



**OUT
OF
ORDER
OUT
OF
TIME**

THE STATE OF THE NATION'S
HEALTH WORKFORCE



Association of Academic Health Centers

Leading institutions that serve society

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A report by the Association of Academic Health Centers



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The Association of Academic Health Centers,
a national non-profit association, represents the
nation's academic health centers and is dedicated
to advancing health and well-being through
leadership in health professions education,
patient care, and research.

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EXECUTIVE SUMMARY

O *ut of Order, Out of Time: The State of the Nation's Health Workforce* is a report undertaken by the Association of Academic Health Centers (AAHC) to focus attention on the critical need for a new, collaborative, coordinated, national health workforce planning initiative. The report is based on the following premises:

- The dysfunction in public and private health workforce policy and infrastructure is an outgrowth of decentralized decision-making in health workforce education, planning, development and policy-making (*out of order*);
- The costs and consequences of our collective failure to act effectively are accelerating due to looming socioeconomic forces that leave no time for further delay (*out of time*);
- Cross-cutting challenges that transcend geographical and professional boundaries require an integrated and comprehensive national policy to implement effective solutions;
- The issues and problems outlined in the report have not been effectively addressed to date because of the inability of policymakers at all levels to break free from the historic incremental, piecemeal approaches; and
- Despite many challenges, the prospects for positive change are high.

The report presents findings, conclusions and recommendations. The detailed findings are discussed in seven chapters:

- CHAPTER ONE reviews the historic evolution of health workforce policy and considers how the decentralization of health workforce

policymaking among numerous public and private entities limits their collective ability to address national needs in an integrated, comprehensive, and effective manner.

- CHAPTER TWO considers some of the specific problems arising from the lack of an integrative role in current public policymaking and infrastructure, including poor harmonization of policy within and across jurisdictions, the barriers to other stakeholders' ability to bridge those divides, and the consequences of the failure to create shared taxonomies and coordinated research capabilities.
- CHAPTER THREE examines specific policy areas where lack of harmonization of various public and private standards and requirements is problematic, including scope of practice laws, licensure and accreditation.
- CHAPTER FOUR investigates how health labor markets are adversely affected by dissatisfaction with jobs and work environment as well as the limited success of recruitment and retention strategies. It also discusses how market incentives, increased debt, and other financial concerns contribute to suboptimal supply and distribution of the health labor force.
- CHAPTER FIVE scrutinizes the challenges facing institutions responsible for health workforce education and training, including constrained resources, adverse impact of elevation of minimum credentials, persistent faculty shortages, the consequences of increased entrepreneurialism and privatization in health workforce education, and the unrealized promise of mainstreamed interprofessional education and practice.
- CHAPTER SIX explores increasing reliance on a mobile international health workforce, the economic and individual choices at issue, and the need to evaluate and plan from a national perspective.
- CHAPTER SEVEN delves into the socioeconomic trends accelerating health workforce challenges, such as increased demand attributable to aging baby boomers and decreased supply attributable to the looming retirements of baby boom generation practitioners, as well as the changing values and perceptions that accompany changing demographics of the health workforce, and the health professions' ongoing struggle to respond to demographic diversity.

The report draws several broad conclusions from the detailed findings:

- A broader, more integrated national strategic vision than that which has characterized our historic approach to health workforce policymaking and planning is needed if complex and urgent health workforce issues are to be addressed effectively.
- A mechanism is needed to serve the currently unfilled integrative role that existing health workforce policymaking and planning processes are not designed, and are ill-equipped, to serve.
- National health workforce policy priorities include:
 - Assessing and harmonizing health workforce laws, standards, and requirements to improve their effectiveness and to remove the arbitrary barriers and burdens that the lack of consistency and compatibility creates;
 - Developing innovative policies and strategies that counteract the economic and environmental factors discouraging pursuit of health professions careers at a time when the nation is already facing current and projected shortages in many health professions;
 - Developing innovative policies and strategies that address the economic and environmental factors obstructing access to health professions education, burdening educational institutions, and distorting health workforce objectives; and
 - Developing a national approach to global health workforce issues.
- It is critically important to act immediately to develop and implement an integrated, comprehensive national health workforce policy before intensifying health workforce needs outpace available resources, putting the U.S. at risk of losing its status as the global health care leader.

The report's findings and conclusions offer compelling arguments that we are *out of time* to address what is *out of order* in our health workforce. Therefore, the report recommends that all public and private stakeholders work together to:

- Make the U.S. health workforce a priority domestic policy issue;
- Begin addressing national health workforce issues immediately to avert crises in national workforce capacity and infrastructure;

- Develop an integrated, comprehensive national health workforce policy that recognizes and compensates for the inherent weaknesses and vulnerabilities of current decentralized multi-stakeholder decision-making; and
- Create a national health workforce planning body that engages diverse federal, state, public and private stakeholders with a mission to:
 - Articulate a national workforce agenda;
 - Promote harmonization in public and private standards, requirements and prevailing practices across jurisdictions;
 - Address access to the health professions and the ability of educational institutions to respond to economic, social, and environmental factors that impact the workforce; and
 - Identify and address unintended adverse interactions among public and private policies, standards, and requirements.

The report includes additional recommendations for fulfilling each of these missions.

The Association of Academic Health Centers is a non-profit organization based in Washington, DC that represents the nation’s academic health centers* and seeks to advance the nation’s health and well-being through leadership in health professions education, patient care, and research. *Out of Order, Out of Time: The State of the Nation’s Health Workforce* is a product of the AAHC’s recent initiative to analyze health workforce shortage issues from a broad multi-professional perspective and was supported in part by a grant from the Josiah Macy, Jr., Foundation. The report is based on a review of health workforce literature, as well as information gathered during a series of forums and workshops with health workforce experts, analysts, and representatives of major educational and healthcare organizations, and from AAHC staff interviews with select academic health center CEOs.

*An academic health center is a degree-granting institution of higher education that consists of a medical school (allopathic or osteopathic), one or more other health professions schools or programs (e.g., allied health, dentistry, graduate studies, nursing, pharmacy, psychology, public health, veterinary medicine), and an owned or affiliated relationship with a teaching hospital, health system, or other organized health-care provider.

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PRESIDENT'S FOREWORD

Out of Order, Out of Time: The State of the Nation's Health Workforce focuses attention on the critical need for a new, collaborative, coordinated, national health workforce planning initiative. It is essential that the nation take a critical look at its policymaking framework for the health workforce that has created a system that may no longer be adaptable to changing national demands and a rapidly evolving global economy.

In the context of a new century, this report examines why the U.S. cannot afford to continue its current approach to the nation's health workforce. It also proposes specific policy recommendations for addressing what can best be described as a smoldering crisis.

The nation is not only *Out of Order* with regard to its workforce policy, it is running *Out of Time* to transform the policy infrastructure. Demographic and socioeconomic changes are already reshaping the nation and will dramatically impact the healthcare system. Rapid technological advances and globalization are magnifying workforce vulnerabilities and may overwhelm efforts to address the health workforce in a timely and comprehensive manner.

The health workforce also plays a pivotal role in the U.S. economy, and the healthcare sector will be a dominant source of future employment growth and integral to the future of research and science. These new jobs are expected to be filled by persons with pertinent secondary education who are part of the knowledge economy of the future. The rules and practices that determined success in our historical industrial economy were written into the existing policy framework. However, in an interconnected, globalized economy, where knowledge resources such as know-how, expertise, and intellectual property have the potential to be more critical than other economic resources, public policy that promotes and advances knowledge assets needs a different framework for policymaking.



IF WE DO NOT
ACT ON A NATIONAL
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Workforce policy development must be able to adapt to these labor challenges, not only to ensure that individuals are prepared for the healthcare job market, but also to be certain the nation is prepared to compete in the global arena. Taken as a whole, these demographic, socioeconomic, technologic, and global forces call into question the current framework for health workforce policy and suggest the need to reengineer the system. Simply put, the nation needs to have a prepared, adequate, and skilled health workforce for its health and economic well-being.

Yet, by January 1, 2011, when the first baby boomers turn 65, we may lack a national policy to ensure that outcome. This problem cannot be left solely in the hands of market forces, which encourage a system dominated by wants as opposed to needs ultimately resulting in an uneven distribution of healthcare practitioners. Nor can the problem be left to the states that will understandably serve their own regional needs, leaving an uneven national playing field.

If we do not act on a national level, we can expect serious consequences in the years ahead. As shortfalls in needed health services arise along with shortages in the faculties of the academic institutions necessary to educate and train health professionals, the quality of healthcare across the country will inevitably suffer. The public's health will be harmed and the financial impact will be enormous. Already reliant on international workers to meet our health workforce needs, it is not sensible policy to deepen our requirement to increasingly import nurses, pharmacists, physicians, dentists, long-term care providers, and others to tend to our aging population. We also run the serious risk of being unprepared for any further strain on the healthcare system — whether it comes in the form of a major natural disaster or other health care emergency.

The problem is clearly multifaceted and complex and it will require a multifaceted, complex policy solution. It begins with the acknowledgement that we do not currently have a national health workforce policy and must

find the political will to develop one. It continues with the need to simplify the cumbersome policy apparatus at federal and state levels that impacts the education and deployment of health professionals. It also calls for us to educate the public, harmonize standards, increase access and funding for education, improve working conditions, invest in technology, update our infrastructure, and rethink the way we conduct research on the workforce.

The United States has always been a leader in technology and healthcare. If we want to continue in that leadership role, we must act now. But beyond the issue of leadership is a far more important one: the need to protect the health and well-being of the nation.



Steven A. Wartman, MD, PhD, MACP
President/CEO
Association of Academic Health Centers

PREFACE

Out of Order, Out of Time: The State of the Nation's Health-care Workforce is a report undertaken by the Association of Academic Health Centers (AAHC) to focus attention on the critical need for a new, collaborative, coordinated, national health workforce planning initiative. The report is based on the following premises:

- The dysfunction in public and private health workforce policy and infrastructure is an outgrowth of decentralized decision-making in health workforce education, planning, development and policy-making (*out of order*);
- The costs and consequences of our collective failure to act effectively are accelerating due to looming socioeconomic forces that leave no time for further delay (*out of time*);
- Cross-cutting challenges that transcend geographical and professional boundaries require an integrated and comprehensive national policy to implement effective solutions;
- Despite many problems, prospects for positive change are high.

The report includes both findings and recommendations on a variety of workforce concerns. The report documents numerous health workforce issues from the educational arena to the regulatory environment, which create friction or are under duress due to many factors, including lack of standardization, fragmented policymaking, weak infrastructure, or poor funding. In assessing the findings, the report notes that an out of order system stymies desired policy outcomes through both sequential and concurrent systematic failures. The report concludes by focusing on how the nation is running out of time to deal with the workforce challenge. The final chapter reveals

how demographic and socioeconomic forces, specifically the aging of the baby boomer generation and the growing diversity of the U.S. population, are rapidly transforming the U.S. and will be placing enormous pressures on an unprepared healthcare system. As the prevalence of disability, frailty, and chronic diseases increases dramatically, the health of elderly populations will have increasing consequences not only for the U.S. but also the world. In the recommendations, the report identifies some specific issues and challenges that would benefit from a national health workforce planning initiative.

The nation is urged to act in a rational, comprehensive fashion to ensure the nation's future well-being and economic growth. A new collaborative health workforce planning initiative, involving the active participation of private, state, and federal stakeholders is necessary to develop and implement a comprehensive national health workforce policy.

This report, part of an ongoing AAHC health workforce project, approaches the nation's health workforce from a broad, multi-professional perspective in the context of a growing and changing U.S. population. The report was supported in part by a grant from the Josiah Macy, Jr., Foundation.

