State Actions and the Health Workforce Crisis

By Michal Cohen Moskowitz

State action on workforce issues is critical not only in resolving shortages but also in developing and sustaining a workforce for the future.

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Current and forecasted shortages in the health workforce have generated calls at many levels of policymaking to analyze problems and identify resolutions. Given changing health workforce demographics, looming retirements of health professionals, and increased demand for health services as the Baby Boomer generation ages, experts have estimated that the nation will need to produce 6 million new members of the health workforce by 2014 to replace retiring workers and fill new positions.[1]

Given the critical role that states play in developing the workforce, the Association of Academic Health Centers (AAHC) has examined state policies and programs related to the health workforce as part of a three-year Josiah Macy, Jr.-Foundation funded study. Through education, financing, and regulation of health professionals, states leverage much influence over the development and practice of the health workforce. Thus, state action is critical not only in resolving current shortages but also in producing and sustaining a workforce for the future.

Nearly all states had initiated action around workforce shortages by 2002, when a report by the Center for Health Workforce Studies in New York found that 44 out of 50 states had convened task forces to examine shortages and recommend solutions.[2] The AAHC sought to determine the outcomes of state task forces established to address workforce issues, explore current state activities, and examine to what extent states are engaged in planning for the future. Eight representative states—California, Georgia, Maryland, Massachusetts, Montana, Nebraska, New York, and Texas—were targeted. States were selected to reflect diversity in geographic distribution, population size, and urban/rural distribution. In addition, states were selected based on their level of activity on health workforce issues as documented in 2002.

Research on state activity was conducted through examining the published literature, including reports by federal and state agencies, university systems, the federally-designated centers

for health workforce studies, and major national state policy organizations; contacting representatives of state agencies and offices, such as departments of health, higher education authorities, workforce boards, state professional boards, and universities; and communicating with national health professions associations.

This paper presents a brief overview of state actions to address the health workforce in the eight selected states. First, the paper examines state infrastructure for decision-making about the workforce and the degree to which agencies and offices have undertaken planning activities or responsibilities. Next, states' strategies and tactics to address health workforce shortages and the major professions or areas receiving attention are identified. The paper concludes with key observations about state action and recommendations for establishing and/or expanding effective workforce planning efforts.

INFRASTRUCTURE FOR WORKFORCE DECISION-MAKING & RESOURCES

Understanding state responses requires an assessment of their current infrastructure for addressing workforce shortages and the loci of decision-making and responsibility within state governments, including the state department of health, higher education authorities, department of labor, workforce board, the governor's office, and the legislature. In researching this paper, it was initially difficult to determine what, if any, agency within a given state has responsibility for the health workforce or what functions were delegated to the various agencies and offices. As these states generally lack a central coordinating mechanism to monitor and plan for the health workforce, state decision-making for health workforce issues is often splintered between several bodies.

Departments of Health

Within the department of health, responsibility for workforce issues falls under varied divisions. With a few exceptions, department of health activity in the eight profiled states has generally focused on selected aspects of the health workforce, primarily

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underserved areas and populations. Of the eight, Texas is the only state whose department of health has developed comprehensive coordinated mechanisms for analyzing and addressing statewide, cross-professions workforce issues. Montana has recently formed a body which expects to take on similar functions as well.

- **California:** The Health Care Workforce and Community Development Division of the Office of Statewide Health Planning and Development focuses on geographically underserved areas and groups that are demographically underrepresented in the health professions. Its programs include financial support for primary care training and residencies for underserved populations, loan repayment for primary health care providers in shortage areas, and health career outreach and recruitment. The division also collects, analyzes, and publishes data about the health care workforce, particularly around shortage areas.[3]
- **Georgia:** From 2001 until loss of funding in 2004, a Health Care Workforce Policy Advisory Committee worked through the Department of Community Health. The committee was tasked with monitoring the health workforce and overseeing initiatives in data and forecasting, workplace environment and productivity enhancement, recruitment and marketing, and educational programming and student finance. Now that the committee has disbanded, the department conducts workforce analysis and planning only for physicians, through the Georgia Board for the Physician Workforce. An independent state board attached to the Department of Community Health, with members appointed by the governor, the board examines the state's capacity for medical education, the supply and distribution of physicians, and the specialties needed in the state.
- **Massachusetts:** The Department of Public Health's workforce activities have focused on issues in rural areas, community health centers, and designated shortage areas. The

department oversees incentive programs designed to attract providers to underserved populations. While these programs support a full array of professions, the department has prioritized mental health and dentistry as fields of greatest need for Medicaid populations at the current time.

