the future health care workforce:

BIGGER and better

Projections of future health needs challenge the health care workforce to grow in size and skills. As more fully explored in the accompanying essay *We the People: Key Demographic Trends in the United States*, demographic and other societal changes will have a profound impact on demand for health care services, significantly influencing both the magnitude and nature of those service needs. As the population ages, demand for health care services is expected to grow dramatically. Between 2000 and 2020, hospital inpatient days are expected to increase by 30 percent, outpatient visits by 20 percent, and emergency department visits by 17 percent (HRSA 2003). Long-term care needs will also rise with the number of nursing home residents increasing by 40 percent and the number of home health visits by 36 percent. Fueled by the increasing number of senior citizens, as well as increasing prevalence of chronic disease among younger populations, the future need for services promises to be staggering. At the same time, the demographic make-up of the population is becoming increasingly diverse, challenging health care service providers to address a broad spectrum of cultural norms and linguistic needs.

Rapidly escalating service use (along with mounting levels of unmet need) will likely shine a bright light on the inefficiencies and inequities that exist within the health care system. The extent to which system failures will force a fundamental re-engineering of delivery and financing dynamics remains unclear, but many health systems researchers and philanthropic leaders have already sounded cautionary alarms. Many believe that the health care system cannot begin to accommodate forecasted levels of demand absent significant systems innovation such as an increased reliance on technological supports; improved engagement of patients and informal caregivers; more efficient diagnostic and therapeutic processes; better alignment of payment incentives; a stronger emphasis on prevention; and (perhaps most difficult to achieve) new roles for, and relationships among, professional and direct care health care workers.

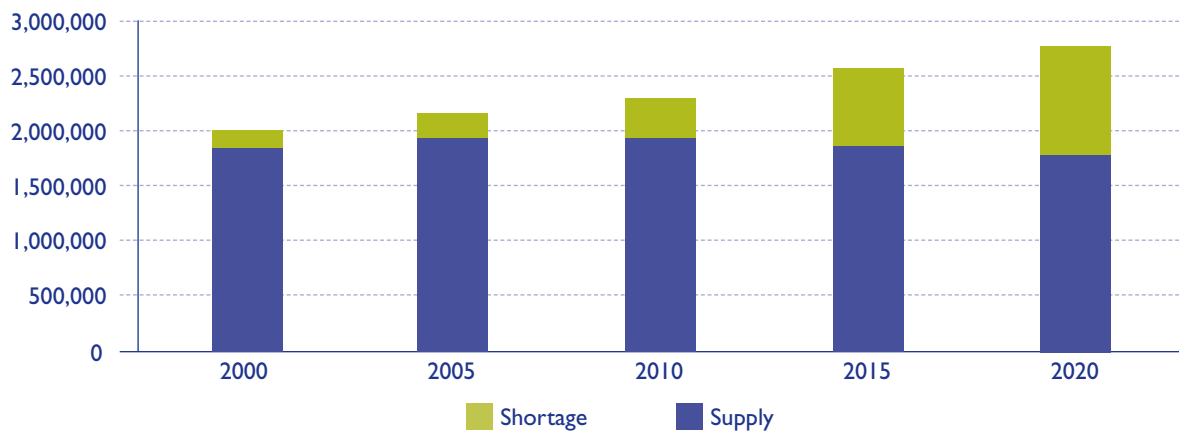
CURRENT AND FUTURE WORKFORCE SHORTAGES

Current personnel shortages suggest an immediate need to reorient the training and practices of the health care workforce while simultaneously attracting additional workers to the field. Today the recruitment and retention of health care workers is a significant concern across most disciplines and care settings. The Institute of Medicine (2008) reports current shortages for nurses, primary care physicians, certain physician specialties (such as psychiatry, endocrinology, and cardiology), pharmacists, and dentists. These workforce shortages are particularly severe in nonurban areas and are felt most acutely by elderly, low-income, uninsured, and other vulnerable patient groups. Workforce capacity constraints are also apparent for other types of health professionals, such as psychologists, social workers, medical technicians, and dental hygienists, as well as for direct care workers, such as nursing assistants and home health aides. Prevailing shortages in some health professions have been attenuated somewhat in recent years through recruitment of health professionals educated outside of the United States, but the long-term feasibility and ethical concerns raised by this strategy are troubling. The number of internationally educated health professionals is finite and their immigration to the United States only serves to erode the health resources of their home countries.