Academic health centers have an historic commitment, if not obligation, to address workforce issues because a major portion of the nation's health professionals are educated in their many schools. More importantly, academic health centers are uniquely qualified to take a leadership role to resolve workforce issues because their educational and research operations are integrally connected to patient care, all of which ultimately depend on the health workforce.

Academic health centers are also vital for economic development in their communities, states, and regions. Given their vantage point on the labor market and the economy, academic health centers have a responsibility to help analyze current issues and to develop and facilitate a new approach to workforce issues because, as this report points out, further delay on the workforce is unacceptable. No other institutions can provide such cross-cutting leadership to facilitate the changes so urgently needed in this area.

The process leading to the report was in part guided by an advisory committee (Appendix A) and consisted of commissioned papers from nationally known experts who analyzed some of the underlying challenges inherent in expanding workforce capacity (Appendix B), and a series of meetings with workforce experts, analysts, and representatives of major educational and healthcare organizations (Appendix C). The AAHC staff also interviewed

selected academic health center CEOs to learn of efforts to respond to existing and impending shortages.

The Association of Academic Health Centers, a non-profit 501(c)(3) organization based in Washington and representing more than 100 academic health centers nationwide, is dedicated to improving the nation's health care system by mobilizing and enhancing the strengths and resources of the academic health center enterprise in health professions education, patient care, and research.

INTRODUCTION

O *ut of Order, Out of Time* is an appropriate and recurring theme in the study of U.S. health workforce policy when deficiency, dysfunction and confusion in structures, priorities, and policies are considered. These problems, which are delineated in this report, emerge from the nation's decentralized system for workforce decision making that by its nature promoted and accommodated the growth and influence of multiple groups with disparate interests. As a result, there is no coherent overarching health workforce policy.

The report details how a rational, comprehensive approach to policy-making was unable to flourish in a policy framework where targeted issues, specific professions, crisis situations, or high profile concerns dominated the landscape. The need for rational workforce planning, where the nation purposely aligns the health workforce with strategic national goals or objectives, was recognized during the past century. However, attempts to establish meaningful goals and viable structures for such an initiative were short lived, narrowly focused, and characterized by incrementalism.

This report explores the powerful, historic forces that helped create our current situation and are today the greatest vulnerabilities for the workforce and the nation. It addresses issues that might have benefited from a broad, comprehensive approach to workforce studies and outlines how myriad groups promoted standards and policies and advocated for economic incentives to achieve individualized public policy agendas, with little regard for shared goals and visions.

The health workforce has always played *the* vital role in ensuring the nation's health. "Health workforce" is a broad term that encompasses the many individuals with and without professional degrees who are required to deliver healthcare in today's complex patient care environment. This report focuses on those practitioners with post-secondary education, including an array of allied health professionals, dentists, nurses, optometrists, pharmacists, phy-

sicians, podiatrists, psychologists, public health professionals, veterinarians, and others. Many of these individuals are also faculty at health professions schools throughout the nation. The health workforce is also referred to in this report as simply “the workforce”.

The workforce, because of its link to the health, educational, and research enterprises is a crucial component of our national economic infrastructure, and, more than ever, a key to the nation’s preeminence in the global economy. Indeed, the healthcare sector is now and will continue to be a significant area of U.S. job creation in the coming decades. The health workforce is also a crucial component of our national security infrastructure as it is always on the front line of any national tragedy. This report addresses the reasons for and implications of shortages in the health professions, revealing why they will worsen in the coming decades with ramifications in every sector of the economy.

While it has long been recognized that public and private reimbursement for health services play a strategic role in developing and sustaining the nation’s health workforce, this report will not argue for one method of financing over another. Rather, it will point out how the current system of reimbursement is beset with distortions, inequities, and contradictions that have influenced and shaped the health workforce over many years.

The report will show how the free-market initiatives of the last two decades have engendered perverse reimbursement incentives that do not address greater social needs. With an absence of overarching national leadership and quantitative health workforce standards (*out of order*), numerous educational, accrediting, and licensure bodies — all well-intentioned — emerged and contributed to a Tower of Babel in the healthcare community, as the first chapters of the report reveal. Also noted are how the healthcare needs of the public were largely left to individual states, and how the state governments understandably focused on the specific needs of their populations, without concern for the greater national priorities.

This report moves from the policy arena to specific issues affecting students pursuing health professions careers, as well as the factors that help or hinder the ability of educational institutions to educate the health workforce of tomorrow. The report raises awareness about how the younger generations are being deterred from entering the health professions by debt, compensation factors, hazardous work environments, and in some cases, reduced access to education. The report also examines the global dimensions of health



THE CHALLENGES FACING TODAY'S HEALTH WORKFORCE HAVE SERIOUS REPERCUSSIONS FOR PATIENTS AND THE HEALTH PROFESSIONALS WHO SERVE THEM.

workforce policy that compound institutional challenges and have ramifications beyond the health care sector.

The report highlights the demographic trends that are greatly exacerbating the health workforce problem and heightening the need for new directions in policy making. The continued growth of the U.S. population, its increasing diversity, and specifically the aging of the baby boomers raise strategic concerns about the adequacy of the health workforce. Along with a wide variety of other societal and socioeconomic challenges that confront the workforce, these trends suggest that we are running *out of time* to address the nation's need for qualified health professionals.

As the health workforce shortages deepen and worsen in the coming decades, the report points to a number of negative outcomes, including a crumbling infrastructure for health professions education that cannot be quickly or easily repaired, and a similarly weakened infrastructure for the delivery of health care services and research, which also relies on the health workforce.

In short, the challenges facing today's health workforce have serious repercussions for patients and the health professionals who serve them. Given that such a large part of our nation's well-being and economy are directly and indirectly tied to healthcare, this report demonstrates that the nation cannot afford to allow the various public and private health workforce policymaking stakeholders to continue addressing these challenges in piecemeal isolation.

This report presents compelling reasons for making the health workforce a priority domestic policy issue that receives immediate attention to avert crises in national workforce capacity and infrastructure. The report concludes with sound recommendations for transforming the national outlook on the health workforce and the nation's approach to decision making on this critical component of the nation's well-being.

CHAPTER ONE

THE HISTORY OF WORKFORCE POLICY

Seeds of Disarray Sown Early On

KEY FINDINGS

1. A multitude of decision making entities control health workforce policy making.
2. An era of state and professional regulation of medical and other health professions schools has produced a decentralized and distributed approach to health workforce regulation and oversight.
3. Public workforce planning commissions have tended to have a limited focus, often concentrating on one profession or a limited series of issues, rather than a broad strategic vision.
4. Federal funding has tended to be driven by responses to crises rather than long-term commitment to investment in health workforce infrastructure.
5. Recent trends toward government retrenchment and reliance on the private sector have exposed additional vulnerabilities.
6. Reimbursement policy and health workforce policy are inextricably linked, but not harmonized.
7. Focusing on model educational programs and curricula may be unrealistically narrow given current socioeconomic realities.
8. Health workforce policy has not been a primary focus in the contemporary health reform debate.



STRATEGIC THINKING AND PLANNING APPEARED TO BE AN AFTERTHOUGHT

20TH CENTURY POLICYMAKING: MULTIPLE ENTITIES EVOLVE

It became apparent early in the 20th Century that the infrastructure for health workforce policymaking would be controlled by a multitude of decision making entities, in both the private and public sectors, with varying degrees of authority. As a result, strategic thinking and planning appeared to be an afterthought, often abandoned due to fears about overly expanding the powers of federal government.

1900s TO 1930s: REGULATORY PROCESSES AND STANDARD SETTING EMERGE

Strategic direction for policymaking was more pronounced in the private sector. Regulatory processes for health professions schools emerged in the late nineteenth and early twentieth centuries, including the accreditation and licensure functions. Considered the means to raise standards within the health professions and protect the public, these bodies developed from private sector initiatives and interest.

This was most evidenced by the response to the 1910 Flexner Report¹ on medicine. The report, which revolutionized medical education by calling for higher educational standards and adherence to the protocols of science in teaching and research, was also a catalyst for establishing governmental and professional regulation of the health workforce. The report would be followed by an era of policymaking through vigorous state and professional regulation of medical and other health professions schools and professionals, including the establishment of professional and institutional standards promoted in the report.

The next decades saw the formal differentiation of medical specialty practice, beginning with the formation of the American College of Surgeons in 1913 and the American College of Physicians in 1915. Board examinations were introduced in the 1930s. Nursing flourished during this era, with the ad-

vent of university-based schools of nursing and the establishment of multiple national nursing associations. North Carolina established the first nursing board in 1903 with responsibilities that included approving and monitoring the state's nursing education programs that lead to initial licensure and issuing licenses, and interpreting the practice of nursing based on the state's nursing practice act.

1940s AND 1950s: PLANNING COMMISSIONS WITH LIMITED FOCUS

Early efforts by the federal government to promote health planning did emerge in the post World War II era with, for example, the Hill Burton Hospital Construction Act in 1946. This era was a time of tremendous economic growth and expansion of the education and manufacturing sectors, including the development of the university-based academic health center as it is known today. Economic well-being was also coupled with fears of an impending shortage of physicians during the 1950s and into the 1960s. Both scenarios served as catalysts to develop policies to expand the nation's medical schools, increase government funding for medical education, provide subsidies to teaching hospitals for the education of physicians, and create policies and programs that encouraged immigration of foreign-trained physicians.

During the post World War II era a series of planning commissions concentrated on physician issues and the unequal distribution of physicians across the U.S. By 1952, the President's Commission on the Health Needs of the Nation found health workforce shortages a severe national problem: "From the big cities and from the forks of the creek, the people asked for more physicians, nurses, dentists... There are not enough general physicians, and most of those that we have are so busy that they cannot give the patient the time and sympathetic care the old family doctor could give."² The Commission found acute shortages in all specialties with the possible exception of surgery.

In 1955, the American Medical Association released the Sawyer Committee report, which called for the expansion of training for general practitioners (GPs) and eventually led to the first GP residency programs in the early 1960s. This report would be a bellwether of things to come in later decades when the nation focused on selected segments of the health workforce to address specific shortages, lack of access, or disparities in delivering services to particular populations or geographic areas.

1960s AND 1970s: FUNDING IN RESPONSE TO CRISES

In response to a shortage of healthcare providers, Congress amended Title VII of the Public Health Service Act in 1963 and established Title VIII in 1964; these titles were amended over time to authorize funding for a variety of health professions educational and training programs with diverse objectives (e.g., underserved areas, minority and disadvantaged populations, primary care). In 1964, the Nurse Training Act marked the first federal law to give comprehensive assistance for nursing education. This legislation was followed by a series of amendments, regional medical programs in 1965, and the Comprehensive Health Planning and Public Health Service Amendments in 1966.

The 1965 Coggeshall³ report from the Association of American Medical Colleges foretold of an impending shortage of physicians and served as an impetus for President Lyndon Johnson's appointment of a National Advisory Commission on Health Manpower, whose 1967 recommendations led to expanded opportunities to enter the health professions. Also in 1967, the Public Health Service, part of the U.S. Department of Health, Education and Welfare (the predecessor to the Department of Health and Human Services), was reorganized into five bureaus, including a new Bureau of Health Manpower.

Despite these efforts, the National Health Planning and Resources Development Act of 1974 (P.L. 93-641) declared that the history of public and private sector responses to the problems of inequitable access and rising costs "have not resulted in a comprehensive rational approach to the present [problems]."⁴ Incrementalism in policymaking, the outcome of a decentralized framework for decision making, resulted in ebbs and flows in interest and attention to health workforce issues throughout the past century. Policies were developed to address specific needs and concerns of a broad scope of interest groups and policymakers.