- **Maryland:** The Office of Health Policy and Planning oversees the Primary Care Organization, which designates Health Professions Shortage Areas for primary care, mental health, and dentistry. It also oversees incentive programs to place providers in underserved areas.
- **Montana:** The Montana Health Care Workforce Advisory Committee, created in 2006, is facilitated by the Office of Rural Health. Consisting of representatives from hospitals, higher education, and health care providers across the state, the committee has gathered data on a full spectrum of health professions. It is providing strategic direction to the Board of Regents, helping it identify the state's health workforce needs and prioritize the distribution of resources for health professions education. The committee is also interested in developing initiatives in other areas such as recruitment and career ladders.
- **Nebraska:** Two offices within the Nebraska Health and Human Services system deal with workforce issues: the Office of Rural Health oversees state incentive programs that place professionals in underserved areas, while the Department of Regulation and Licensure collects and analyzes data about vacancies and practice for selected professions, including nursing and dentistry.
- **New York:** Since 1996, the Division of Planning, Policy, and Resource Development in the Department of Health has administered $1.3 billion for five major initiatives for recruitment and training of health professionals. The programs support career ladders, recruitment, and retention projects for workers in shortage occupations, low income workers, and workers in nursing homes. Although some programs have lost funding, many are continuing. The main program, called the Health Care Worker Retraining Initiative, spent $245 million over the last ten years training 80,000 workers. The department is not involved in workforce data collection.[4]
- **Texas:** The Department of State Health Services' Center for Health Statistics provides administrative oversight for several operations related to the health workforce: (1) The Health Professions Resource Center collects and analyzes data about the supply, demographics, and distribution of a full range of practicing health care providers in Texas; (2) The Texas Center for Nurse Workforce Studies, created in 2003, maintains more extensive data about educational and employment trends, supply and demand trends, nursing workforce demographics, and nursing migration data; (3) The Texas Statewide Health Coordinating Council (SHCC), created in 1998 by the state legislature, performs comprehensive workforce data analysis and planning. The SHCC issues a new plan to the governor and legislature every six years and updates it every two years. It successfully influenced the passage of eight bills in the last legislature, largely related to telemedicine and nursing. The most recent report largely focused on nursing but also addressed physicians, public health, and the long-term care workforce, as well as the impact of technology on the health workforce.[5]

Higher Education Authorities

Institutions of higher education, from community colleges to academic health centers, play an indispensable role in nearly all aspects of health workforce development, including outreach to K-12 students, education of health professionals, and analysis of workforce data. Historically, states have been dedicated to educating and retaining residents to work within the state after graduation. Accordingly, state higher education authorities are leading health workforce projects in seven profiled states. Only in California and Georgia, however, have higher education authorities or systems produced comprehensive analyses of the health

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workforce in the state and developed strategic plans to align health professions education with the state's workforce needs.

- **California:** In 2005, the University of California (UC) Health Sciences System analyzed the state's health workforce and developed recommendations for the university system to implement. The report identified demographic and economic trends affecting demand for and access to care; profiled seven major health professions by listing factors affecting demand and supply for the profession as well as by describing UC's educational programs in each discipline; and identified major challenges facing California and the UC system.[6]

  The report's recommendations largely focused on expanding enrollment, meeting the needs of the underserved, diversifying the student body and faculty, developing new curricula, especially collaborative or technology-based programs, and recruiting and retaining faculty. The UC is now expanding health science enrollment for the first time in over 30 years: it launched new degree programs in nursing, pharmacy, and public health in 2006, and has achieved approval from the Board of Regents to pursue plans for a new medical school at the Riverside campus.[7]
- **Georgia:** In 2006, the Task Force on Health Professions Education of the University System of Georgia (USG) issued its report that called attention to the lack of comprehensive health workforce planning in the state. Taking a broad overview of the health workforce, it identified drivers of health care supply and demand, demographic trends in Georgia, the economic impact of the health care industry, the education and practice characteristics of a range of health professions, and the availability of health professions education programs in the USG's 35 institutions, including community colleges as well as universities.

  The task force identified priority health professions whose workforces are most fragile and issued a set of recommendations to the Board of Regents, including system-level planning for health professions education, strategic development for faculty recruitment and retention, on-going curricular revision and enhancement, and marketing for health professions. The USG has already created new doctoral programs in nursing practice, physical therapy, and neuroscience, and has increased enrollment, particularly in the schools of dentistry and medicine. In 2006, the Board of Regents allocated $5 million to produce more graduates with associate's, bachelor's, and doctoral degrees in nursing at 21 USG institutions.[8]
- **Massachusetts:** Under the Public Higher Education Initiative in Nursing and Allied Health Education, the Massachusetts Board of Higher Education has formed partnerships with the health care industry as well as presidents of public colleges and the state universities to programmatically speed up rate at which nurses enter the field. The initiative is creating a centralized clinical placement system for nurses, developing core competencies for nursing education and practice, and distributing funds to state colleges and universities to support doctoral degree programs and faculty development projects.[9]
- **Maryland:** Together with the Department of Labor, Licensing, and Regulation (DLLR), the Maryland Higher Education Commission released *Maryland's Top Demand Health Care Occupations: Projected Demand and Reported Supply*.[10] The report outlines the top highest-demand health care occupations, the credentials required to practice, and the means of obtaining such credentials. The report is providing baseline data to measure the success of the Maryland Health care Workforce Initiative, a $1.5 million project run by the DLLR, which is providing scholarships and incumbent training programs to nurses and allied health workers.
- **Montana:** Identifying the need for strategic direction in developing health professions education and the state's health care workforce, the Board of Regents approved the formation of the Montana Health Care Workforce Advisory Committee, described earlier. The committee will advise the Board of Regents on developing health professions education programs for the state.

- **Nebraska:** To date, no statewide higher education body has examined health professions educational capacity. However, the state has approved new schools or programs in nursing and public health.
- **New York:** Noting the state's needs for pharmacists and nurses, the *New York State Board of Regents Statewide Plan for Higher Education, 2004-2012* outlined plans to boost educational capacity and retention in those fields.[11] It has stimulated the development of health professions recruitment initiatives as well.
- **Texas:** The Texas Higher Education Coordinating Board has most recently conducted a study of professional nursing graduation rates and administers Nursing Innovation Grants to higher education institutions that are developing creative ways of expanding nurse education capacity. As part of a broader report about problems in health status and access to care in Texas, academic health centers in Texas also noted shortages of physicians, nurses, and other professions in the 2006 report *Code Red: The Critical Condition of Health in Texas*. The report called for the expansion of medical school loan repayment programs, increasing the number of medical residencies, and increasing funding for nursing schools.[12]

State Labor and Workforce Bodies

State labor and workforce offices perform several operational functions for the health workforce. By aggregating data and performing analysis about industry trends in employment, vacancies, and wages; producing short-term and long-term labor projections; disseminating career information to job-seekers; and conducting job training programs, these agencies impact the health workforce on several levels.

