The U.S. is in the midst of a shortage of registered nurses that is projected to intensify in the next 10 to 15 years as the current workforce reaches retirement age and the Baby Boom generation’s health needs increase. Compounding this problem is the decreasing enrollment of students in nursing colleges and universities, aging nursing faculties, and a decline in the appeal of the nursing profession due to staffing and workplace issues. This policy brief examines some of the complex and interrelated trends contributing to the current and future dilemma regarding the registered nurse workforce.

Shortage Indicators
Multiple pressures are influencing both the supply of and demand for registered nurses (RNs). Meeting the increasing demand for registered nurses is becoming increasingly complex. The most recent projections from the U.S. Bureau of Labor Statistics indicate that one million new and replacement registered nurses will be needed by the year 2010.1 The stability of a healthcare system pivots on a sufficient supply of an appropriately educated and skilled nurse workforce. Reports of the erosion of this vital workforce have emerged from a number of sources that examine the indicators of the nursing shortage.

The years between 1996 and 2000 marked the slowest growth in the registered nurse population over the 20-year period between 1980 and 2000. This slowdown in growth reflects fewer new entrants into the nurse population coupled with a larger volume of losses from the nurse population than in earlier periods.2 Shortages of registered nurses, previously projected to begin around 2007, were already evident in the year 2000 in 30 states, including 10 of the WICHE states.3

By 2010, the national shortage of RNs is projected to increase to 12 percent and to be unevenly distributed across the U.S. At that point demand will exceed supply at an accelerated rate and nearly quadruple, from a modest 6 percent in 2000 to 20 percent by 2015. In the West, 11 of the WICHE states are projected to exceed the 20 percent national projected shortage of registered nurses.4

Contributing Factors
In recent years, numerous national reports and studies have attempted to describe, quantify, and explain the potential threat the registered nursing shortage poses to quality health care delivery. The reports identify several driving forces or trends contributing to the shortage. They include: population growth and aging, an aging nursing workforce, new opportunities for women in other professions, and a smaller pool of young people entering the profession. Additionally, the image of the nursing profession, the impact of managed care and/or other cost containment measures, and the challenging work environment of nurses are cited as reasons for this workforce deficit.5 These interrelated factors will present significant challenges to state policymakers, higher education systems, and institutions.
Population Growth and Aging Baby Boomers

Two of the most significant factors contributing to the stressed nursing workforce are population growth and the aging Baby Boomers. The Bureau of the Census projects that the U.S. population will increase to nearly 300 million by 2010. Significant numbers of the country’s 78 million Baby Boomers (i.e., the large group born between 1946 and 1964) are poised for retirement. It is projected that by 2010, the number of people aged 65 and over will be 39 million, or 13 percent of the total population. Increased longevity and new technologies will create a surge in demand for health care services required by an older population at a time when there will be fewer nurses in the workplace.

Graying of the RN Workforce

The nursing workforce is also growing older along with their Baby Boom peers in the larger population. In 1980, nearly 53 percent of the RN population was under the age of 40, while in 2000 less than one-third (31.7 percent) was under the age of 40. In 1980, 25 percent of RNs were under the age of 30 compared to only 9 percent in 2000. The aging RN workforce reflects fewer young nurses entering the RN population, large numbers of nurses moving into their 50’s and 60’s, and students entering nursing education programs at an older age. By 2010, it is projected that approximately 40 percent of the nursing workforce will likely be older than 50.

Enrollment Increases Insufficient to Meet Growing Demand

In Fall 2002, enrollments in schools of nursing rose over 2001 enrollments by 8 percent. Even though recent increases might signal a shift in the decline in enrollments since 1993, the number of students in the educational pipeline is still insufficient to meet the demand for more than a million new and replacement nurses over the next 10 years. Despite increases in enrollments at a majority of nursing schools, slightly more than 30 percent of schools report no change or a decline in enrollments in 2002, resulting in unfilled seats. Almost 40 percent of schools with increased enrollments attracted only 20 or fewer students this year. Not only is there a shortage of students in the nursing educational pipeline, the number of successful graduates obtaining licensure is also inadequate to meet the demands of today’s health care system. Data on new registered nurses, as measured by those passing the RN licensing test (NCLEX), show that after growing steadily during the first half of the 1990s, the number of new RN graduates fell in the last half of the decade, resulting in 26 percent fewer RN graduates in 2000 than in 1995.

