams of students working on long-term projects requiring interdisciplinary study (visit http://www.questgarden.com/51/22/4/07060809011/index.htm for a sample assignment).

To reduce the workload of clinical instructors, some nursing educators
New Curricula and Technology: Reaching Rural and Ethnic Communities

North Dakota

North Dakota’s four urban centers—Minot, Grand Forks, Bismarck, and Fargo—form the corners of a rectangle that outlines the state’s midsection. Small, isolated rural communities predominate both inside and outside this rectangle. Providing enough nursing education and nurses for these areas remains a work in progress. Yet three programs are making inroads.

Dakota Nursing Program

The Dakota Nursing Program (DNP) is a unique consortium of five community colleges* that use a common curriculum to deliver a Certificate in Practical Nursing (PN) and the ADN to place-bound, certified nursing assistants living outside urban centers. The DNP’s enrollment is typically 90 RN and 120 PN candidates.

DNP faculty encourage their ADN graduates to pursue BSNs at two cooperating universities; BSN graduates are urged to complete advanced degrees and teach for the consortium. This career ladder allows students to increase skills and job prospects while remaining in their communities.

The small, widely dispersed schools accomplish this mission by sharing administrative resources and faculty, and “using technology to the nth degree,” says Julie Traynor, MSN, RN, the consortium’s nursing director. “We have young faculty, and they are very savvy technologically. This really helps our students and program.”

A faculty specialist in pediatrics, for example, develops course materials and lectures for the whole consortium that are disseminated by IVN or WIMBA and Web-streamed for students to download (instructional films are also Web-streamed). The DNP uses Pearson’s eCollege for online learning management (e.g., for e-mail, assignment submission, grading, and document posting). DNP labs share mobile simulators.

The Nurse Faculty Intern Program

Since attracting out-of-state faculty is difficult for North Dakota, grow-your-own approaches are imperative. In 2004, the State Board of Nursing launched a pilot Nurse Faculty Intern (NFI) program, allowing BSN-RNs with at least two years of clinical experience to teach in nursing schools while pursuing graduate degrees—under the guidance of a faculty mentor and a consulting PhD-level educator. Of NFI’s 81 participants, 15 are teaching for the DNP. The state board expects to complete a study of NFI outcomes soon and will pursue funding for a second phase of the popular program.

*Consortium partners: Bismarck State College, Fort Berthold Community College (tribal college), Lake Region State College, Dakota College at Bottineau, and Williston State College.

The Value of Nursing Education

Mentoring

University of North Dakota BSN student Angel Dubois (right), a Turtle Mountain Chippewa, pauses during a mentoring session with RAIN assistant program coordinator Barb Anderson, also a Turtle Mountain Chippewa. RAIN provides mentors, financial assistance, and other supports. Many participants are single parents who come from poor rural areas and are the first in their families to pursue higher education (see “RAIN,” column 3).

Though North Dakota has 34,112 Native American residents and is home to five reservations, only 19 Native Americans had earned BSN degrees from the University of North Dakota (UND) as recently as 1990. UND is the state’s primary center for professional education and training.

“Prior to the start of the RAIN program in 1990, Native American nursing students felt no sense of belonging in UND’s College of Nursing,” says Deb Wilson (Mandan Hidatsa tribe), RAIN program coordinator. “Students often arrive on campus from rural areas having never seen a big city or known a college-educated family member.”

To address these challenges, RAIN has created an atmosphere of “total support” in a “home away from home” in the middle of the College of Nursing, says Wilson.

RAIN offers scholarships, an eight-day immersion orientation, a prenursing program, academic mentors, help with child care, free taxi service to day care and classes, and cash assistance for emergencies.

Just as important are the emotional and cultural supports. “Sometimes RAIN students come with a vision of success, but sometimes you have to mentor that vision,” says Julie Anderson, PhD, RN, CRCC, dean of UND’s College of Nursing. “We tell students in many ways, ‘We are here for you. You can accomplish your dream.’” The school also incorporates native traditions into its academic ceremonies.

As its 20th anniversary approaches, RAIN boasts 149 BSN and 39 MS graduates—the highest such numbers in the country. Anderson is seeking increased, sustainable funding for RAIN and sees it as a model for reaching other underserved populations.