Governors develop statewide workforce strategies with the help of State Workforce Investment Boards. Established by the Workforce Investment Act (WIA) of 1998, state- and local-level Workforce Investment Boards (WIBs) are found in all 50 states. State-level WIBs may be situated under the department of labor or directly under the governor. Members of the state WIB include the

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governor, legislators, and governor-appointed representatives from business, labor organizations, and state agencies. They are responsible for identifying industry priorities as well as advising the governor on state workforce investment activity. The WIA dictates that local WIBs adopt a "One-Stop" delivery model that adopts a "work first" mission, connecting clients with resources to obtain jobs or promotions as quickly as possible. Often targeted at nurses and allied health workers, WIB programs for health professions include career ladders, as well as some health career outreach initiatives.[13]

Across states, governors are increasingly developing sctor-specific initiatives that entail strategic planning for specific industries. Sector initiatives enable states to identify needs, leverage a variety of federal, state, and private funding sources, and develop solutions for needs in recruitment, retention, training, and career advancement.[14] Some states have developed health care industry initiatives, which have largely focused on nursing and allied health.

- **California:** The WIB has directed significant discretionary WIA funds towards the nursing workforce as part of former Governor Gray Davis' $60 million Nursing Workforce Initiative and Governor Arnold Schwarzenegger's $90 million Nurse Education Initiative.[15] Another major state initiative run largely through WIBs was the two-year $25 million California Caregiver Training Initiative. Administered by the Employment Development Department, the initiative successfully trained more than 1,000 health professionals, increased the number of certified nursing assistants and garnered higher earnings for direct care workers through career ladders, recruitment, training, and retention initiatives.[16]
- **Georgia:** Health care is not one of the industries being targeted by the Georgia Office of Workforce Development. Statewide health workforce development projects have been led by higher education agencies instead.
- **Massachusetts:** In its latest strategic plan, the

Massachusetts WIB identified four sector teams, one of which is Nursing, Certified Nursing Assistants (CNAs), and Allied Health.[17] The Commonwealth Corporation, a quasi-public labor and workforce organization, has previously developed statewide industry-specific initiatives such as the $12 million Nursing Career Ladder Initiative and the six-year, $29 million Extended Care Career Ladder Initiative, which provided career ladders, training, and support systems for incumbent nursing home workers.

The Massachusetts Workforce Board Association—a business-led association of workforce boards—has recognized the need for a coherent statewide health workforce plan. After consulting with leaders from state agencies, higher education, and industry, the association prepared a white paper on the health workforce and stimulated the House of Representatives to file legislation in January 2007 that would create a permanent health care workforce council. Consisting of an array of stakeholders who would report to the legislature, the council would review existing data and establish a set of evidence-based priorities and specific performance measures for higher education and workforce development. The legislation also proposes a method of coordinating data collection through the Commonwealth Corporation.[18]

- **Maryland:** The Governor's Workforce Investment Board has targeted the health care workforce by developing the Health Care Industry Initiative. The WIB convened a steering committee with representatives from higher education, health care industry employers, state licensing boards, and state agencies, and produced a monograph in 2003 about current and future health professions shortages as well as best practices already in place within the state. One of the initiative's achievements was securing $1.5 million from the U.S. Department for Labor for scholarships for nurses and training programs for incumbent health workers.[19]
- **Montana:** The Governor's State Workforce Investment Board convened a Health Care Task Force, which submitted its report in January 2007. Drawing upon data from state agencies as well as surveys from the Montana Health Care Association and Montana Hospital Association, the report evaluates the extent of shortages and their causes. It also issues recommendations for marketing and outreach, education, data collection, and implementation of technology, and identifies other health workforce efforts in the state. The report will guide further WIB projects.[20]
- **Nebraska:** Nebraska workforce agencies have not developed major statewide health industry strategies. However, a coalition of representatives from the state agencies, higher education, the governor's office, legislature, and businesses have formed FutureForce Nebraska, a group that is developing career pathways for key industries, including health care.
- **New York:** New York workforce agencies have not developed major statewide health industry strategies. Local boards are responsible for developing health workforce projects.
- **Texas:** Health care is not among the six industry clusters that the Texas statewide workforce system is currently targeting. Local boards are responsible for developing health workforce projects, many of which have focused on building educational capacity for nursing and allied health.

Governors

State officials consistently report that success of workforce initiatives depends upon direct support from the governor's office, but activity and involvement from that office is varied, and the priority of the health workforce on the governor's agenda is often difficult to discern. Texas Governor Rick Perry appears to be the only one of the eight whose office houses a standing council dedicated to strategic health workforce planning and monitoring. The council, whose members include representatives from state agencies as well as higher education, identified nursing education as a major workforce priority, and successfully influenced the inclusion of $47 million in new funding for

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nursing education in the governor's 2008-2009 budget.

Other governors have authorized and supported significant health workforce-related initiatives, mostly related to nursing and allied health professions: past and current California governors Davis and Schwarzenegger both established multi-year initiatives to expand the nurse workforce. Both governors utilized discretionary spending from federal WIA funds. Former New York Governor George Pataki leveraged federal funds from the Temporary Assistance for Needy Families (TANF) program and other sources to provide $1.3 billion from 1996 to 2006 for health workforce recruitment, retention, and training initiatives, as well as another $2.1 billion over three years to hospitals, nursing homes, and other providers to recruit and retain health workers. The programs have trained nurses, technicians, therapists, clerical staff, and administrative staff.