1980s AND 1990s: GOVERNMENT RETRENCHMENT LEAVES HEALTH WORKFORCE INFLUENCE IN PRIVATE SECTOR

A longstanding philosophic divide between government-based planning and market-oriented approaches became increasingly visible in the late 1980s and 1990s, when proponents of market solutions to healthcare gained pre-eminence. As a result, the 1980s were a time of retrenchment for the federal government, with calls for less government and lower taxes. Concomitant with this change in philosophy was the belief that the private sector was best

equipped to influence and control market forces. Government policy was directed at controlling costs in the healthcare sector by promoting competition within the private sector. For example, the Tax Equity and Fiscal Responsibility Act of 1982 encouraged health maintenance organizations to compete in Medicare and led to an explosion of entrepreneurialism in pursuit of managed care opportunities. Health workforce issues, specifically physician supply, were revisited as private health maintenance organizations emerged with promises of increased efficiencies and new and better practice models for health professionals.

In 1980 the Graduate Medical Education National Advisory Commission (GMENAC) analyzed the population's expected healthcare needs and the medical services that could be expected to improve population health, concluding that the overall projected physician supply would soon exceed estimated need.⁵ However, instead of tackling the overall physician supply, the federal government more narrowly defined its role as one of compensating for the distributional failures of the marketplace. Congress also phased out health professions capitation programs that were attempts to resolve shortages.

Important regulatory mechanisms were introduced in the health system with cost containment goals in mind. While considered or labeled as planning by some experts, this narrow, strictly financial approach and assessment of the health sector, would have detrimental or unintended consequences for the health workforce. The prospective payment system for hospitals in 1983 and physician payment reform in 1989 only heightened the debate over regulation versus competition, adding little to providing a rational—and surely not a national—context to approach health system or health workforce issues.

Policymakers debated competitive advantage within the health sector while setting forth grand objectives of access to care and quality of care. Changes in the Medicaid system to expand coverage to the uninsured, viewed



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as innovations at the state level, were highlights of the decade. However well intentioned, these access initiatives were still compromised by their limited perspective of the healthcare sector that often excluded workforce issues.

1990S TO PRESENT

The backlash against managed care, distrust of a total laissez-faire approach to healthcare issues, and the 1994 proposed Clinton health care plan helped to open the door to debate on system change. Some awareness of demographic change and the emerging health care threats renewed concern for the health workforce in some circles, but what little dialogue there was on the workforce remained centered on traditional profession specific issues, which continues up to the present day. With vocal advocates for reform of the health care system, it will be critical that policymakers work diligently to make sure the health workforce issues become part of the discussion.

REIMBURSEMENT SYSTEM NOT HARMONIZED WITH WORKFORCE NEEDS

Health planning and regulatory activities remained separate from the organizations that financed health services. At the national level, the Centers for Medicare & Medicaid Services (CMS), formerly known as the Healthcare Financing Administration, coordinates public financing of health services. Literature on health planning consistently points out that in order to link health planning and financing, the social goals of reimbursement must correspond to the planning goals.⁶

Many believe that the reimbursement system should encourage physicians and hospitals to base the provision of services more on medical needs than on financial incentives at the margin. However, healthcare financing in the U.S. has not followed a model that would create a reimbursement system with the patient's or society's interest as the central reimbursement criteria; rather the criteria has largely been based on the service performed regardless of actual need.

Since its inception in 1965, Medicare has shared the costs of clinical training for physicians under the assumption that graduate medical education (GME) and related activities carried out by teaching hospitals contribute to the quality of care provided to Medicare beneficiaries. The federal government has not directly funded medical schools except for specific purposes, as occurred with the national push for workforce expansion in the 1960s and



THE CASE FOR PUBLIC FINANCING OF MEDICAL EDUCATION STILL RESTS LARGELY ON THE ARGUMENT THAT HEALTHCARE SERVICES ARE A PUBLIC GOOD

1970s. Direct graduate medical education (DME) payments through Medicare, which represented approximately \$2.4 billion in fiscal year 2007, supports resident and teacher salaries, overhead costs, and other expenditures directly associated with clinical education.⁷

A different and larger component of this funding, the “indirect” medical education adjustment, was paid to teaching hospitals for the added costs of education and training. As a consequence, medical education, based in institutions that deliver patient care, was inextricably linked to reimbursement from public and private payers for the delivery of healthcare services. Bearing in mind that graduate medical education is the final and necessary step towards medical licensure, it is clear that the kinds of care settings that are authorized for federal GME payments, how those payments are calculated, and how they are allocated significantly impact the makeup and distribution of the physician workforce. The actual number of GME residency slots is a deciding factor in the supply and distribution of physicians. Of note is the linking of graduate medical education and Medicare, thus pointing out a critical and often debated issue that GME is targeted at a subset of the population, and may not be well correlated with overall workforce or societal needs.

The number of GME residency slots paid for through Medicare is currently capped and thus represents a major obstacle to expansion of the physician workforce with implications for the entire delivery system. In recent years, the Council on Graduate Medical Education (COGME) has recommended that the number of Medicare GME-funded residency positions be increased in order to boost physician supply.⁸ A recent call by the Association of American Medical Colleges for an increase in the number of medical students highlights the need to have a corresponding increase in the number of residency slots if the number of physicians is to increase.

While some experts may question the methodology for financing physician education and whether Medicare is the appropriate vehicle for federal support of GME, the case for public financing of medical education still rests largely on the argument that healthcare services are a public good, such

that maintaining a sufficient number of well-trained physicians in the nation's healthcare system benefits all in the long run and contributes positive externalities to society, such as containment of infectious diseases and a healthier, more productive workforce.⁹

FOCUS ON MODEL EDUCATIONAL PROGRAMS AND CURRICULA CREATES NICHE WORKFORCE POLICY

Federal funding to support new and model health professions programs, as opposed to educating large numbers of health professions students of all kinds, was delegated to the U.S. Health Resources and Services Administration (HRSA).

The skills, attitudes, competencies, and values of the individual health professional became the focus of much research on the health workforce during the 1980s and 1990s, resulting in analysis, critique and recommendations for reform of the educational environment, particularly with regard to curricula in the health professions schools. The Pew Health Professions Commission, for example, addressed curricula and regulation, and issued a series of reports advocating for policies responsive to the nation's health workforce needs, such as the removal of barriers to the full use of competent health professionals.

The Pew Commission brought attention to health professions education as part of the evolving healthcare system and the need for new or different skills and competencies. While recognizing the benefits of a coordinated response to change, the Pew Commission focused primarily—and perhaps unrealistically—on health professions schools, with goals and objectives that could only be met if all other forces acting upon the healthcare system were also controlled or monitored.



**MAINTAINING A
SUFFICIENT NUMBER
OF WELL-TRAINED
PHYSICIANS IN THE
NATION'S HEALTHCARE
SYSTEM BENEFITS ALL
IN THE LONG RUN.**

CHAPTER TWO

INTEGRATIVE ROLE LACKING IN PUBLIC POLICYMAKING AND INFRASTRUCTURE

KEY FINDINGS

1. At the federal level, responsibility for health workforce policy is fragmented among multiple agencies with inconsistent or conflicting missions.
2. A large portion of health workforce policymaking occurs at the state level, where it is often fragmented within jurisdictions and poorly coordinated across jurisdictions.
3. Foundations often are unable to effectively bridge the gaps in fragmented, uncoordinated health workforce policy, in part because they are often closely tied to the specific communities and constituencies they serve.
4. Data and research capabilities have been weakened by fragmentation and lack of coordination among policymakers.
5. Fragmented and uncoordinated data/research capabilities are further undermined by the lack of consistent workforce taxonomies.

MULTIPLE AGENCIES AND CONFLICTING AGENDAS EMERGE

Given the history and the distributed nature of policymaking, state to state variability on health workforce issues is an expected outcome. While integration or coordination at the federal level can often compensate for this variability, this role was never clearly envisioned for the federal government. Responsibilities for health workforce issues at the federal level were distributed among several agencies. For example, the Department of Health and Human Services (HHS) has overall responsibility for the health professions. Financing of health care services, which is linked to reimbursement for graduate medical training, is the responsibility of the Centers for Medicare and Medicaid Services under HHS. However, financing and reimbursement of service delivery and educational activities has little if any connection to programmatic efforts.

The Bureau of Health Professions in HRSA has not been perceived as a strong focal point for federal policy making on the health workforce, and is being increasingly marginalized in terms of funding and influence. The Bureau currently manages programs related to encouraging training in particular professions or subject areas, promoting diversity, and supporting new and model programs, as well as loan repayment programs. Research and data gathering responsibilities, a designated HRSA responsibility, have received varying degrees of attention and have not been sustained over time.

Under the Workforce Investment Act of 1998, the Department of Labor (DOL) works with the states to establish job training programs and expand a broad array of entry-level, often non-degree, positions for the health workforce. Yet HHS and DOL do not coordinate their efforts — let alone coordinate with other federal agencies involved in some aspect of health workforce policy. The Department of Veterans Affairs is a major player in the workforce arena in terms of education and training programs and research opportunities for a range of health professionals. Finally, the Department of Defense (DOD) offers medical training to ensure supply of physicians in time of war



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or other national emergency. DOD facilities also sponsor or are the primary clinical training sites for some medical residency programs.

At present, there is no overall coordination or harmonization of the efforts of these and other agencies. The result is a less than coherent national policy structure for the health professions workforce.

STATE WORKFORCE INITIATIVES DECENTRALIZED, CREATING REGULATORY BUREAUCRACIES

In the absence of coordinated national leadership, the states have been left with primary control and responsibility for and influence over their own health workforce. For example, states support state universities and colleges that educate health professionals, run training programs under state labor or employment departments, license and regulate many health professions and the facilities in which most health professionals work, establish Medicaid policies and regulate health insurance. As at the federal level, there is division of responsibility for the health workforce within the state governmental structure. A recent AAHC study found that it is often difficult to determine what, if any, agency within a given state has responsibility for the health workforce or what functions are delegated to the various agencies and offices.¹¹

State initiatives may emerge from one or many departments, including the departments of health, labor and/or higher education; states generally lack a central coordinating mechanism to monitor and plan for the workforce. In part due to growing recognition of the economic importance of the health workforce, an increasing number of states are focusing on this labor force, with mixed implications. On the positive side, health workforce needs and challenges are highly contingent upon local factors (e.g., rural/urban population distribution, burden of disease, population age, demographic mix), so state-level research and planning can be tailored to the needs and characteristics of the population. Initiatives might, for example, encourage professionals to serve in rural areas or propose that the state higher education system produces more specific types of health professionals.

Yet, there is virtually no coordination or networking between or among the states on health workforce issues. Leaving each state to address health workforce matters is problematic in many ways. While state officials consistently report that success of workforce initiatives depends upon direct support from the governor's office, activity and involvement by governors in health workforce issues vary greatly.¹² The priority of the workforce on a gov-



RECENT BUDGETARY CONSTRAINTS HAVE HAMPERED MANY STATE EFFORTS

ernor's agenda is often difficult to discern. Increasingly, some governors are developing sector-specific initiatives that entail strategic planning for targeted industries; the healthcare industry is found to be in the mix but from limited perspective, usually focused on nursing or allied health. The nexus of policy-making is often within agencies or offices far removed from the governor's direct oversight or influence. Many states lack an infrastructure that would permit top state officials to access data and analysis on the broad array of educational, research, and patient care issues that impact the workforce and need to be considered in policymaking.

Additionally, states may have limited resources for developing and sustaining effective health workforce research and planning; indeed, state workforce efforts tend to focus on visible crises rather than broad, long-term planning or analysis. Although the health workforce should be a top priority for state governments, state workforce initiatives do not typically take a broad view of the health professions or analyze the impact and consequences of profession-specific actions on the full complement of professions and services. State initiatives also tend to be more profession-specific and have focused to date chiefly on nursing. By 2002, 44 states had established task forces to address health workforce concerns, yet the majority of these focused on nursing shortages, already manifest as crises.¹³

FOUNDATIONS OFTEN FOLLOW AGENDAS OF COMMUNITY OUTREACH

National foundations are prominent among the non-governmental actors who have stepped in to support health professions education and address healthcare issues. Several have played an important role in supporting and shaping policy, particularly for medicine and nursing. However, foundation agendas, which are often driven by community outreach missions, have promoted programs that cannot help but sustain an incremental, fragmented approach to policymaking in the long run. In many instances in the past few

decades, foundation funding of novel approaches and demonstration projects, while providing examples of potential progress and improvement for the short term, failed to enter the mainstream of practice when funding ended.