This gap between workforce supply and demand is expected to swell over the next 10 to 20 years. By 2020 increased demand for health care services will likely result in a 33 percent increase in the requirements for physicians and similarly large increases in demand for other health professions: 28 percent for nurses, 18 percent for physical therapists, 20 percent for optometrists, 28 percent for podiatrists, 30 percent for licensed practical nurses, and 33 percent for nurse aides (HRSA 2003). These estimates assume a continuation of current patterns with respect to per capita utilization rates, provider productivity, and provider

Current personnel shortages suggest an immediate need to reorient the training and practices of the health care workforce while simultaneously attracting additional workers to the field.

FIGURE 1: PROJECTED SUPPLY, DEMAND, AND SHORTAGES FOR RNS (FTES)



Source: HRSA 2004

staffing patterns. The scale of these projected "status quo" growth requirements, however, suggests that even if efficiency-boosting innovations could be factored in, the health care workforce will need to expand considerably in order to meet future demand.

CHALLENGES

Bolstering the ranks of the health care workforce has proved to be a surprisingly difficult feat. In recent years the numbers of new entrants to the field have risen in a number of professional disciplines. The same demographic trends fueling increased demand for services, however, are also working to undercut supply. The aging and retirement of the current health care workforce threatens to erode recent gains in training new workers. For example, under baseline scenarios the number of practicing registered nurses (RNs) is expected to decrease by 4 percent between 2000 and 2020, largely due to anticipated retirements. Recalibrating the capacity of "pipeline" training programs to overcome these attrition-related losses and anticipate future growth in demand is urgently needed. This recalibration will likely be an incremental process, in part because of the practical realities of expanding training programs, but also because training targets within and across disciplines are likely to shift as practice patterns evolve and provider mix adapts to these clinical models.

Efforts to revamp workforce development must go further than simply scaling up existing training programs. Preparing health care workers (both the newly minted and the more experienced) to address emerging health needs and to adopt novel, more cost-effective practice models will also necessitate significant changes in the content and structure of pipeline training programs and continuing education efforts. Few workers now receive focused training in geriatrics, cultural competency is not widespread, communication and information technology skills are lacking, and "team-based" care is the exception rather than the rule. Ensuring that these and other training needs are fully addressed will require numerous adaptations in curricula, practicum requirements, faculty composition, accreditation standards for academic institutions, competency assessment techniques, financial support for training programs, and other policies.

Shifting responsibilities within and across professions and occupations creates additional complexities. A report by the Association of Academic Health Centers (AAHC) (2008), funded in part by the Josiah Macy, Jr. Foundation, noted that over the last 25 years, a bifurcation of the health care workforce has occurred—with increases in the proportion of workers at both the lowest and highest educational levels. AAHC attributes this shift to two divergent forces: the desire for professional associations and their members to increase the scope and standing of their discipline and the desire for employers to minimize their personnel costs. In some cases, technological advances have allowed health care provider organizations to substitute baccalaureate-level personnel (such as clinical laboratory scientists or medical technologists) with associate-level or certified staff (such as medical technicians).

At the same time, a number of professions have sought to either increase the educational requirements for "entry to practice" or promote advanced practice for individuals achieving higher levels of education. For example, primary care services are increasingly being delivered by master's level nurse practitioners. "Degree creep," particularly the

increasing numbers of professions offering doctoral-level preparation, has historically led to an increasing overlap in the scope of practice across disciplines and advocacy for higher levels of professional autonomy. The AAHC report concluded, "Whether this provides greater access and service to the public, or just greater friction and potential dysfunction within the health system, depends on one's perspective" (AAHC 2008).

Negotiating "turf battles" and other forms of interdisciplinary conflicts that so often impede transformative innovations will be critical. More effective, efficient approaches to patient care will likely involve an expanded scope of responsibilities for some types of workers; an increased emphasis on delegation, oversight, and consultation for other types of workers; and more collaborative approaches to patient care across disciplines. The creation of unprecedented job functions, functional classifications, credentials, certifications, educational degrees, and training requirements may also be necessary. These functional shifts within and across professional disciplines and occupational categories may require supportive policy changes related to professional credentialing standards, accreditation of degree-granting programs, licensure requirements, scope of practice laws, and reimbursement policies.