Legislatures

Most state action on the workforce can in some way be traced to state funding and legislative decision-making. Higher education institutions receive major financial support from the state budget, and in many states, graduate medical education (GME) receives support from state Medicaid programs as well. Because more states successfully retain physicians who completed their GME, rather than medical school education, in the state, state support for GME may be critical for filling a state's physician workforce needs.[21] States also promote health professions education with their investment in K-12 education, financing of scholarships, distribution of worker training funds, and public and rural health initiatives as noted above.

Budget crises and subsequent decreases in funding for higher education hurt appropriations to universities and colleges in the beginning of the 21st century. State budgets have shown signs of recovery as state higher education appropriations have grown at faster rates in the 2005-2006 and 2006-2007 fiscal years.[22] However, even though state funding for medical education has more than doubled since the early 1980s, state appropriations have declined proportionally as a source of allopathic medical school revenue.[23] Whereas in the 1980s and 1990s, state legislatures undertook major political and funding efforts to boost the supply of primary care physicians, many state legislatures now often appear to be focused on nursing.

State legislatures must also grapple with access to health care services or providers for underserved populations or areas. State reimbursement policies for Medicaid have a major impact on access to care and the number of providers serving these populations.

Finally, together with state professional boards, state legislatures share responsibility for regulating the practice of health professionals. Statutes passed by the legislature are augmented by the boards' detailed rules about professional practice. Thus, legislatures also form part of the battleground for scope of practice matters, that is, the legal definition of what a professional can and cannot do, perhaps the most controversial area affecting the expansion of professions within the health workforce.

Task Forces and Advisory Committees

In most states, legislatures and executive branches have established task forces, asking them to assess the causes and severity of workforce shortages and issue policy recommendations. Comprising representatives from multiple stakeholders within and outside of state government—including health care industry employers, professional associations, and academic health centers—task forces provide a mix of public and private perspectives.

States have implemented recommendations by task forces and advisory committees. The following examples of activity since 2002 do not include the university system task forces in California and Georgia.

- Following recommendations of the Board of Pharmacy's **Pharmacy Manpower Task Force**, California rescinded its requirement of a state-specific examination for pharmacists in favor of a national examination and established a formal certification process for pharmacy technicians.[24]
- **Georgia's Health Care Workforce Policy Advisory Committee** (HCWPAC), an outgrowth of the Georgia Department of

Community Health, succeeded in tripling funding for health career scholarships to more than $3 million, creating a nurse faculty loan program, and passing legislation requiring collection of data from health licensure boards.[25]

- The **Maryland Statewide Commission on the Crisis in Nursing**, created by the state legislature, successfully advocated for the passage of whistleblower protection and prohibition of involuntary overtime for nurses.[26]
- The **Montana Governor's Blue Ribbon Task Force on the Health Care Workforce Shortage** produced its report in 2002. Although the report's recommendations languished for a few years, renewed interest in the workforce prompted the founding of a new advisory committee which is providing strategic direction to the Board of Regents for addressing health workforce shortages.
- The **New York Regents Blue Ribbon Task Force on the Future of Nursing** produced a survey of 14,000 nurses; stimulated the development of a clearinghouse on national and state activity for nurse recruitment, retention, data collection, and education; garnered financial support for nurse faculty scholarships and loan repayment; and clarified existing laws about patient abandonment and scope of practice of nurse practitioners.[27]

The success of these groups provides promising evidence about the impact of task forces. However, without a mechanism to implement or enforce their recommendations, task force reports may vary in their ability to influence policy.

FOCUS AREAS

State attention appears to focus on the most visible issue of public or current concern. In the eight states reviewed, nursing receives the greatest share of state action and analysis, consistent with concerns evident in 2002 when 90% of states reported nursing shortages as a major concern.[28] Of the eight states, all have implemented major initiatives to address the crisis in nursing. The long-term care workforce has also garnered significant

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state attention as the growing burdens of chronic disease and the aging population have exacerbated shortages in direct-care workers.

Specific state action around nursing has included the commissioning of task forces and reports; the establishment of state nursing workforce centers as central places to gather data and issue policy recommendations; the enactment of legislation such as mandatory overtime protection and minimum staffing ratios in hospitals; the funding of faculty loan repayment; the expansion of educational capacity, including the development of innovative educational delivery programs in colleges and universities; and the development of partnerships between schools and health care providers to educate more nurses and place them in jobs.

Other health professions appear to be addressed in piecemeal fashion. California's Board of Pharmacy formed a task force dedicated to the pharmacy workforce in 2001, and Nebraska's Department of Labor produced a report on dental education and staffing needs in 2005, but evidence of other recent task forces for other health professions was scant.

Signs from the last two years, however, indicate that some states may be recognizing the need to develop a cross-professions perspective on workforce capacity, particularly as shortages in pharmacy, allied health, and veterinary medicine attract increasing media coverage. As noted, Texas and Montana now have standing bodies dedicated to studying and advising the state on its entire health workforce, and the 2005 and 2006 reports by the university systems of California and Georgia drew attention to the full range of health professions as well. In 2006, the Maryland legislature established a task force charged with evaluating workforce capacity and developing strategies for education, recruitment, and retention of health professionals.