DATA AND RESEARCH CAPABILITIES WEAKENED BY LACK OF COORDINATION

The distributed system of policymaking has also had a significant impact on the nation's ability to collect and analyze data on the nation's health workforce. At the federal level, the National Center for Health Workforce Analysis (NCHWA) until recently provided only a skeletal infrastructure for data analysis, including support for six regional centers housed at academic institutions across the country. Upon the cessation of funding for the NCHWA, the responsibility has shifted to a small office within the Bureau of Health Professions and the viability of most of the regional centers is in question.

Although more states are now collecting data,¹⁴ there is insufficient political will — let alone adequate financial resources — in many states to collect and analyze health workforce data. States vary tremendously in their health professions information systems; responsibility for data collection and analysis is typically divided between various state agencies and organizations. There is also tremendous variation in the types of health professions examined, the metrics used and the frequency of data collection or assessment among the states.

Recent budgetary constraints have hampered many state efforts, and there is also the matter of fragmentation in that different state agencies might collect data on or assess different health professionals or populations served. States often have difficulty weighing the impact of health professionals movement into or out of the state, resulting in little collaboration or coordination among states on data collection and analysis. Further, fragmentation of research makes assessment across professions, an increasingly critical need, even less likely to occur.

Beyond the states, academic researchers have long examined single professions or discrete elements of the workforce conundrum. Some profession-specific groups, individual researchers, and states crunch numbers, as they seek to determine the number of health professionals in active practice for current or future state and regional needs. Institutions or organizations have also focused on the inpatient practice environment and recommended ways to enhance recruitment and retention where shortages are the most pro-

nounced. Some health professions educational associations are looking at specific elements of educational capacity building, such as faculty issues, student recruitment, facilities, and (to some extent) educational technology to enhance capacity. For the most part, these efforts have been narrowly focused on a given health profession and/or geographic region without taking into account the impact of changes in one profession on another.

LACK OF WORKFORCE TAXONOMIES PROBLEMATIC FOR RESEARCH

Review of the literature on workforce research quickly reveals deficiencies in a variety of areas. There is often a multitude of information sources which produce differing definitions, measurements, and methodologies related to the workforce. This lack of uniform or coherent taxonomy highlights the absence of a common unifying methodology for addressing workforce issues. Simply identifying and tracking the U.S. health workforce, while arguably essential for coherent policy making, is a daunting task.

At the outset, there is the fundamental matter of defining that workforce: Calculating the aggregate number of people depends on whether one includes only clinicians or adds those who are not clinicians but are involved in healthcare delivery (e.g., hospital administrators), as well as whether one distinguishes between those with baccalaureate or higher degrees and the so-called ‘frontline’ health workers (e.g., nurses’ aides in nursing homes), who may have very limited training.

There is also debate over the understanding of a given profession’s range of skills and competencies. This is an important and highly fluid area for analysis, as, for example, nurse practitioners and physician assistants fill in gaps left to certain kinds of physician shortages. There are few established methods for cross-analyses of workforce data sets among different health professions.

Researchers do not agree on how best to measure or project the health workforce; there are numerous methodologies for doing so. One might focus on the need (e.g., “a normative judgment about the ideal number of health personnel that should be able to ‘deliver safe, effective or high quality care’ in a particular area or population, regardless of ability to pay”), the supply (e.g., “the number of health personnel either working or available to work in healthcare”), the demand (e.g., “an economic concept based on the willingness of employers to purchase the services of healthcare personnel at a particular compensation level”) or requirements (e.g., “the estimates of health

personnel needed to achieve desired levels of healthcare for specific population groups or geographic regions”).¹⁵ A recent and somewhat controversial mechanism, trend analysis, uses a macroeconomic conceptual framework to examine supply and utilization to predict the physician workforce of 2020 and another approach, benchmarking, uses current physician-to-population ratios.



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TO THE WORKFORCE.

CHAPTER THREE

HEALTH WORKFORCE DISRUPTED BY LACK OF HARMONIZATION AMONG PUBLIC AND PRIVATE STANDARDS AND REQUIREMENTS

KEY FINDINGS

1. Myriad public and private entities have overlapping roles in health workforce policymaking.
2. Inconsistencies in scope of practice laws engender numerous challenges.
3. Lack of national uniformity in scope of practice limits health professionals' mobility and practice.
4. Scope of practice often does not reflect educational achievement.
5. State legislators make complex decisions about scope of practice, often without sufficient expertise or adequate assistance from independent review committees.
6. State policymakers have difficulty rising above professional turf issues.
7. Although many health professions have established nationally standardized examinations, states often require additional tests or demonstrations of competency that undermine consistency and create barriers.
8. Voluntary, self-regulatory processes like accreditation are also often subject to inconsistencies that have adverse effects on the health workforce.

MYRIAD PUBLIC AND PRIVATE ENTITIES HAVE ROLES IN HEALTH WORKFORCE POLICYMAKING

As noted, the multiplicity of regulatory and standard setting bodies has created an intricate web of control over all aspects of the health workforce, with no entity available to harmonize interests or agendas of the various organizations and agencies. In addition to the federal and state governments (including departments of health, education and labor at both levels and state licensing and insurance boards), multiple entities are involved in the regulation of health professionals. Such entities include professional practice and education associations, state and regional accrediting bodies, and third-party payers. Many of these players are responsible for only a discrete aspect of the workforce environment or for only one profession.

SCOPE OF PRACTICE LAWS ENGENDER NUMEROUS CHALLENGES

Scope of practice laws have long been the subject of extensive and sometimes heated discussion between and among health professions, particularly given the closely related issue of reimbursement for services. There is a lack of uniformity in scope of practice around the country where issues such as identifying the practice boundaries between professions tax state legislators, especially with pressure to expand scopes of practice in some professions. Further, professional boundaries may serve to limit the interaction amongst health professions at a time when team care is suggested as an important way to meet public needs.

Over the decades, there has been widespread change in the scope of practice of many health professionals. For example, the nurse practitioner (NP) emerged in the mid-1960s as a cost-effective means to address the nation's primary care needs during an era of projected physician shortages. One decade later, Oregon became the first state to pass legislation permitting NPs to practice autonomously. And gradually, over the next three decades, each of the 50 states granted NPs prescriptive authority. Six NP specialties have also emerged.

In 1988, twenty percent of state statutes contained no definition of pharmacy practice, while most of the 41 with a definition included dispensing, compounding, interpretation/evaluation of prescriptions, and consultation; just a decade later, 47 practice acts cited compounding and dispensing, 45 included drug product selection, 41 cited consultation, 39 included interpret-



THERE IS A LACK OF UNIFORMITY IN SCOPE OF PRACTICE AROUND THE COUNTRY

ing/evaluating prescriptions and 35 included drug utilization review.¹⁸

Expansions in scope of practice are often driven by gaps or changes in healthcare delivery. For example, because early nurse practitioners (NPs) were envisioned as a means to access care in rural America, NP practice privileges for many years were different for urban and rural areas. However, the challenges of providing primary care services in urban areas led to expansion of NP practice privileges in that setting as well. More recently, pharmacists moved from behind the counter at the corner drug store to run clinics that manage drug therapy and monitor patients with chronic disease. In dentistry today, three main models are emerging to address underserved oral health needs, with the advanced dental hygiene practitioner and the dental health aide therapist as emerging professions and the community dental health coordinator representing a proposed model now under evaluation.¹⁹

Many professions have advocated for expanded practice laws, often in response to the changing nature of education or practice. Among more recent expansion proposals, physical therapists have been advocating for state laws to permit patients direct access to physical therapy services without a physician referral; and podiatrists, who are now able to perform medical and surgical procedures in all 50 states, have pushed to expand their scope of practice to include surgery and amputations above the foot. Some believe that the recent phenomenon of elevation of credentialing in many fields is being driven at least in part by a push for expanded scope of practice.

With scientific advances and the current rapidly changing practice environment, new health professions continue to emerge, particularly in the broad field of allied health, with the associated difficulties of defining roles and scopes of practice. Just as the introduction of NPs and physician assistants in the 1960s marked an attempt to expand primary care services, some newer roles, such as pharmacy technicians and dental hygienists, are viewed as ‘extenders’ of other health professionals. Others such as the newer version

of a combat medic, known as a “healthcare specialist,” represent the U.S. Army’s adaptation to circumstance by merging the roles of emergency medical technicians (EMTs) and licensed practical nurses.

LACK OF NATIONAL UNIFORMITY IN SCOPE OF PRACTICE LIMITS MOBILITY AND PRACTICE

Each individual state sets its own scope of practice laws based on the historic need to protect the public. Of note, however, no study has shown that a state with restrictive scope of practice laws has better health outcomes than a state with expansive practice acts.

For some time, the debate over uniformity of scopes of practice has seen thoughtful observers call for removal of these historic U.S. barriers. For example, a 1998 Pew Commission report recommended that states “enact and implement scopes of practice that are nationally uniform for each profession,” going on to recommend that “[u]ntil national models for scopes of practice can be developed and adopted, states should explore and develop mechanisms for existing professions to evolve their existing scopes of practice and for new professions (or previously unregulated professions) to emerge.”²⁰ As steps in this direction, the American Academy of Physician Assistants, the National Association of State Boards of Pharmacy and the Nurse Anesthetists Association have all developed and supported use of model scopes of practice for their respective professions.

Some have called for state policy makers to elevate all practice acts to the same level, which would produce the same result as national scopes of practice. In the current global economy, it is noteworthy that most industrialized nations have national scopes of practice.

SCOPE OF PRACTICE MAY NOT REFLECT EDUCATIONAL ACHIEVEMENT

One particularly troubling aspect of variation in scopes of practice is that certain health professionals, including dental hygienists, nurse practitioners,



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and physical therapists, may have been educated to a level beyond the scope of practice of the state in which they ultimately decide to settle. They are, in effect, “overtrained” for what their state of residence permits them to do. Some experts contend that this is tantamount to “wasting” education and that the nation could deploy health professions faculty better and in a more cost effective way by focusing on a smaller core of knowledge and skills covered by all practice acts.²¹

It has been suggested that closer alignment of practice acts and competence could have a dramatic positive impact on the workforce in at least three important ways.²² First, the nation could help meet demand where shortages exist, whether due to smaller cohorts entering certain professions, geographic maldistribution or rising demand from baby boomers and others. Second, expanded practice authority for certain professions could expand potential faculty for those professions, enabling expansion of training capacity. Third, this alignment could have the effect of fostering interprofessional team care which may help improve access and quality.

STATE LEGISLATORS CAUGHT IN COMPLEX DECISION MAKING WEB

Most state legislators are not health professionals and do not have health professionals on their policy staffs, yet in 50 state houses they are called upon to determine complex aspects of scopes of practice in a piecemeal fashion, and often on the basis of incomplete or one-sided evidence and testimony through which it is difficult to sift. Legislators all too often address this area in response to requests and counterarguments from given health professions or in reaction to a highly publicized incident related to access to healthcare services.

Some states, including Minnesota and Virginia, have independent review committees that examine proposed establishment of or changes in scopes of practice and make impartial recommendations to the legislature. Significantly, a 2006 report²³ from leading associations whose members are regulatory boards for six health professions (i.e., allopathic medicine, nursing, occupational therapy, pharmacy, physical therapy, and social work) offers guidance to state legislatures in the area of scopes of practice, offering five key assumptions and proposing critical factors for decision making; this collaboration represents a milestone in these six professions working together on these issues.