Nursing Faculty Shortages Diminish the Capacity of Nursing Schools

At many nursing schools, enrollment growth is a factor of how well schools have been able to bridge the expanding nursing faculty shortage. In recent years, the deficit of faculty has reached critical proportions as the current nursing faculty workforce advances toward retirement and the pool of younger replacement faculty decreases. As with the overall nursing workforce, the mean age of this sector has increased steadily from 49.7 years in 1993 to 53.3 in 2002 for doctoral faculty and from 46 to 48.8 for master’s faculty during this period. A majority of schools with baccalaureate, master’s, and doctoral programs responding to a 2002-03 survey reported that two of the highest ranking reasons for not accommodating student applications were insufficient funds to hire new faculty and competition for jobs with other market places. Additional barriers influencing the ability of nursing programs to attract and retain faculty include the limited number of programs offering an academic nursing education track, competition for doctoral graduates, lack of clinical placement opportunities, salary differentials, working conditions, tuition and loan burdens for graduates, age of doctoral recipients, and time to degree. The shortage of educationally prepared nursing faculty will present continuing and expanding challenges for states and higher education institutions.

How States Have Responded to the Nursing Shortage

Many states are examining the potential stress registered nurse shortages will place on health care systems. State level workgroups are encouraging legislators to tackle the problem on a number of fronts. In a 2002 survey of state responses to health worker shortages, nursing shortages were cited as a major concern in 90 percent of the states. Twenty-four states had convened task forces to study the shortage of nurses, and 24 states reported scholarship and/or loan repayment programs for registered nurses. From 2001 through 2003, state legislatures have introduced and enacted many pieces of legislation to address nursing shortages. The dominant themes of legislative actions include nursing education incentives, the improvement of working conditions, nursing quality indicators to improve patient outcomes, and the collection of data for planning, policy formulation, and accountability.

Nursing Education Incentives

From 2001 into 2003, legislative initiatives have focused on strengthening the educational pipeline for all levels of nursing and attracting a more diverse pool of applicants. Nursing education incentives have included student loan forgiveness, tax credits for tuition, grant and scholarship programs, outreach programs, and funds to hire additional staff and faculty. Some states have proposed funding educational programs with tobacco settlement money; others have created early outreach efforts that expand recruitment efforts to elementary and high school students and offer special placement in associate degree programs.
Yet others have provided funds to health care facilities to establish education-in-nursing specialty areas, qualified nursing education under welfare-to-work plans, and marketing programs to improve the image of nursing. Still others have considered providing incentives through block grants.

Among the Western states in 2001-2003:
- **Arizona’s** Governor has established a “Nursing Shortage Task Force” and recent legislation requires the development of a five-year plan to increase the number of graduates from nursing programs in the state.
- **California** is standardizing all nursing program prerequisites and admissions requirements on a statewide basis.
- **Colorado** passed two bills: one directed the state to develop admission policies for nursing programs to allow for more students; a second bill created a three-year care provider career-path program.
- **New Mexico** has created a “Nursing Excellence Program and Fund” to identify strategies to enhance recruitment and retention of professional nurses, set standards, and increase career and educational opportunities. Legislation also mandates improved interactions between health facilities’ administrators, the medical professions, and institutions of higher education. Additional legislation enacts the “Nursing Licensure Compact,” to encourage the cooperation of participating states in the areas of nurse licensure and regulation.
- **Nevada** has appropriated funds for nursing loans.
- **South Dakota’s** Governor has established a “Nursing Leadership Council which developed a strategic plan to double the enrollment in Oregon’s nursing programs by 2004, redesign nursing education, and create the Oregon Center for Nursing to coordinate and implement the plan.
- **Wyoming** legislation creates a nursing loan grant program and requires the Wyoming Higher Education Assistance Authority to coordinate the inclusion of Internet courses to meet prerequisites for entry into nursing programs.

**Improving Working Conditions and Staffing Levels**

There has been significant attention and public pressure regarding the convergence of poor working conditions and the inadequate staffing levels that are making it difficult to retain nursing professionals. During the most recent legislative sessions, several laws have been enacted to target staffing and other workplace issues.

In the Western states:
- **California** has mandated minimum staffing levels in hospitals throughout the state.
- **Oregon** and **Washington** enacted legislation prohibiting mandatory overtime.
- **Oregon** and **Nevada** lawmakers are requiring the development and implementation of valid and reliable nursing staffing systems.
- **New Mexico** and **Oregon** are providing whistleblower protection for nurses who report unsafe conditions.

**Data for Planning and Accountability**

As states begin to establish or revise policies to address the broad range of issues related to the projected shortages of nurses and other health professionals, there is an increasing need for comprehensive, accurate, and timely data and analyses. In addressing this need, many states have passed legislation requiring the collection and analysis of data to support policymaking and planning.