STRATEGIES AND TACTICS TO BOOST THE HEALTH WORKFORCE

Data Collection and Analysis

Experts have emphasized the need for current, comprehensive data about the workforce in order to address worker shortages. The number and geographic distribution of licensed professionals, demographics of professionals, vacancy rates in health care institutions, retention and turnover rates, trends in wages, inter- and intra-state migration of professionals, availability of educational programs within a state, and enrollment and graduation rates in health professions education programs are all data areas that can inform the development of workforce policy.

Yet states vary tremendously in their health professions information systems, and responsibility for data collection and analysis is typically divided between various state agencies and organizations. Information may be gathered by the department of labor, department of health, division of professional licensure, board of higher education, and profession-specific state offices, such as the Georgia Board for the Physician Workforce or the Texas Center for Nurse Workforce Studies. Private entities such as industry associations may gather further information through surveys as well.

Despite improvements in data collection in some states, many gaps remain. Licensing data may be only voluntarily reported, and not all licensing boards collect demographic data. None of the eight states appears to have a single, centralized repository of all health workforce data. All profiled states do have some mechanisms for health workforce analysis, largely in universities, but their activities are often project-driven and focus on areas of specific current interest. Examples of centers for workforce data collection and analysis include:

- **State nursing centers:** Many state efforts to aggregate comprehensive workforce data have been limited to nursing. State commissions or centers for the nursing workforce in four of eight states (California, Maryland, Nebraska, and Texas) have analyzed information about supply, demand, enrollment, graduation rates, demographics, faculty shortages, practice patterns, and other matters. Comprehensive analysis of data for other professions in the eight states generally appears to be lacking, with the exception of the Georgia Board for the Physician Workforce.
- **Centers for Health Workforce Studies:** Three of the eight states (New York, California, and Texas) have federally-designated Centers for Health Workforce Studies (CHWS) situated at universities. In the recent past, these centers have collected data and conducted analysis on state health workforce issues ranging from choice of residencies among medical students to distribution and composition of the dental workforce, and have advised states on health workforce issues. Many CHWS activities are regional or national in scope. These centers failed to receive renewed federal funding in 2006, and their future viability depends on alternate sources of support.
- **University centers:** In all eight states, public universities have been involved to some degree in generating and/or analyzing data about the health workforce. However, these university-based centers vary widely in the focus and scope of their activities. In California, the activities of the CHWS are augmented by additional major research activities of the **University of California, San Francisco's Center for Health Professions.** Among the numerous projects of the center is the Health Workforce Tracking Collaborative, which maps the educational supply chain for a wide range of health professions in California.

  In Nebraska, the **University of Nebraska Medical Center's Health Professions Tracking Center** collects comprehensive current data about the practice of a full range of health professionals ranging from physicians and pharmacists to paramedics and fire services, as well as the hospitals, clinics, and nursing homes in which they practice. The center has tracked this data for 11 years and supplies it to the state department of health to study trends.

  By contrast, the **University of Maryland's**

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Center for Health Workforce Development has almost exclusively focused on nursing and has worked on individual projects often targeted at influencing policy and practice. Legislation incorporating recommendations from its report about whether Health Maintenance Organizations (HMOs) should allow the designation of nurse practitioners as primary care providers was signed into law in May 2003.[29] However, repeated inquiries to the center found no evidence of ongoing activities at the time of writing.

Pipeline Development

Pipeline development efforts may take the shape of marketing campaigns, K-12 outreach initiatives, and scholarships for students entering high-need professions. They are often directed at underserved or rural populations and minorities, and particularly in the case of nursing, at men. States, especially those with rapidly growing minority populations, are anxious to try to align the demographics of their health workforce with their residents with an eye toward reducing health disparities. State recruitment tactics include:

- **Health career websites.** Three of the eight states (Georgia, New York, and Texas) have created websites providing information about various health careers for high school students. In addition, similar sites in Maryland and California were developed by the state hospital association and a private foundation, respectively, to recruit students into health professions. Studies have suggested that media alone is ineffective in influencing high school students to pursue allied health careers, but are best used to supplement other sources of information.[30]
- **K-12 outreach programs.** Responsibility for career outreach often rests within state universities and Area Health Education Centers (AHECs). Developed by Congress in 1971, AHECs were designed to recruit and develop health professionals in rural and underserved populations through community/ academic partnerships. Found in 45 states, AHEC programs collaborate with academic health centers and are supported by a combination of community, state, and in 12 states, federal funds.[31] Federal funding for AHECs is at risk every year, and program viability depends on other sources of support. In all eight profiled states, AHECs conduct some combination of pipeline initiatives for elementary through high school students including health career fairs, science meets, summer camps, mentorships, assistance in applications, and opportunities for high school students to receive college credit for courses in health fields. Many public universities conduct health career outreach outside of the AHEC umbrella as well.

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An example of another state outreach program in development is the New York State Board of Regents' "Planting the Seed," a multimedia interactive project using video and internet platforms to attract middle school students to careers in teaching and health professions. Currently in the planning stages, the project is also expected to equip teachers and guidance counselors with further resources to develop students' interest in pursuing jobs in teaching and the health professions.[32]

- **Scholarships:** All eight states studied have used scholarships or loan repayment programs to provide incentives for primary care professionals such as physicians, dentists, physician assistants, and mental health workers to practice in underserved areas. Many of these programs have struggled to retain providers after they have fulfilled their term of service. In addition, in response to widespread shortages, seven of the eight states (all but Montana) provide scholarships or loan repayment programs for nurses. Only two of the eight states, Georgia and Maryland, offer scholarships or loan repayments for other shortage professions, such as pharmacy, dentistry, allied health, or mental health. Both states have expanded their programs in recent years, and Georgia recently tripled its appropriations to health career scholarships to $3 million.[33] Even so, both states award an annual maximum of only $2,000-$4,000 per student, depending on the field.