LEGISLATURES HAVE DIFFICULTY RISING ABOVE PROFESSIONAL TURF ISSUES

Although scopes of practice have expanded for some professions over the years, the cross-professions struggle for autonomy, prestige and compensation (particularly direct reimbursement) remains. Many professionals and policymakers believe that the appropriate response to workforce shortages is to expand the scope of practice for various health professionals. Such a change would also contribute to leveraging workforce capacity and increase access to care. The professional practice for nurse practitioners, physician assistants, and certified nurse midwives expanded dramatically between 1992 and 2000, markedly increasing access for underserved populations and others. Yet, even the states with the most favorable practice environment had not achieved all practice options viewed as optimal by these professions.²⁴

Some health professionals may perceive expansion of another profession's scope of practice as a loss to their own profession. The effort to expand the scope of practice of one profession is typically met with a predictably negative reaction from the profession(s) already licensed to perform the task(s) or procedure(s) in question. Perceiving encroachment on their 'turf' or some loss of control, the already licensed profession will typically mount an education and advocacy campaign to demonstrate to the state legislature and the public that the profession seeking expansion lacks sufficient education or clinical training or experience.

Because practice regulations vary from state to state, state legislatures across the nation have long been pulled into some entrenched battles (e.g., anesthesiologist/nurse anesthetist, ophthalmologist/optometrist, psychologist/psychiatrist) and otherwise besieged regarding the hundreds — if not thousands — of bills they consider annually.

VARIABILITY IN LICENSURE ALSO CREATES BARRIERS

Comparable professional licensure, which occurs at the state level, establishes requirements for entry to practice and is intended to ensure that practitioners have the right qualifications and competencies to carry out their professional duties. For more than a century, states have regulated the practice of certain professions with the aim of public protection.

To become licensed in most health professions, an individual must graduate from an accredited educational institution and pass a state examination demonstrating that he or she possesses the knowledge to practice the profes-



SOME HEALTH PROFESSIONALS MAY PERCEIVE EXPANSION OF ANOTHER PROFESSION'S SCOPE OF PRACTICE AS A LOSS TO THEIR OWN PROFESSION.

sion safely and competently. State licensing boards often defer to the various professional associations in establishing minimum educational requirements and examinations for entry into a profession as well as in defining its scope of practice.

Although many health professions have established nationally standardized examinations, states may require additional tests or demonstrations of competency. For example, applicants for dentistry licensure must pass both the National Board Dental Examination (NBDE) and a regional or state examination; some states also require completion of a residency. Candidates for optometry licensure in most states must pass a three-part series of examinations administered by the National Board of Examiners in Optometry (NBEO) and many states also require applicants to pass a test on state laws. However, several states replace the third part of the NBEO exam — a test of applicants' practical clinical skills — with their own clinical examination, and a number of states require applicants to pass state-specific clinical exams in addition to the national clinical exam.²⁵

Any given health profession may have many different standards for licensure and maintaining one's credentials, which impacts health professionals and the public. There is substantial anecdotal evidence that academic health centers and other institutions have faced barriers in hiring experienced faculty and clinicians from states other than where the institution is located who, despite their expertise and years of practice, often could not easily obtain a license in a new jurisdiction. The concerns raised by the need for additional licensure are further fueled by the emergence of large, multi-state provider groups and the evolution of health technologies (such as telemedicine) that allow the delivery of care across geographic boundaries. Patients may be unable to obtain the services of skilled providers across state lines and may have fewer choices of safe and appropriate providers.

ACCREDITATION: PEER EVALUATION OFTEN NARROWLY FOCUSED

Accreditation is a voluntary, self-regulatory process of periodic review that post-secondary institutions established to demonstrate and ensure the quality of educational programs and thus the qualifications of their graduates. Accreditation of health professions educational institutions, a three-phase process of self-study, peer review, and a decision from the accrediting body, is handled by entities overseen by the Council for Higher Education Accreditation (CHEA), a private national organization created in 1996 to monitor accreditation activity in the U.S.

In addition to state bodies and six regional accrediting consortia, there are many professional and specialized accrediting bodies, including some with overlapping objectives. While the U.S. Department of Education bears no direct responsibility for accreditation of health professions education institutions, it does recognize accrediting agencies that the Secretary determines to be reliable authorities as to the quality of education provided by institutions.

The number and diversity of accrediting organizations have grown as higher education has evolved, making for even greater complexity. For example, the Commission on Accreditation of Allied Health Education Programs now reviews and accredits more than 2,000 educational programs in 19 allied health fields. In a 2005 CHEA survey, 13 of 18 accrediting organizations reported that their field had seen degree expansion or some increase in requirements or both; respondents reported that these changes largely resulted from changes within the profession.²⁶ Because the elements of health professions education are generally geared toward preparation for licensure and practice, the accreditation process can both affect and be affected significantly by licensure requirements.

The nexus between education, accreditation, and licensure has not been thoroughly reviewed and is not well understood. While multiple bodies play a significant role in ensuring the quality of academic institutions' preparation of students for entry into practice, accreditors often do not recognize the consequences such accreditation can have on the quantity of health professions graduates produced each year. Detractors criticize several areas of the current system of accreditation that impact the process of producing the future health workforce. First and foremost, some contend that accreditation constrains the autonomy of educational institutions without, in fact, always improving quality standards.



THE NEXUS BETWEEN EDUCATION, ACCREDITATION, AND LICENSURE HAS NOT BEEN THOROUGHLY REVIEWED AND IS NOT WELL UNDERSTOOD.

Some accreditation bodies have been criticized for focusing too much on educational structure and process and too little on outcomes, such as students' intellectual progress or attainment of the appropriate skills and competencies.²⁷ Additionally, accreditation is often viewed by academic institutions as complex, inefficient, and burdensome in terms of time and human and financial resources. To examine this claim, one study of 115 complex universities found an average of 3.8 visits per year over a four-year period and argued that academic leadership needs to manage the perception of the accreditation process on campus and to become more engaged in accreditation nationally.²⁸

However, there is extensive anecdotal evidence that many multifaceted institutions — such as academic health centers — perceive themselves as 'overrun' with multiple accreditation site visits at any given point in time. Accrediting and licensing entities have also come under scrutiny in the past for being slow to recognize new educational demands and trends and thus contributing to slowing or hampering change.

To address difficulties in the current system of accreditation, there have been some calls for the development of a national accreditation framework with a stronger emphasis on performance outcomes.²⁹ Some health professions educators urge a streamlining of this process, e.g., through coordinated visits and common criteria across disciplines, which could produce efficiencies and eliminate burdens.³⁰ The challenges associated with accreditation and the potential for adverse consequences may grow as the number of programs and health professions increases and the elevation of training ensues.

CHAPTER FOUR

THE HEALTH WORKFORCE ENVIRONMENT

KEY FINDINGS

1. Dissatisfaction with jobs and environment exacerbate labor market issues.
2. The physical environment and occupational hazards strongly influence job satisfaction.
3. Recruitment and retention strategies have had limited success.
4. Market incentives do not address real workforce needs and lead to increased specialization.
5. Increased debt is discouraging entry into health professions.
6. Financial burdens are driving increased specialization and lopsided distribution of the health workforce.
7. Insurance and litigation concerns are compounding the problems.

DISSATISFACTION WITH JOBS AND ENVIRONMENT EXACERBATE LABOR MARKET ISSUES

The work environment is sometimes overlooked; yet it is of great importance for both recruitment of new health professionals and other health workers and retention of workers who might otherwise retire or leave the health workforce. Among the key challenges are job dissatisfaction among health professionals, the fact that the workplace environment is not conducive to the expectations of new workers in fundamental ways, and occupational hazards that are not always adequately addressed.

Job satisfaction in the health professions is among the lowest of many industries. A 2001 study suggested that hospital nurses were three to four times more likely than the average U.S. worker to be unhappy with their positions, and that almost a quarter of U.S. nurses were planning to leave their jobs in the next year.³¹ Alarming, almost one-in-three nurses under the age of 30 reported that they were planning to leave their jobs within the year.³²

In 2004, a third or more of all pharmacists rated five items as highly stressful (with inadequate staffing of both pharmacists and technicians at the top of the list) and 23 percent of pharmacists reported that they were likely to leave their jobs within the year, citing work schedule, salary, and benefits as the top three reasons.³³ Growing levels of stress and job dissatisfaction have also been observed among physicians,³⁴ and allied health professionals.³⁵

Six major workplace negatives have been suggested as contributing to hospital shortages of health professionals by limiting the institutions' ability to recruit and retain:

1. The system is too hierarchical, with too much rigidity or room for growth;
2. The work is too traditional, which can be particularly jarring for new graduates from younger generations;
3. The work is too physically demanding, which is of particular concern to older workers;
4. Operation 24/7 offers undesirable schedules for some workers and may contribute to perceived lesser status for those who work other than Monday-to-Friday day shifts;
5. Financial compensation may be low and/or plateau; and
6. The pace of work can be demanding and stressful.³⁶

These challenges and concerns are magnified in the long-term care arena, which faces especially acute shortages and workplace stressors. The influx of new long-term care professionals, especially nurses, is constricted by faculty shortages and competition with other economic sectors. In addition, workforce capacity is hampered by high rates of turnover and vacancies, which are often connected to the work environment. Low salaries and benefits are particularly problematic: Almost 30 percent of long-term care paraprofessionals live at or below the poverty line, and they are less likely than the average U.S. worker to have health insurance.³⁷

Numerous studies of different health professions have shown that job dissatisfaction can result in burnout and increased turnover,³⁸ a dynamic that is especially problematic in a time of shortages. Poor perceptions of the work environment can discourage potential health workers from seeking a health career. At the same time, difficult working conditions can accelerate the drop-out or retirement of current health professionals.

In the arena of occupational hazards, health workers face an insidious set of challenges that present the threat of significant injury or disability and even death. These include the biologic/infectious (e.g., bacteria, viruses, and fungi transmitted through contact with infected patients or contaminated bodily secretions or fluids), chemical (e.g., medications, solutions and gases); enviro-mechanical (factors that cause or facilitate accidents, injuries, strain or discomfort), physical (e.g., radiation, electricity, extreme temperatures, and noise), and psychosocial (e.g., stress, burnout, violence) hazards.³⁹

Workplace hazards are among the reasons health professionals cite for missing work (injuries and illness), for changing the type of work they do, and for leaving the health sector. In one survey, nurses cited acute and chronic effects of stress/overwork, a disabling back injury, and contracting HIV or hepatitis from a needle stick as their top three concerns. More than 80 percent indicated that they do not feel safe in their work environment.⁴⁰



**POOR PERCEPTIONS
OF THE WORK
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Data⁴¹ reported by the U.S. Bureau of Labor Statistics are disturbing. In 2004, three of 14 industries having more than 100,000 nonfatal injuries and illnesses were in the health sector, with hospitals in the lead. In 2005, nursing and residential care facilities had the highest rates of musculoskeletal disorders reported within the sector, with a rate of 131.4 per 10,000 workers. The health sector leads all industrial sectors in the incidence of nonfatal workplace assaults; a patient is the source of injury in 45 percent of these cases.

RECRUITMENT, RETENTION STRATEGIES HAVE LIMITED SUCCESS

In response to some of these workplace challenges, the American Hospital Association and others have advocated strategies for hospitals and other delivery entities to facilitate recruitment and retention of a suitable workforce, particularly in nursing. These strategies include fostering meaningful work, improving the workplace culture, broadening diversity of the health workforce (which is primarily female and white), and collaborating with local communities to grow the pipeline and expand workforce capacity.⁴² Hospitals' short-term and long-term strategies are meeting with some success in ameliorating shortages. However, sizable — and perhaps unsustainable — financial costs have been associated with some approaches and many questions remain about the impact on patient care and the long-term ability to meet nursing needs.⁴³

MARKET INCENTIVES DO NOT ADDRESS REAL NEEDS OF THE POPULATION, LEAD TO INCREASED SPECIALIZATION OF WORKFORCE

Market forces, including public demand, affect health career choices, the nature of a clinician's work, and the location in which that work will occur, all of which combine to drive trends that leave gaps in care.