Health philanthropy has been, and continues to be, a critical change agent in helping the health care workforce adapt to changing environmental pressures and evolving service needs. These efforts include reshaping the structure and capacity of education and training programs, developing innovative approaches to patient care, and cultivating public and private sector policies that support these goals. The following narrative describes illustrative examples of grantmaking in each of these areas.

Health philanthropy has been, and continues to be, a critical change agent in helping the health care workforce adapt to changing environmental pressures and evolving service needs.

RESTRUCTURING WORKFORCE DEVELOPMENT

A large number of private philanthropies provide scholarships, loan programs, and other support services for students seeking careers in health care, but many health funders are also striving to increase the capacity and effectiveness of education programs and other workforce development efforts. For example, the Hawaii Medical Service Association (HMSA) Foundation convened leadership from nursing schools and skilled nursing facilities across the state to discuss strategies for encouraging nursing careers in the long-term care sector. These efforts resulted in the inclusion of geriatrics in nursing school curricula, clinical placements in long-term care settings for nursing students, efforts to encourage practicing nurses to specialize in geriatrics, and in-service education programs to develop leadership skills for nurses practicing in long-term care settings. In order to support these efforts, the HMSA Foundation was successful in leveraging funds from other local foundations, as well as from the national Partners Investing in Nursing's Future (PIN) program, which is developed and implemented jointly by the Robert Wood Johnson Foundation (RWJF) and the Northwest Health Foundation (NWHF) (PIN 2008).

RWJF has made a substantial investment in the nursing workforce, committing over $150 million to nursing programs over the last 30 years, and PIN represents a key component of the foundation's current nursing initiative. PIN strives to stimulate innovative grassroots strategies for building a stable nursing workforce at the community level. PIN provides grants directly to local foundations, encouraging them to engage with nurse leaders and catalyze solutions to the nursing shortage that are customized for their own local circumstances.

PIN has supported creative experimentation across the country, with 31 sites receiving funding since the program was launched in 2006. Each PIN partner site receives up to $250,000 for projects lasting up to 24 months, and local funding partners provide matching grants further leveraging RWJF and NWHF support. Collectively the projects address goals in the following areas: diversity, faculty development and educational infrastructure, public health, geriatric and long-term care, and collaborative practice. Most projects include at least two of these themes, but the focus of each effort varies significantly, reflecting local needs and priorities.

PIN-funded efforts have included reaching out to and supporting minority high school students to encourage nursing as a career, revising nursing school curricula, creating a faculty development program built around nurses actively practicing in clinical settings, and developing an accelerated bachelor of science nursing program for students with a baccalaureate degree in another field. PIN partners participate in a national learning collaborative, technical assistance, and evaluative activities, supporting their efforts to learn from one another and promote successful interventions. PIN partners are also encouraged to participate in the National Nurse Funders Collaborative, which convenes over 100 public and

private funders seeking to develop strategic approaches to the problems facing nursing.

While each health profession faces somewhat different challenges in terms of degree of shortage and barriers to workforce expansion, the issues that confront nursing are often emblematic of broader workforce concerns (Joynt and Kimball 2008). A number of health funders have supported efforts to expand and enhance educational capacity for different components of the health care workforce. These efforts have included increasing the capacity of existing teaching programs, establishing new training programs, enriching curricula and practicum experiences, and developing skill-building opportunities for practicing clinicians. Workforce sectors with particularly acute shortages, such as oral health, dental health, and geriatrics, are often targeted in these initiatives.

Innovative care models not only increase the quality and efficiency of services, but often contribute to improved job satisfaction and employee retention.

For example, the W.K. Kellogg Foundation, in partnership with the Rasmuson Foundation of Anchorage, Alaska; the Bethel Community Services Foundation Inc. of Bethel, Alaska; and the M.J. Murdock Charitable Trust of Vancouver, Washington, has funded a groundbreaking effort to establish a dental health aide therapist (DHAT) training program in the United States. The Alaska Native Tribal Health Consortium initially relied on eight DHATs (midlevel dental providers) trained in New Zealand to provide prevention services and perform fillings, extractions, and other limited dental services for children. A $2.7 million grant from Kellogg, combined with an additional $1 million from the other funding partners, supported the creation of the program at the University of Washington's Bethel, Alaska campus, which will train 24 students to become DHATs over a four-year period. Graduates will provide services through the consortium upon completion of the two-year training program (W.K. Kellogg Foundation 2008).