Retention

Because high levels of stress and dissatisfaction with the work environment tend to be associated with "burnout" in many health professions, efforts to improve health worker retention are considered essential to ensure the continuity of the health workforce. Notably, the vast majority of state-sponsored programs geared towards improving retention dealt with nurses while some were created for allied health. Examples include:

- **Career ladders:** Career ladder programs provide training to health professionals, generally in nursing and allied health, enabling them to advance their careers. They provide a mechanism to retain workers in hospitals, nursing homes, and home care agencies, who might otherwise leave the field if frustrated by an inability to advance professionally. Career ladder programs are attractive to state and local Workforce Investment Boards, which provide intensive training resources. Through distributing funds to hospitals, nursing homes, universities, and community colleges, career ladder programs often entail career coaching, mentorship, aid with examination preparation, and educational training.

  Six of the eight states (California, Georgia, Maryland, Massachusetts, New York, and Texas) support career ladder programs in nursing, which enable workers to advance from certified nursing assistant (CNA) to licensed vocational nurse (LVN) to registered nurse (RN).

  At least four of the eight states support career ladders for higher levels of nursing: Texas and Maryland fund programs that enables working RNs to pursue masters degrees or specialties, the Massachusetts Board of Higher Education is supporting nurse faculty development initiatives at public universities and colleges in the state, and New York has directed some resources from its health worker training initiatives toward training nurse practitioners. No evidence of state-level faculty development initiatives or higher education career ladders in fields besides nursing was found in any of the eight states.

  Four of the profiled states (California, Massachusetts, New York, and Texas) also fund career ladders for other professions, such as occupational therapists, pharmacy technicians, radiologic technicians, and/or nursing home workers.

  Specific examples of state support of career ladders include Massachusetts' $12 million Nursing Career Ladder Initiative, Maryland's Incumbent Worker Training Initiative as part of the $1.5 million Maryland Health Care Initiative, California's $90 million five-year Nurse Education Initiative (which is funding career ladders alongside other expansions in nursing education), and New York's five health workforce training initiatives, for which the state has administered $1.3 billion in funding over 10 years.
- **Mandatory overtime:** Several states have abolished mandatory overtime for nurses as a way of improving working conditions and improving retention. Maryland passed such legislation in 2002, and California and Texas passed similar regulatory legislation in 2001 and 2002, respectively. An additional three of the profiled states (Georgia, New York, and Massachusetts) considered such legislation in 2004 and 2005.[34]
- **Minimum staffing ratios:** Minimum staffing ratios have been a source of controversy and debate. In 1999, California became the first state to pass minimum staffing ratios for nurses, and the law only took effect in 2004. While the stricter ratio was designed to prevent facilities from assigning overly burdensome workloads to nurses, it also caused several hospital emergency departments to close due to staffing shortages.[35]

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Licensure and Credentialing

Statutes and rules governing the practice of health professionals are determined both by state legislatures and professional boards. In consultation and cooperation with those boards, states have enacted regulatory changes that affect the supply and practice of health professionals.

"Differences in licensure requirements may pose barriers to migration of health professionals between states."

- **Scope of practice:** Changes in health professionals' scope of practice have been demonstrated as one way to improve access to care in the face of workforce shortages.[36] However, scope of practice changes continue to be highly contentious and often provoke conflict between professions.

  Nurse practitioners, physician assistants, optometrists, dental hygienists, and other health professions have increasingly expanded their scope of practice over the last five years. Since 2002, psychologists have gained the ability to prescribe medication in two states nationwide, and advocacy for prescription rights continues in other states.[37] State legislatures in 31 states faced proposed expansions to the scope of practice of varied allied health professions in 2006 alone.[38]

  Recent scope of practice changes were evident in the eight states profiled. Through laws enacted since 2001, dental hygienists can now provide treatment independently of a dentist's supervision, generally in public health settings, in four of the eight states (California, Montana, New York, and Texas).[39] Also within that time frame, two of the eight (Nebraska and Montana) have adopted laws allowing nurse anesthetists to practice without supervision. Pharmacists can now perform collaborative drug therapy management in six of the eight states (California, Georgia, Maryland, Montana, Nebraska, and Texas).
- **Licensure requirements:** State professional boards oversee the licensure of health professionals in each state, and states have struggled with the impact of state-specific licensure on the workforce. Licensure, the most rigorous method of regulating professions, establishes entry-to-practice requirements for health professionals. Differences in licensure requirements may pose barriers to migration of health professionals between states. Yet states have argued that state-specific licensure also enables states to maintain standards of competence for professionals and provides a revenue source for state professional boards.

  In recent years, certain professional associations have advocated successfully that states adopt mutual recognition models enabling professionals to carry over their licensure from one state to another. In 2000, the National Council of State Boards of Nursing implemented the Nurse Licensure Compact, whereby participating states enable nurses to practice in one state if licensed in another state. Twenty states, including three of the eight profiled states (Maryland, Nebraska, and Texas) now participate.[40]

  The initiation of new licensures also shapes the workforce as individual professions emerge and develop. For example, New York passed legislation authorizing the licensure of four new mental health professions in 2002, and authorized licensure of two more professions—clinical laboratory technologists and cytotechnologists—in 2004.[41]

Educational Capacity Building

As health professions require years of advanced education, the health workforce depends on a strong educational system capable of producing a sufficient supply of future professionals. However, limited educational capacity can pose a major obstacle across the health professions.