Market forces have contributed, along with scientific advances, to the current specialty orientation of medicine with the result that fewer new physicians are entering primary care. The proportion of U.S. allopathic medical school graduates planning careers in primary care decreased from 53.4 percent in 1997 to 35.1 percent in 2004.⁴⁴

Many factors, including technological changes and developments, drive specialty and sub-specialty growth, but economic incentives have a major bearing on the trend, as specialty physicians tend to earn two to three times



MARKET FORCES HAVE CONTRIBUTED, ALONG WITH SCIENTIFIC ADVANCES, TO THE CURRENT SPECIALTY ORIENTATION OF MEDICINE WITH THE RESULT THAT FEWER NEW PHYSICIANS ARE ENTERING PRIMARY CARE.

more money on average than do generalist physicians.⁴⁵ In particular, fields such as radiology, cardiology, and anesthesiology are compensated at very generous levels compared to family or general internal medicine. Moreover, this income gap is widening: Median income of primary care physicians increased by 9.9 percent from 2000 to 2004, compared with a 15.8 percent increase in specialists' income.⁴⁶

Many observers have argued that primary care physicians are significantly underrepresented and that overspecialization has important consequences for the healthcare system, including escalating costs and the provision of unnecessary or inappropriate care. Studies have consistently shown that access to and use of primary care services are associated with better health outcomes. Others have argued that specialization is a vital aspect of medicine, that its growth is driven by legitimate public demand, and that the specialties and subspecialties have been important drivers of medical innovation, thus stimulating economic growth.

Despite public policies and notable efforts on the part of health professions schools throughout the nation to promote primary care and access to underserved areas, reimbursement policies and market forces, combined with high levels of student debt, have promoted the specialty career pathway for physicians.

INCREASED DEBT DISCOURAGING ENTRY INTO HEALTH PROFESSIONS

Student debt is another factor deterring entry into the health professions. Even when students have appropriate academic credentials and are interested in health careers, their path to the health workforce may be blocked by the high cost of health professions education. Students must determine how to

cover expenses for tuition, books and other educational supplies, living expenses and the cost of any additional prerequisite training, not to mention fees for applications, standardized tests and other costs incurred in the admissions process. In addition, particularly for professions demanding many years in school and residency training, potential students must weigh the cost of foregone income.

In one survey of students who were academically qualified but did not apply to medical school, all respondents listed cost as a major reason, and African American, Hispanic, and Native American students cited cost as the top deterrent.⁴⁷ Over the last 20 years, medical school tuition has outpaced gains in physician income,⁴⁸ and average debt for indebted medical students graduating in 2007 was \$138,608 — a 289 percent increase since 1987.⁴⁹ From 1990 to 2006, dental school tuition more than doubled and average debt upon graduation from dental school rose from just under \$60,000 to \$145,465.⁵⁰ Debt at graduation is high for other fields as well, and this pattern can only increase in light of rising costs of education and the elevation of minimum credentials.

Although many health professions, particularly medicine, are generally regarded as lucrative (medical specialties still represent 13 of the 15 most lucrative professions⁵¹), in an age of malpractice threats and declining reimbursements, the financial rewards of a health profession are less certain than they once were. This is especially significant when viewed in light of the number of years of training that are required as compared to many other types of professions.⁵²

FINANCIAL BURDENS FORCING INCREASED SPECIALIZATION AND LOPSIDED DISTRIBUTION OF LABOR FORCE

Given the disparities in compensation between generalists and specialists in the health system, higher levels of student debt suggest that graduating physicians will have even more of an economic incentive to specialize. Because economic incentives strongly drive practice type and location, particularly for physicians, increasing levels of student debt are likely to magnify geographic maldistribution as well. It has been shown that the higher a physician's degree of specialty, the less likely he or she is to settle in a rural area, suggesting that the growth of specialization in medicine is a major contributor to the maldistribution of physicians.

Reimbursement for clinical care, which creates a major and much



IN AN AGE OF MALPRACTICE THREATS AND DECLINING REIMBURSEMENTS, THE FINANCIAL REWARDS OF A HEALTH PROFESSION ARE LESS CERTAIN THAN THEY ONCE WERE.

needed funding stream for many hospitals, has also been driven by subspecialty rather than primary care and thus can ultimately influence the types of training programs offered. Specialization in medicine has contributed to growing specialization in other health professions. Nurse practitioners (NPs) and physician assistants (PAs) are increasingly playing supportive roles for specialist physicians, as opposed to their traditional roles in delivering primary care.⁵³ Changes in NP and PA training have tracked this trend and degree and credentialing requirements are shifting accordingly as well. The impact of increased specialization in these fields on overall access to care is as yet unclear.

Reimbursement policy can have intended as well as unintended consequences for career choices or specialization choices for physicians, in particular. In the Balanced Budget Act of 1997, the federal cap on reimbursement for rehabilitation professionals, including occupational and physical therapists, led to depressed employment prospects in these fields, which in turn led to a drop in applications to these educational programs; a more recent change in the cap has seen the employment outlook rise and enrollments increase.⁵⁴

Unfortunately, government and private insurers are often slow to view as reimbursable the services that representatives of emerging health professions provide, which is of concern given the burgeoning of new fields. Reimbursement restrictions have been noted in the decline in home health services in the late 1990s and are one reason why telehealth services have been slow to expand.

INSURANCE AND LITIGATION WOES COMPOUNDING PROBLEMS

The recent sharp increase in medical malpractice insurance premiums serves as a very different but equally striking example of how a market force can alter

the health workforce and leave gaps in care. In the wake of large jury awards and shifting underwriting practices, insurance premiums have been rising rapidly in many regions and high-risk fields for some time, causing physicians to relocate to other states, reduce the scope of their practice (an oft-cited example is the obstetrician-gynecologist who no longer delivers babies) or, in some instances, leave practice altogether. Physicians' departures force patients to find new clinicians, perhaps at a great distance, and leave some patients without needed care. These changes also impact hospitals and other delivery settings, which may have to close or reduce services where they lack sufficient staff to provide needed care.

CHAPTER FIVE

SOCIOECONOMIC CHALLENGES LIMIT INSTITUTIONAL RESPONSES

KEY FINDINGS

1. Students' access to health professions education is hampered by limited resources and narrow vision.
2. Elevation of minimum credentials for entry into professions highlights competition to shape market without regard to infrastructure threats.
3. The quality and consistency of education are under pressure.
4. Persistent faculty shortages are a serious concern.
5. Faculty supply is being outpaced by the opening of new health professions schools.
6. Faculty job satisfaction is a growing concern.
7. Increased entrepreneurialism and privatization in education call traditional norms into question.
8. Interprofessional education and practice may be key to meeting future health workforce objectives but have not yet been mainstreamed.

ACCESS TO HEALTH PROFESSIONS EDUCATION HAMPERED BY LIMITED RESOURCES, NARROW VISION

Maintaining or expanding health workforce capacity mandates that students with the interest and ability to pursue health careers have access to the requisite education. That process starts in elementary school.

However, leaks occur along the path of educational and professional development: Students may receive inadequate preparation in math and science in elementary or secondary school, drop out of high school, neglect to apply to college, perform poorly on entry exams and standardized tests, drop out of college or health professions school, and/or fail to receive adequate social, financial, or academic support during their undergraduate and/or health professions education.

Many of the obstacles and barriers to becoming a health professional entail lack of external resources, support, and/or opportunities, but even students with every opportunity and resource may still leak out of the pipeline due to ignorance of the wide variety of health professions, negative perceptions of health careers, lack of professional role models, and/or attraction to other lucrative professions that may be less beset by heavy regulation or the threat of litigation.⁵⁵

Academic health centers, national and community organizations, foundations, government agencies, and many others have long been actively involved in an array of initiatives designed to draw students into health careers. Pipeline initiatives have targeted K-12 students in general or focused more narrowly on rural areas or underrepresented minorities. Summer enrichment programs have also exposed high school, pre-college and college students to health careers.

Many additional strategies are in place at the baccalaureate level. In nursing, for example, national public relations campaigns by foundations and other programs have been credited with raising awareness and interest in the field. Some have suggested that the events of September 11, 2001, may have been a tipping point for increasing interest in the service professions.

While the continuity of the health workforce depends largely upon the next generation, adults who are already in the workforce also represent a significant pool of potential new additions to the health sector and some programs target this pool. For example, interest in nursing among those seeking a second career is rising and later entry into nursing appears to be a trend as the number of accelerated, second degree nursing programs rose from 31 in

1990 to 168 by 2005.⁵⁶ Second-career students may be especially appealing candidates, because they bring transferable skills from other jobs, including communication and decision making skills, along with their additional life experiences and maturity to the health career.

There is some evidence of limited success from institutional programs for second career students, which are typically small. The success of accelerated degree programs in nursing for second-career students suggests that these may be a model for other health professions.

ELEVATION OF MINIMUM CREDENTIALS HIGHLIGHTS COMPETITION TO SHAPE MARKET WITHOUT REGARD TO INFRASTRUCTURE THREATS

The educational preparation required for entry to a health profession has become increasingly more complex and sophisticated over time. The minimum credential for entry to many health professions has progressed along the educational continuum that spans certificates, associate, baccalaureate, master, and doctoral degree programs.

Professional associations and societies generally hold responsibility for deciding to raise the minimum credential to enter a profession, and many professions now offer or even require advanced degrees beyond the baccalaureate level: pharmacy, podiatry, optometry, and audiology have all recently instituted the doctorate as the minimum entry-level credential.

In the early twentieth century, on-the-job training and three-month certificate programs sufficed to prepare new physical therapists, yet all entry-level physical therapy degree programs are expected to be at the doctoral level by 2020.⁵⁷ Clinical doctorates (e.g., the doctor of nursing practice, doctor of pharmacy, doctor of physical therapy), sometimes referred to as professional or practice doctorates, are designed to prepare clinicians rather than researchers and have been developed in recent years, often representing the entry point to a health profession, but sometimes permitting advanced



MANY OF THE OBSTACLES AND BARRIERS TO BECOMING A HEALTH PROFESSIONAL ENTAIL LACK OF EXTERNAL RESOURCES, SUPPORT, AND/OR OPPORTUNITIES.

practice beyond the entry level. While this is in part a response to the increasingly sophisticated healthcare environment, the rapid proliferation of doctorates at times appears to be leading to an arms race of sorts between professions and between institutions, all of which feel pressure to keep up with the competition.

Elevation of minimum credentials has created a battleground, at the center of which are tensions over rising healthcare costs, patient safety, professional turf, status and prestige, the shrinking or widening of career options for students entering the health professions, and the capacity of the health workforce. Advocates assert that clinical doctorates, for example, can represent a new rung on career ladders, enabling clinicians to increase their scope of practice as they complete more education.

Nursing provides the classic example of a profession with numerous such opportunities for advancement: Those prepared at the associate, baccalaureate and master level obtain different licenses (LPN, RN, NP or APN, respectively) with distinct and progressive scope of practice; career ladder programs enable students prepared at one level to complete a bridge to the next level of educational and professional achievement, in which the recent introduction of the doctorate of nursing practice represents the final rung.

Champions of increased entry-level degrees note that the professions must adapt to a rapidly changing practice environment by producing practitioners with sophisticated educational preparation. As therapeutic procedures and technologies become more complex and the knowledge base grows, professionals must be prepared to use all of the tools available to them.