The effort has met resistance, including a recently settled lawsuit brought by the Alaska Dental Society and the American Dental Association, which alleged that DHATs were violating Alaska's Dental Practice Act. The suit was dropped after the state's Supreme Court ruled in favor of the consortium, finding that federal law governing the provision of health care to American Indians and Alaska Natives preempts Alaska state law (Kaplan 2008). The unique parameters of this ruling make the potential for broader replication of the DHAT model unclear. The W.K. Kellogg Foundation and its partners are now funding a comprehensive evaluation of the initiative, to be conducted by RTI International, to examine the quality, effectiveness, and efficiency of services.

The Rasmuson Foundation cautions that foundations must be prepared for controversy and opposition when addressing entrenched health problems, such as those seeking to restructure the health care workforce (Kaplan 2008). The foundation had to fight for better oral health "tooth and nail," but through passion, commitment, patience, and an emphasis on forging effective partnerships, progress has been achieved. The foundation's strong relationships with public officials and private sector leaders within the state are seen as critical components of the effort's current success, despite considerable opposition to innovation.

REORIENTING CLINICAL PRACTICE

Health funders are also seeking to develop innovative models of clinical practice that more effectively and efficiently leverage the expertise and time of health care workers. These innovative care models not only increase the quality and efficiency of services, but often contribute to improved job satisfaction and employee retention.

The John A. Hartford Foundation has invested in a broad range of initiatives to support training, research, and service innovations to improve the health of older Americans. The foundation is currently working to disseminate team-based, patient-centered care models developed through the Geriatric Inter-disciplinary Teams in Practice (GIT-P) grants. These grants yielded four promising models of interdisciplinary care, which are now being disseminated nationwide through a three-year, $1.1 million grant to the University of Colorado Health Sciences Center. The most broadly adopted of these efforts, the Care Transitions model, has been replicated in over 100 sites (The John A. Hartford Foundation 2007).

Care Transitions is focused on reducing the miscommunication and fragmentation that often occur when patients transfer across care settings, such as returning home after being discharged from a hospital. The model is focused on helping patients self-manage their medications, developing a personal health record, ensuring timely primary care or specialty follow-up, and identifying red flags signaling a worsening in the patient's condition. Centered around a

"transition coach" (typically a physician's assistant or nurse practitioner) and improved use of information technology, the Care Transitions model both empowers patients to play a more active role in managing their own health service needs and facilitates better coordination across sectors and providers.

While these interdisciplinary models largely focus on improving communications across health professions, The John A. Hartford Foundation also recognizes the important role frontline or direct care workers play in the quality of long-term care services. The foundation has funded a variety of efforts seeking to improve the work environments in which these caregivers are employed. Turnover in the direct care workforce is high, compensation levels are low, and the nature of the job is physically and emotionally taxing. The Paraprofessional Health Institute (PHI) works to improve the lives and work environment of direct care workers with the goal of creating high-quality long-term care services and stable relationships between residents and staff.

The John A. Hartford Foundation and The Atlantic Philanthropies have provided a four-year, $4.7 million grant to PHI to support its Center for Coaching Supervision and Leadership. The center strives to help direct care workers succeed in their jobs by improving the communication and management skills of their supervisors. The center combines a "train the trainer" approach for nurses and other supervisors of direct care workers with leadership development for senior executives in long-term care organizations. The program strives to create a respectful culture that values the input of direct care workers and helps develop their problem solving and prioritization skills. Through prior research and demonstration activities, PHI has proven that strong coaching supervision and peer mentoring lead to reductions in staff turnover and absenteeism, as well as increased job satisfaction (The John A. Hartford Foundation 2008).

The long-term success of attempts to redesign workforce education and clinical practice often hinges on the enactment of policies that support and sustain these innovations.

REFRAMING SUPPORTIVE POLICIES

The long-term success of attempts to redesign workforce education and clinical practice often hinges on the enactment of policies that support and sustain these innovations. Policies relevant to workforce development include public sector policy decisions (such as funding for workforce training programs, state-level scope of practice laws and licensure requirements, and reimbursement policies through Medicaid and Medicare), as well private sector policies (such as credentialing standards established by professional associations and accreditation standards established by organizations that certify degree-granting institutions and health care providers).