- **Idaho** legislators passed a concurrent resolution requiring the State Board of Education with the Idaho

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**THE FEDERAL RESPONSE**

The prospects for alleviating the nation’s increasingly acute shortage of nurses have improved somewhat with approval of the federal Nurses Reinvestment Act. The act directs the secretary of Health and Human Services (HHS) to undertake a number of activities to encourage more people to enter the field of nursing and to stay in the field. The act supports scholarships, loan repayments, public service announcements, retention grants, career ladders, geriatric training grants, and loan cancellation for nursing faculty. Funding for these programs is provided through 2007.

Further relief and support for state efforts may be found through Titles VII and VIII of the Public Health Service Act, which authorize a number of initiatives to improve the geographic distribution, quality, and racial and ethnic diversity of the health care workforce.

For more information on the Nursing Reinvestment Act grant and scholarship programs see: [http://www.bhpr.hrsa.gov/nursing/reinvestmentact.htm](http://www.bhpr.hrsa.gov/nursing/reinvestmentact.htm).
Collaborative and Strategic Partnerships

In response to nursing shortages, colleges and universities are developing collaborative and strategic partnerships with hospitals and other stakeholders to build student capacity and address mutual needs. These arrangements make a variety of connections and serve various functions. Some schools utilize expert practitioners to augment nursing faculty supply. Others involve partnerships among nursing education programs to encourage the sharing of services and physical resources to overcome limitations in clinical, classroom, and research space. Still others collaborate to provide tuition assistance in exchange for work commitments.

For additional models of collaborations and partnerships focused on nursing workforce issues, visit the WICHE Publications Clearinghouse at: http://www.wiche.edu/Policy/RPP/index.asp.

Diversifying the Nursing Workforce

A lack of diversity in the educational pipeline leads to a lack of diversity in the registered nurse workforce. According to the latest National Sample Survey of Registered Nurses (2000), prepared by the federal Division of Nursing within the Bureau of Health Professions (HRSA), only 5.4 percent of all RNs are men; only 12.3 percent of RNs represent racial or ethnic minority groups while these groups represent nearly 41 percent of the general population. Many reasons have been identified as to why men and minority group members do not pursue careers in nursing: role stereotypes, economic barriers, few mentors, gender biases, lack of direction from early authority figures, misunderstanding about the practice of nursing, and increased opportunities in other fields.

In Nursing’s Agenda for the Future: A Call to the Nation, a coalition of nursing organizations and associations aims for diversity that reflects the patient population, in order to better meet population needs. Five strategies were identified to increase the nursing workforce through valuing diversity:

- Increase diversity of faculty, students, and curricula in all academic and continuing education.
- Focus recruitment and retention programs to greatly increase diversity.
- Target legislation and funding for diversity initiatives.

Distance Learning’s Impact

Through video conferencing, CD-ROMs, and the Internet, distance education affords the profession opportunities to increase collaborative efforts in

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**NORTHWEST EDUCATIONAL OUTREACH NETWORK**

*Expanding Educational Access, Distance Learning and Interstate Collaborations*

WICHE is partnering with the Northwest Academic Forum (NWAF) – a 10-state group of institutions and state policymakers – to create a regional electronic consortium, the Northwest Educational Outreach Network (NEON). NEON’s mission is to foster interinstitutional collaborations to expand the availability of academic degree programs offered via technology-mediated education. One of the initial efforts involves working with schools and colleges of nursing in the West to expand access to nursing Ph.D. programs through academic courses and programs offered at a distance. This collaboration is open to all nursing programs in the 15 WICHE states and will help reduce the faculty shortage that is projected over the next several years.

For more information on NEON, contact: Jere Mock at 303.541.0222 (jmock@wiche.edu) or Russell Poulin at 303.541.0305 (rpoulin@wcet.info).
teaching, practice, and research. Distance learning has benefits for engaging students and may enhance enrollments at the associate, baccalaureate and graduate levels. Some of the factors that need to be addressed by nursing leaders, healthcare institutions, external funders, and policymakers are:  

- Superior distance education programs require substantial institutional financial investment in equipment, infrastructure, and faculty development.  
- Local, regional, and national planning for multisite communications needs to consider coordination of services, compatibility, and the progressive upgrading of hardware, as well as policies that lower transmission costs within states and across state lines.  
- The use of distance technology and, in particular, Web-based media have raised questions regarding intellectual property and copyrights, privacy of educational dialogue, and other related legal and ethical issues that will require continuing clarification.  
- Technology-mediated teaching strategies can change dramatically the way teaching and learning occurs, challenging the traditional relationship of students to academic institutions. These strategies may change conventional thinking about how the quality of educational programs is assessed and what is required to support student learning (e.g., library access, counseling services, computing equipment, tuition, and financial aid).  
- Distance education technology has provided some nursing schools with an advantage in recruiting students and is increasing competition among institutions.