It has been argued that additional years of education will improve patient safety by enabling providers to make better-informed decisions. Thus, new hires who come with more education are often viewed as better prepared employees.⁵⁸ In nursing, supporters also contend that increased doctorate education will help fill faculty ranks while stimulating the development of evidence-based treatments by practitioners.⁵⁹

On the other side of the debate, some critics see little market demand



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for the new focus on doctorates, or other new degree programs, which they disparage as “degree creep” or “degree inflation,” and assert that on-the-job training will suffice. They characterize the trend as a selfish move for increased prestige and higher salaries which, in turn, raises costs for employers and patients alike.

Additional salary costs are not absorbed by third-party payers, since insurance companies do not necessarily reimburse at a higher rate for professionals with higher degrees.⁶⁰ Higher salaries may price many of these professionals out of the affordable range for clinics with fewer resources. When employers, particularly in urban and rural underserved areas, cannot afford to hire as many providers at higher salary levels, existing shortages are exacerbated.⁶¹

Critics also assert that increasing the number of years required to obtain an entry-level degree may exacerbate shortages by discouraging potential workers from entering these health professions. Students could be deterred by the prospect of increased debt and the opportunity cost of lost years of work while obtaining a degree. Critics have emphasized that this discouraging effect would most acutely impact minority, socio-economically disadvantaged, or other underrepresented students—those who are especially needed to join the ranks of health professionals.

The emergence of new clinical doctorate programs has concerned many educational leaders regarding quality of programs, higher costs of doctoral education, availability of faculty to teach at a higher level, and the implications for research doctorates, which may take twice as many years of higher education to complete.⁶² Concerns about quality and consistency of education are most pervasive.

One task force recently found that uniform standards for the structure, length and content of many clinical doctorate programs are lacking; it recommended the establishment of core characteristics of acceptable professional doctoral programs and cited an urgent need for national dialogue among institutional accreditors.⁶³ Given existing faculty shortages across the health professions, many leaders are concerned about their ability to attract and retain faculty who can teach at an even higher level, as many in the pool of prospective faculty may not have received doctorates themselves.

It is also problematic that a large number of clinical doctorate programs are being established at colleges that do not offer graduate degrees, thus calling into question quality, resources, and accreditation issues. Institutions that offer few if any other doctoral programs may lack the resources and oversight

to create a high quality program and may (as in the case of community colleges) lack the authority to grant doctoral degrees.⁶⁴

INSTITUTIONS CONFRONTED WITH PERSISTENT FACULTY SHORTAGES

Health professions faculty are a vital pillar of the U.S. health workforce; faculty shortages constitute a major barrier to increasing capacity as a whole. Without sufficient faculty, educational programs will not have the capacity to train enough workers to meet even current workforce needs, let alone expand to meet the rising demand.

Faculty shortages are driven by a number of factors. These include the aging of the faculty workforce, the declining pipeline of future faculty, burdensome and costly educational requirements, and workplace dissatisfaction. Significant disparities in financial compensation between academia and private practice are frequently cited as a major obstacle in many fields.

This phenomenon is occurring across the health professions. The American Association of Colleges of Nursing (AACN) reports a national nurse faculty vacancy rate of 7.9 percent (approximately two vacancies per school), with most of the vacancies requiring a doctoral degree.⁶⁵ The American Dental Education Association (ADEA) reports that between 2004 and 2005, the number of full-time faculty vacancies in U.S. dental schools increased by 50 percent, rising from 250 to 374, the highest number in over a decade.⁶⁶ A 2006 American Association of Colleges of Pharmacy (AACP) survey found an average of more than five faculty vacancies per school of pharmacy, the vast majority of which were for full-time positions.⁶⁷ As just one example in allied health, the American Society of Radiologic Technologists (ASRT) recently reported that more than 67 percent of directors of educational programs for radiographers, radiation therapists and nuclear medicine technologists expressed difficulty recruiting faculty members.⁶⁸ In medicine, there is anecdotal evidence that certain specialties are experiencing difficulty in recruiting faculty.

The aging of faculty mirrors the aging of the health workforce overall. In nursing, the mean age of faculty has been increasing steadily, reaching 54.3 in 2004 for doctoral faculty and 49.2 for master's faculty.⁶⁹ Projections show that large numbers of nursing faculty will be retiring in the next decade.⁷⁰ Similar trends are present in dentistry, pharmacy, and such allied health professions as dietetics, respiratory therapy, dental hygiene, and radiography. Almost 55



SOME HEALTH PROFESSIONS SCHOOLS ARE UNABLE TO OFFER SALARIES COMPARABLE TO THOSE IN PRIVATE PRACTICE AND ARE THUS UNABLE TO HIRE OR RETAIN SUFFICIENT NUMBERS OF FACULTY.

percent of dental faculty are fifty years of age or older, while 24 percent are sixty years of age or older.⁷¹ Retiring faculty members are not being replaced at a rate sufficient to maintain even current capacity.

Salaries tend to be significantly lower for health professionals in academia than for those in private practice. According to AACCP, the average salary of a pharmacy faculty member in 2006-07 was \$62,276 with a baccalaureate and \$84,083 with a doctorate,⁷² in contrast to an average base salary of \$94,927 in practice.⁷³ ADEA reports that the median annual salary of full-time dental professors in 2004-2005 was \$110,073, while the Bureau of Labor Statistics shows \$143,310 as the mean annual income of a general dentist in 2006.⁷⁴

Lacking financial resources in the wake of significant recent cuts in federal and state funding for higher education, some health professions schools are unable to offer salaries comparable to those in private practice and are thus unable to hire or retain sufficient numbers of faculty to meet the demand for applicants. This is especially true in nursing. Even if state appropriations are not the primary source of funding for faculty salaries, the loss of government dollars continues to put constraints on university which directly or indirectly affect funding available for faculty compensation. Compensation issues have exacerbated faculty shortages.

FACULTY SUPPLY OUTPACED BY OPENING OF NEW HEALTH PROFESSIONS SCHOOLS

The demand for an already short supply of faculty is heightened by the growth of health professions schools. Osteopathic medical education has grown from five institutions in 1968 to 23 (plus three branch campuses) in 2007, with other new schools and new branch campuses anticipated; overall enrollment is expected to grow by more than eightfold during that time and is expected to grow by more than 25 percent by 2011-2012.⁷⁵ The AACCP reports that as many as ten universities and colleges are expected to open phar-

macy schools by 2010⁷⁶ and the Association of American Medical Colleges has called for a 30 percent increase in medical school enrollment in existing schools by 2012.⁷⁷

FACULTY JOB SATISFACTION A GROWING CONCERN

Low job satisfaction rates have also been observed among health professions educators. Stress, unrealistic job expectations, and difficulties managing academic life and personal life contribute to this problem. There is evidence that many junior faculty members have difficulty securing the research grants that are necessary for promotion and tenure.

Responses to faculty shortages have included a variety of creative strategies and innovative approaches by government, universities, health professions associations, foundations, and others:

1. Financial assistance programs are commonly employed, either to help defray costs of education or to increase salaries for faculty members to bring compensation more in line with the private sector. The federal government supports a number of initiatives to train and support some health professions faculty and a number of states have enacted loan forgiveness programs, competitive grants, funding for faculty positions, or other forms of financial assistance, primarily in nursing.
2. Many schools have initiated efforts to engage with students early in the educational process to build interest in academic careers (e.g., mentoring programs, faculty coaching of promising students, distributing recruitment materials, and targeting groups who are underrepresented in certain health professions).
3. Efforts have been made to facilitate and streamline the training process for those pursuing teaching careers, particularly in nursing and pharmacy. Many schools offer distance learning, online courses, and other strategies to make academic training more accessible, particularly for those in rural areas. Because it is traditional in nursing to acquire extensive clinical experience before moving on to advanced education, some schools integrate clinical and academic training to achieve earlier entry into active faculty roles, while others provide increased flexibility for nurses considering teaching careers in order to allow them to work while continuing their education.⁷⁸ A similar

approach has been employed with success in pharmacy, using flexible tenure-track systems.⁷⁹

4. Some schools have taken measures to make the best use of resources available to them. Cooperative programs or arrangements among health sciences schools include joint educational programs, faculty sharing arrangements, and interdisciplinary education.⁸⁰
5. In the wake of shortages, faculty retention has become increasingly important. Schools have created faculty development programs to support research and research training. A number of federal agencies, such as the National Institute of Nursing Research, the Department of Veterans Affairs, and the Agency for Healthcare Research and Quality provide support for research and research training for health professions faculty.⁸¹ Other retention strategies include reward systems for excellence in teaching or research, mentoring of junior faculty, and career development programs.⁸²

INCREASED ENTREPRENEURIALISM AND PRIVATIZATION IN EDUCATION CALL PUBLIC ROLE INTO QUESTION

The growing trend of privatization in higher education is attributable to a number of factors, including a combination of political agendas and philanthropic trends motivated by community and economic development. It also reflects the reaction to an environment of declining public funds and increasing demand for education.

The rise of an information-based economy that has increased the value of knowledge and intellectual capital and fueled demand for higher education; a shift toward more part-time students whose needs, expectations, and goals may differ significantly from those of traditional students; the advent of new technologies that enable distance learning; and other non-traditional educational strategies have all contributed to the growth of privatization. De-



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clining trust in government and other public institutions to solve the educational dilemma has also been an issue.⁸³

While the scope and impact of proprietary, or for-profit, schools have not been well documented, it is clear that they constitute a small but rapidly growing proportion of the American higher education system.⁸⁴ Traditionally dominant in short-term post-secondary training leading to certification, the for-profit education sector has become increasingly involved in health professions education in recent years. Proprietary schools have been moving to fill the need for pharmacy and nursing education as well—the University of Phoenix, a major for-profit education corporation, has 6,000 nursing students enrolled across multiple campuses and in online programs and has advertised itself as “the largest school of nursing in the nation.”⁸⁵

The establishment of for-profit schools of medicine is generating controversy that mirrors or perhaps magnifies concerns often expressed about for-profit educational enterprises, as many question the desirability of these enterprises in medical education.⁸⁶ A major concern is whether for-profit schools will invest resources into research and commit to the historic mission to ensure the delivery of services to all people across the socioeconomic spectrum, as non-profit medical schools are committed to do. Because the research enterprise is particularly costly, proprietary institutions’ potential ability to avoid this core mission area has caused alarm. Some also suggest that the profit motive could lead to a reduction in standards for student applicants and a decline in the quality of education delivered at these schools.

Supporters of for-profit institutions contend that the educational landscape is undergoing transformation and that proprietary schools, which can



A MAJOR CONCERN IS WHETHER FOR-PROFIT SCHOOLS WILL INVEST RESOURCES INTO RESEARCH AND COMMIT TO THE HISTORIC MISSION TO ENSURE THE DELIVERY OF SERVICES TO ALL PEOPLE ACROSS THE SOCIOECONOMIC SPECTRUM, AS NON-PROFIT MEDICAL SCHOOLS ARE COMMITTED TO DO.

be more nimble due to their centralized management and lack of bureaucratic restrictions, are better able to adapt to students' and employers' changing needs. For-profit schools are subject to the same core requirements as non-profit institutions, including authorization by a state in which the institution operates and accreditation by an agency recognized by the U.S. Secretary of Education.

The development of proprietary schools along with the for-profit trend has raised the issue of how best to define quality in higher education. Benefits to the public and society have traditionally been major goals of the nation's educational system; this is especially true of health professions education.

However, the nature of many for-profit schools raises issues about whether education is a commodity, carried out primarily for the benefit of individual students. With this philosophy, the yardstick becomes the economic returns that students gain from their schooling. This singular measure of success—employment of graduates—differs from the traditional multiple objectives of higher education institutions, which include preparing students for employment, but are also geared toward fostering a sense of obligation and service to society and the advancement of knowledge through research.