State strategies to increase supply through education and training include:

- **Faculty scholarships and loan repayments:** Faculty shortages pose a problem for many health profession schools, and disparities in salaries between clinical practice and academe can discourage students from pursuing academic careers. Accordingly, five of the eight states (California, Georgia, Maryland, Nebraska, and Texas) offer loan repayments for students who become nursing faculty. Annual repayments range from $5,000 a year (in Nebraska) to $13,000 a year (in Georgia). However, while faculty shortages and limited capacity are affecting an array of health professions, states' attention to the problem appears limited to nursing.
- **Increasing educational capacity:** All eight profiled states have identified the need to

increase educational capacity in order to meet future health workforce needs. Academic health centers in two of the eight profiled states (California and Texas) are developing plans to build new medical schools: The University of California is pursuing a proposal to open a medical school at the Riverside campus, and Texas Tech University of the Health Sciences has already won legislative support to build a new school in El Paso. Over three-quarters of existing medical schools expect an increase in first-year enrollment from 2002–2003 levels.[42]

Efforts to increase nursing education are most common, as all eight states have funded major statewide projects to expand educational capacity for nursing in the last five years. These states have allocated money to universities and community colleges to open new branch campuses, fund new faculty positions, augment the salaries of nurse faculty who plan to retire or transfer, pay clinical assistants, purchase new equipment, and create new degree programs such as doctoral programs in nursing practice.

New pharmacy schools are appearing as well, albeit mostly in private institutions. Between 2001 and 2006, 15 pharmacy schools opened in 13 states nationwide, including in three of the eight profiled states (California, Georgia, and Massachusetts).[43] Because of pharmacist shortages, the University of Maryland School of Pharmacy is creating a new campus in fall 2007 to accommodate more students.[44]

- **Innovation in educational delivery:** Because simply funding more faculty and new degree programs may not solve the problem entirely, more efficient and creative delivery of education may also accommodate more students. Six of the eight states (California, Georgia, Maryland, Massachusetts, Nebraska, and Texas) have funded innovative programs designed to expand educational capacity for nursing, while Georgia was the only state found to offer similar programs for other health professions, in this case pharmacists and medical technologists. Programs include accelerated curricula, flexible degree programs, and partnerships between universities, colleges, and hospitals designed to share providers from clinical practice with educational institutions, train students quickly, and place graduates in jobs.

"The priority of the health workforce on the governor's agenda is often difficult to discern."

Specific examples of these innovations include **Georgia's Health Professionals Initiative** (HPI) and Texas' Nursing Innovation Grant program. Launched in 2002 by the University System of Georgia's Intellectual Capital Partnership Program (ICAPP) with $4.55 million in private and public funding, HPI provides accelerated curricula in 16 USG schools for health professionals and places graduates in jobs through partnerships with health care employers in 25 counties. Through its first two phases, HPI produced an estimated 1,300 additional health professionals by December 2006.[45]

Texas started a **Nursing Innovation Grant** program in 2001, offering competitive grants to challenge nursing schools to develop creative educational models. In its third and most recent grant cycle, the state is funding two multi-year demonstration projects through the University of Texas-Houston Health Science Center and Midwestern State University. The projects both promote efficient use of faculty and central resource-sharing with the goal of producing more nurse graduates.[46]

CONCLUDING OBSERVATIONS

Growing awareness of health workforce issues within the last five years has impelled all eight profiled states to take action. States are facing current or looming shortages that stem from multiple complex factors, including the aging population, changing educational and practice environments, and limited pipeline of people entering health professions. Against this backdrop, the AAHC examined state activity related to the workforce, with a particular focus on planning for the future. In assessing state activity in the last five years, several themes have emerged:

"Growing awareness of health workforce issues within the last five years has impelled all eight profiled states to take action."

- **Lack of comprehensive planning:** Calls for cohesive, thorough health workforce planning are evident in task force reports across all states. However, despite growing calls for action, many states still lack long-term planning. Health industry initiatives by state workforce boards are enabling states to develop some strategic perspective, but these efforts mostly pertain to the nursing and allied health workforces. New structures appear to be needed in order to provide comprehensive planning.
- **Infrastructure:** Responsibility for the health workforce is divided between several bodies within the state. While growing collaboration between state agencies in addressing workforce problems is a positive sign and a signal of changing practices, many gaps still remain. Any given state office or agency may address only limited aspects of the health workforce without examining the entire landscape of health professions and long-term workforce issues.
  - *Departments of health:* Most departments of health in the eight profiled states have focused on selected aspects of the health workforce, primarily underserved populations and nurses. The Texas department of health is the only one that continuously analyzes and addresses statewide cross-professions workforce issues.
  - *Higher education authorities:* Due to their central role in nearly all aspects of health workforce development, higher education leaders and institutions invariably participate in task forces and appear to play advisory or consultative roles in many state efforts. University systems in California and Georgia have taken the lead in developing strategic plans for the state health workforce, while other state higher education authorities' activities have been less comprehensive.
  - *Workforce agencies:* Although many state workforce development agencies tend to concentrate on local projects, workforce agencies in California, Maryland, and Massachusetts have established statewide initiatives for the health care industry. Such initiatives advantageously enable states to leverage a variety of funding sources for health workforce projects; emphasize the health workforce's role in the economy; and develop statewide strategic plans.
  - *Governors:* The priority of the health workforce on the governor's agenda is often difficult to discern, and activity and involvement from the governors' office is varied. Of the eight profiled states, only Texas has a standing council in the governor's office that advises on the health workforce. The governors of California and New York also have supported major health workforce initiatives. What remains unclear is the extent to which governors are aware of long-term cross-professions health workforce concerns rather than immediate crises.
  - *Legislatures:* Because the future of the workforce depends on state funding and legislative decision-making, prioritization of the health workforce by state legislatures is critical. Since health workforce matters span education, health care, and labor, state legislators will need to ensure that workforce issues are addressed on all fronts in a coordinated fashion.
- **Absence of leadership:** The absence of leadership poses a major challenge to sustained workforce initiatives and planning. Most of the eight states lack a central leading body to set the state's health workforce agenda. Many state workforce initiatives have faced challenges in sustaining funding and have struggled to maintain visibility and prioritization of health workforce issues among governors and legislatures.
- **Focus areas:** State activities have focused heavily on immediate crises, most recently nursing. Most of the eight states have

"The absence of leadership poses a major challenge to sustained workforce initiatives and planning."