Health funders have sought to marshal support for key policy changes in a variety of ways. Data collection and analyses that publicize regional workforce shortages, training needs, and funding gaps are important tools that health philanthropies have used to stimulate policy action. For example, The California Endowment (TCE), The California Wellness Foundation (TCWF), and the California HealthCare Foundation have funded numerous analytic studies assessing the adequacy of the current supply of health care workers and the capacity of current educational programs to train new workers. Among these efforts is a series of reports exploring the demographic characteristics of physicians, dentists, pharmacists, RNs, and physical therapists practicing within the state, along with a demographic analysis of students studying in these disciplines. Efforts to increase diversity and improve participation in educational programs by underrepresented groups are also highlighted (Bates et al. 2008).

Building on these analytic studies, TCE has funded the statewide initiative Connecting the Dots, which focuses on increasing health professions' workforce diversity. This comprehensive initiative has sought to identify barriers to, and opportunities for, increased diversity; raise the visibility of exemplary practices (such as those related to pipeline investments, admissions, institutional climate, faculty recruitment and retention, and financial aid); explore how the issue is framed by the media; document benefits of diversity; and consider the K-12 network of support available to minority students. The effort seeks to culminate in the development of a statewide strategy and the active engagement of key stakeholders and policymakers. In 2006 TCWF introduced a complementary public relations campaign to increase diversity in the health professions, which includes the Web-based resource *Health Jobs Start Here*, designed to help young people explore careers in health.

Health funders are also working to catalyze workforce policy change at the national level. Partnering with the U.S. Department of Labor, RWJF convened a national Nursing Education Capacity Summit in June 2008. The summit brought together 18 state-based teams to engage in solution-

oriented discussions about the nursing shortage. Each team included representatives from nursing education, organizations that employ nurses, regulatory bodies, workforce investment organizations, government agencies and policymakers, and philanthropy (selected through a competitive process) The teams discussed best practices and action plans related to strategic partnerships and resource alignment, state policy and regulation, faculty expansions, and educational redesigns.

CONCLUSION

Several of the initiatives described above are multidimensional strategies that seek to simultaneously improve educational capacity, transform clinical practices, and promote supportive policies with the shared goal of strengthening the health care workforce. These strategies are clearly interrelated and mutually reinforcing. Health philanthropy has historically played a leadership role in raising the visibility of health workforce shortages, testing innovative approaches to shortages in both training and practice settings, and stimulating public and private sector reforms to more broadly disseminate these innovations. Responding to the magnitude and complexity of future health care needs will require continued momentum in all of these areas, locally, regionally, and nationwide. If necessity is in fact the mother of invention, then the demographic changes on the horizon portend a crucial opportunity for revitalizing the health care workforce, as well as the broader system of care.

REFERENCES

Association of Academic Health Centers (AAHC), *From Education to Regulation: Dynamic Challenges to the Health Care Workforce* (Washington, DC: 2008).

Bates, Timothy, Laurie Hailer, and Susan Chapman, *Diversity in California's Health Professions: Current Status and Emerging Trends* (San Francisco, CA: UCSF Center for Health Professions, March 2008).

The John A. Hartford Foundation, *Annual Report* (New York, NY: 2007).

Institute of Medicine, *Retooling for an Aging America: Building the Health Care Workforce* (Washington, DC: The National Academies Press, 2008).

Joynt, J., and B. Kimball, "Blowing Open the Bottleneck: Designing New Approaches to Increase Nursing Education Capacity," <http://www.championnursing.org/uploads/NursingEducationCapacityWhitePaper20080618.pdf>, May 2008.

Kaplan, D., Rasmuson Foundation, "Innovations In Rural Health Take Root in Alaska," <http://www.rasmuson.org/PressRelease/index.php?switch=view_pressrelease&iReleaseID=162&highlight=DHAT>, March 2008.

W.K. Kellogg Foundation, "Evaluation to Measure Effectiveness of Oral Health Care Model in Rural Alaska Native Villages," <http://www.wkkf.org/default.aspx?tabid=1147&CID=432&NID=259&newsitem=4>, July 16, 2008.

Partners Investing in Nursing's Future (PIN), *Connection + Collaboration=Innovation*, <http://www.partnersinnursing.org/documents/PIN_Brochure_Final102008_000.pdf>, October 2008.

U.S. Health Resources and Services Administration (HRSA), *Changing Demographics: Implications for Physicians, Nurses, and other Health Workers* (Washington, DC: 2003).

U.S. Health Resources and Services Administration (HRSA), *What Is Behind HRSA's Projected Supply, Demand, and Shortage of Registered Nurses?* (Washington, DC: 2004).