Despite the potential benefits of distance education, this technology cannot resolve issues like the shortage of clinical sites which limits the capacity of many nursing programs to provide the necessary hands on experiences to students.

**Accelerated Programs**

Accelerated programs are innovative approaches that have gained momentum throughout the country over the past decade. Programs are offered at both baccalaureate and master’s levels and reach out to new student populations by building on previous learning experiences and providing a “fast-track” into the nursing professions. For those with prior degrees, accelerated programs offer a quick route to becoming a registered nurse but require heavy credit loads and intense clinical experiences. These programs are attractive to second-career seekers, and graduates of these programs are prized by nurse employers who value the many layers of skill and education these graduates bring to the workplace. The challenge inherent in these programs is to quickly produce competent nurses while maintaining the integrity and quality of nursing education.  

Many institutions are adding part-time options and developing partnerships to support these students financially and academically.

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**Policy Implications**

The abundance of legislative activity at both the state and federal levels reflects the growing awareness of the impact of the shortage of registered nurses and other health professionals on the health care system. The current and evolving shortage of RNs in the U.S. will demand new approaches, combining federal efforts, state initiatives, and public-private partnerships. Addressing these complex issues will require the involvement of healthcare, education, and governmental sectors, working collaboratively to consider both short-term and long-term strategies. Not much can be done to reverse the factors contributing to the increased demand for these health professionals, but there are significant policy implications for the development of strategies to increase the supply of RNs. The development of solutions to address this workforce dilemma will require quality data collection and analysis, a continuing commitment from state policymakers and education leaders, and collaborative structures to develop and implement policy recommendations.

State policymakers, higher education and health care leadership will need to focus on multiple issues related to policy and practice:

- What are the implications of a nursing shortage for public policy?

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**Accelerated Baccalaureate and Master’s Degree Programs in the WICHE Region**

Arizona  
Grand Canyon University

California  
Azusa Pacific University  
Loma Linda University  
Mount St. Mary’s College  
Samuel Merritt-St. Mary’s-MSN  
San Francisco State University-MSN  
University of California-San Francisco-MSN  
University of San Diego-MSN  
University of San Francisco-MSN

Colorado  
Regis University  
University of Northern Colorado

Hawaii  
Hawaii Pacific University  
University of Hawaii at Manoa

Idaho  
Lewis-Clark State College

Nevada  
University of Nevada-Reno

Oregon  
Oregon Health and Science-BSN & MSN

South Dakota  
South Dakota State University

Washington  
Pacific Lutheran University-MSN  
Seattle University-MSN

Note: List based on response to the American Association of Colleges of Nursing (AACN) 2002-2003 survey of nursing
If there is a shortage, what might be its characteristics in terms of severity, types of affected facilities, and geographic distribution?
What are the causes of the current shortages?
Is there a reliable central source of data on the future need for registered nurses on which to base public policy and resource allocations?
How effective are current strategies in addressing this workforce issue?
What types of system and institutional strategies will be required to address it?
What educational strategies and standards will be required to ensure a balance between the quality of RNs and the quantity need?
Are educational leaders seeking opportunities for collaborations across disciplines and institutions?
Are Web-based technologies being utilized to increase access to nursing education opportunities?
How can the state’s resources, in a time of economic uncertainty, be most effectively leveraged to address policy options related to recruitment, education, retention, technology, data collection, and regulation strategies?

State governments play a major role in helping to assure an adequate supply of health workers to meet the health care needs in their states. State roles include the licensure of health professionals, regulation of health care facilities, support of educational programs, and financing of state colleges and universities. In response to the registered nurse shortages, most Western states are developing solutions and programs consistent with their health and education systems. States are convening tasks forces or commissions, creating scholarship and loan repayment programs, engaging in workforce data collection, reshaping educational programs and career ladders, and developing initiatives to more effectively market nursing opportunities. Regional dialogues, information sharing, and collaborations will also reinforce state-level policies, initiatives, and programs so that competent registered nurses are available when and where we need them the most.

Endnotes
4 Health Resources.
7 Spratley, Johnson, et al., 7 and 11.
9 Health Resources, 4.
11 American Association of Colleges of Nursing, “Faculty Shortages in Baccalaureate and Graduate Nursing Programs: Scope of the Problem and Strategies for Expanding the Supply” (2003), 1 <http://www.aacn.nche.edu/publications/wps/FacultyShortages.htm> (14 April 2003).
12 American Association of Colleges of Nursing, 2003 Faculty Shortages, 2.
16 Spratley, Johnson, et. al., 8.

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