"State activities have focused heavily on immediate crises."

developed multi-pronged approaches to current nursing shortages through expansion in educational capacity, data collection, policy analysis, and workplace legislation. Many states also have focused on developing and investing in the long-term care workforce.

It appears that new cross-professions approaches to the health workforce are emerging, which will enable states to look beyond current crises and address broader emerging trends and concerns. Standing health workforce councils in the Texas and Montana departments of health, task force reports by the university systems of California and Georgia, and health industry initiatives by state workforce boards have begun to examine and address broader health workforce concerns.

- **Communication and coordination:** Development of the health workforce requires action by state health, education, and labor agencies. As such, communication and coordination between agencies is essential, not only in developing cohesive policy and programs, but also in preventing duplication of efforts. While state officials usually noted collaboration and communication with other offices, it appears that much activity is still conducted in silos. Information about state health workforce activities is not always easy to find or access.
- **Common strategies and tactics:** The eight profiled states have developed similar strategies and tactics to address health workforce needs:
  - *Data collection:* Coordinating up-to-date, comprehensive data collection still poses a major challenge, even in states with strong interagency collaboration. Many data collection efforts occur on an issue-by-issue rather than sustained basis, and most major efforts are specific to nursing.
  - *Pipeline development:* Health career websites, K-12 outreach programs, and scholarships/loan repayment programs are being used to encourage the entry of young people into health professions. States tend to give the responsibility for career outreach to public universities and Area Health Education Centers (AHECs). More ongoing involvement by state agencies would be beneficial to raise awareness, increase public outreach, and heighten media attention.
  - *Retention:* Common methods used to improve retention among health professionals include passing mandatory overtime legislation and supporting career ladders. Six of the eight profiled states support career ladder programs for nurses, and four of those states also fund career ladders for other professions in allied health.
  - *Licensure and credentialing:* In the eight profiled states, various health professions such as dental hygienists and certified nurse anesthetists have expanded their scope of practice in recent years. While advocates note that scope of practice changes increase access to care, little research has demonstrated the impact of change of scope of practices on the professions and the public. As regulations are changing the practice of the health workforce, this area will need continued study.
  - *Educational capacity building:* All eight profiled states have identified the need to increase educational capacity in order to meet future health workforce needs. All states have expanded educational capacity for nursing in the last five years, while some are expanding or opening new schools of medicine, pharmacy, and other disciplines as well. Expansions of health professions education are not always planned or coordinated on a statewide level.

RECOMMENDATIONS

Policymaking at the state level will continue to play a critical role in determining the nature and scope of America's health workforce for the future. Planning for the workforce is rapidly becoming one of the most critically important functions that states need to address. To ensure that states are able to meet this challenge and develop a health workforce for the 21st century, states should:

- Ensure that the health workforce is a top priority in the state government, with direct involvement of the governor and top leaders in the legislative and executive branches.
- Develop a plan to consolidate activities related to health workforce planning within one permanent office or agency. Responsibilities should include analyzing and re-evaluating workforce needs and trends, establishing appropriate government and public communication systems, and advising the governor and legislature on programs and policies for the health workforce.
- Examine ways to develop and network state planning agencies across the nation with the goal of establishing and linking to a national federal health workforce center.
- Examine ways to provide sustained funding to workforce initiatives for at least the next ten years.
- Ensure that workforce initiatives take a broad view of the health professions, analyzing the impact and consequences of profession-specific actions on the full range of professions and services.
- Educate legislators and other state officials about the health care landscape, including health professions education and practice, to help inform decision-making.
- Work closely with higher education institutions to support educational and marketing campaigns that promote health careers to K-12 students, bolster support for health professions schools, and promote faculty development. States should also augment health career outreach through increased public relations and media campaigns.
- Establish a comprehensive, up-to-date repository of health workforce data that compiles information from all relevant agencies. Such data may address health professionals practice and demographics; vacancy, retention, and turnover rates among providers; trends in wages; availability of health professions educational programs; and their enrollment and graduation rates.
- Explore the impact of regulations on the workforce, and examine options to standardize practices for the future to increase mobility of health care professionals across state lines, increase access to care, and enhance the economic impact of the health care system.
- Develop strategies to present state health workforce issues and activities in a manner that is user-friendly and clearly accessible to the public.

As the health care practice environment changes and many health professions face challenges in meeting capacity, state action is critical. While states are utilizing a variety of strategies to build the workforce, success will require long-term, sustained planning initiatives. Health workforce development efforts must address the full spectrum of professions and issues, including recruitment, retention, faculty development, expansion of educational capacity, data collection, and other areas. Through coordinating health workforce activity, adopting a long-term perspective, and placing the health workforce high on the state agenda, states can reach their health workforce goals for the present and future.

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"Health workforce development efforts must address the full spectrum of professions."

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