Concerns have been raised that the business-oriented management practices typical of proprietary schools—extending even to choices about curriculum and course design⁸⁷—may diminish the role of faculty in the educational process and weaken traditional academic norms, such as professional autonomy, shared governance, and public service. Many proprietary schools make substantial use of part-time faculty,⁸⁸ have a more transient faculty and make aggressive use of distance learning,⁸⁹ which may limit faculty-student contact and lead some to question the for-profit educational model's ability to foster in-depth learning.

INTERPROFESSIONAL EDUCATION AND PRACTICE: KEYS TO FUTURE WORKFORCE BUT NOT MAINSTREAMED

With changes in the healthcare delivery system, team care (now better known as collaborative practice) began to flourish in the U.S. after World War II and now receives enthusiastic endorsement well beyond such traditional areas as geriatrics, rehabilitation, and chronic care. The related phenomenon of inter-professional education — defined as students from two or more health professions being taught together, faculty from two or more professions teaching together, or both⁹⁰ — has also evolved over the past half century.

Within the past decade, the Pew Commission cited work in interdisciplinary teams as among 21 competencies for all health professionals for the 21st century,⁹¹ and a seminal Institute of Medicine report⁹² called for all health professionals to be proficient in five core areas, including work as part of interdisciplinary teams. The inclusion of interprofessionalism in these two significant reports marked a sea change in the perception of healthcare delivery and health professionals' core competencies.

Supporters view interprofessional education as a logical and valuable means to the end of collaborative practice and better health outcomes and, although there are few data showing impact on the latter, interprofessional education arguably supports enhanced workforce capacity in several major ways. When educated in traditional silos without much exposure to other health professions, future health professionals may have only a vague sense of what others do and whom to contact for specific types of assistance. They may also be less likely to call on a colleague in a different profession whose skill set goes beyond the typical image of that profession.

By learning early on about others' roles, a future health professional can understand ways in which additional types of health professionals may serve in similar or overlapping ways (e.g., routine immunization or triage in emergency situations). Early exposure to colleagues from other health professions can also help future clinicians gain respect and appreciation for others' contributions, easing their transition into — and thus their effectiveness in — clinical settings.

However, interprofessional education has faced several persistent challenges and criticisms. Having often been tied to government or foundation interest in specific populations (e.g., rural health and geriatrics) or delivery mechanisms (e.g., community health centers), programs have all too often thrived with funders' largesse but ebbed once funds were eliminated. Some disciplines have more enthusiastically embraced interprofessionalism than others.

Institutional difficulties, such as scheduling and classroom space, and external challenges, such as whether accreditors or state licensing boards will permit students to be taught by representatives of other professions, all represent barriers that have hindered greater acceptance and implementation of interprofessional approaches. When announcing a new interprofessional approach, an institution may believe its work is path breaking because it was not acquainted with colleagues and predecessors whose expertise in this realm

might be beneficial; institutions often attempt to recreate decades of lessons.

Critics point to the paucity of data indicating improved health outcomes, question the cost of implementing and sustaining interprofessional education, and claim that graduates can quickly learn how to function on a team when faced with that opportunity in a practice setting.

Further mainstreaming of interprofessional education is hindered by a number of factors, with money as just one of the most obvious concerns. Because champions are needed for both top-down and bottom-up approaches, the reluctance of faculty (and often deans) to embrace this approach can be problematic. Because it takes tremendous effort and time to create an institutional culture of collaboration, where senior administrators fully support interprofessionalism, personnel changes at that level can unravel years of work toward an interprofessional ethos.



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CHAPTER SIX

THE GLOBAL MARKET REQUIRES PLANNING AND EVALUATION FROM A NATIONAL VANTAGE POINT

KEY FINDINGS

1. The global health labor market is increasing its reliance on international health workers.
2. Such migration entails significant economic and individual choices and raises several important policy issues.

THE GLOBAL MARKET: MULTIPLE MIGRATION FLOWS INFLUENCE NATIONS

While health professionals make up only a small proportion of U.S. immigrants, the U.S. is one of the top receiving countries for migrating health professionals. Approximately 90,000 foreign-trained nurses account for four percent of employed nurses⁹³ and are found in a variety of practice settings. The number of nurses trained abroad is rising, having more than doubled as a percentage of U.S. trained registered nurses from 1998 to 2002.⁹⁴ International medical graduates (IMGs) remain 25 percent of all new physicians who enter residency⁹⁵ and represent almost a quarter of all practicing physicians in the U.S.⁹⁶ IMGs have long played a significant safety net role in rural and inner-city underserved areas.⁹⁷

“Brain Drain,” a term coined in the 1960s to describe the migration of British scholars to the U.S., became a catch-all phrase for the loss of professionals from low-income to more industrialized countries. Experts have shown that brain drain in the health sector consists of multiple flows, including internal migration from rural to urban areas, from clinical to research or managerial positions, and from government service to the private sector.

Brain drain patterns, along with the factors influencing the migration of health professions, including economic and political conditions, the health and educational systems, career opportunities, and supply and demand factors, have been addressed for individual countries and selected regions of the world. Migration trends, the working conditions of migrants, migration policies and recruitment practices have also been addressed.

Much attention has been focused on migration of physicians and nurses since the 1970s because of the tremendous impact of these individuals on nations’ health systems and economic infrastructure.⁹⁸ In particular, the ‘push’ and ‘pull’ factors have been the focus of analysis.

In the 1970s and 1980s, the debate focused on the loss of qualified and



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skilled human resources for the exporting country.⁹⁹ Political instability, civil strife, insecurity, oppression, poor housing, low salaries, shortages of supplies, unsatisfactory working conditions and lack of continuing education or professional development have been shown to contribute to or indeed push health professionals from exporting countries.¹⁰⁰ In poorer countries, the social image of nursing, in particular, has been cited as an element of dissatisfaction and a motivating factor to leave.¹⁰¹

Changing demographics, advanced medical practices and technology, higher wages, and improved working conditions are among the pulls attracting foreign workers to importing countries. For these countries, including the U.S., a main benefit is the ability to address workforce shortages, as immigrants have traditionally been employed in posts that are hard to fill for professional, geographic or other reasons.

However, there may be deskilling and under-utilization of skills of the worker upon arrival in the receiving country. Nurses, in particular, have reported that employers fail to recognize their skills and previous experience.¹⁰² Discrimination in pay and working conditions has also been revealed in several studies.

More recently, the pull side has gained increasing attention,¹⁰³ with analysts looking at the roles of governments and private sector recruitment agencies in the systematic promotion and management of migration. A new terminology has also emerged, including 'professional migration,' 'professional mobility'¹⁰⁴ and 'brain circulation' to take account of the worker's interest in and right to career development and free mobility; these issues have been the focus of analysis and criticism as well.

Unlike the 1970s, when cultural and linguistic ties were determining factors linking donor and recipient nations, today utilitarian and economic determinants are primary drivers of migration.¹⁰⁵ In fact, some countries have promoted and actively managed the export of health professionals.

The Philippines is a prime example, as an estimated seven million Filipinos (approximately ten percent of the population) work or live abroad.¹⁰⁶ Its government actively encouraged labor migration, viewing overseas employment as a key source of economic growth, first with physicians and now with nurses; the Philippines is the largest source of registered nurses working overseas. More than 70 percent of the 7,000 graduates each year leave the country, part of an estimated annual outflow of 15,000 nurses who go to more than 30 countries.¹⁰⁷ While many in the Philippines view the export of health pro-

professionals as an industry,¹⁰⁸ the reality is that 30,000 nursing positions in the Philippines went unfilled in 2003.

India has also become an important source country, especially for nurses. In 2003 the U.S. Commission on Graduates of Foreign Nursing Schools opened a new exam center in India to facilitate entry to the U.S. labor market.¹⁰⁹ Sri Lankan nurses are also being targeted by the U.S., Malaysia, Singapore, and Europe, and some of the newly-independent states of the former Soviet Union aspire to train nurses for export following the Philippine example.¹¹⁰

ECONOMIC AND INDIVIDUAL CHOICES AT ISSUE

Another issue in the debate over the costs and benefits of international migration is remittances, that is, the portion of international migrant workers' earnings sent back to the country of origin. Remittances play a central role in the economies of many source countries and, for some, have been viewed as a benefit to the health system.¹¹¹

There are no studies of remittances specifically related to the health sector and those sent by health workers are not directly reinvested in human capital for the health system. Experts acknowledge the difficulty of estimating the scale of remittances, but one study valued emittance receipts of developing countries at \$72.3 billion in 2001.¹¹² Remittance flows are the second largest source of external funding for developing countries behind foreign direct investments. India (\$11.5 billion), Mexico (\$6.5 billion) and Egypt (\$3.5 billion) received the largest share of remittances according to a 2003 study by the International Organization for Migration.¹¹³ Some experts express doubt about the value of remittances for economic development because little is known about how they are used.¹¹⁴

Still to be reconciled in the migration debate is the health professional's freedom of movement and his or her personal right to pursue better living or professional conditions versus the health needs of the exporting country. Some analysts believe that the professional mobility arguments outweigh the health arguments. Regardless of one's position, it appears obvious that low-income countries will continue to sustain health workforce losses.¹¹¹ 5

The World Health Organization and health ministries have attempted to address the negative impact of migration on the individual worker through policy statements, codes of practice and guidelines related to recruitment and employment, and the increasing concern for the feminization of migration. Such codes, however, are not applicable to private sector organizations where

many irregularities have been known to occur. Governments have also been reluctant to enforce regulations on private sector employers.¹¹⁶

The push/pull to the U.S. of international health workers may be contrasted with an increasing trend of U.S. scientists leaving to work abroad. Along with the trend in medical tourism, this may mean a loss to the U.S. of part of its highly skilled workforce, further underscoring the need to examine workforce issues in the larger context.

Governments have been exhorted to give health workforce management a higher profile in the policy arena and thus help to alleviate the push factors that encourage migration. Ways to assess and enforce codes of practice still need to be addressed. This new era of brain drain has raised the issue of the coherence of policies related to the international mobility of the health workforce, the need for international cooperation in the development and management of the health workforce, and the need to assess health workforce migration in the context of national economic and political policies.

CHAPTER SEVEN

SOCIOECONOMIC TRENDS ACCELERATING WORKFORCE CHALLENGES

KEY FINDINGS

1. Increased longevity of a growing population will change national healthcare needs.
2. At the same time that demographics-driven demand will be increasing, the looming retirement of the baby boom cohort of health professionals will exacerbate shortages in the health workforce.
3. Generational changes in values, perceptions, and expectations are also having a significant impact on health professions supply.
4. The impact of socioeconomic factors is magnified in the long term care health workforce.
5. The health workforce is not keeping pace with the increasing diversity of the U.S. population.
6. The U.S. is at risk of losing its status as the global leader in healthcare.

CURRENT AND PROJECTED HEALTH PROFESSIONS SHORTAGES

Although this report is not focused on precise numbers or methodology for projecting need, supply or demand, it is helpful at this point to note some health workforce projections for the next decade and beyond:

1. Nursing, the nation's largest health profession, has faced a shortage since the 1980s. Nursing is the profession in which the shortage is the most pronounced and the impact is already felt across the nation. A 2007 projection anticipates a shortfall of 340,000 registered nurses by 2020,¹¹⁷ which is lower than previous estimates, yet nonetheless suggests a difficult future for healthcare delivery.
2. The picture in medicine is also one of anticipated shortages.¹¹⁸ Some schools of allopathic medicine are expanding enrollment and new medical schools are being developed.¹¹⁹ Osteopathic medicine is growing rapidly.¹²⁰ While shortages have been apparent in primary care for more than a decade; there is also some evidence of shortages in at least a dozen specialties.¹²¹ A central difficulty in assessing physician capacity is in predicting which fields of practice graduates will choose, given that these fields may or may not be in line with actual healthcare needs.
3. While the workload for pharmacists in their traditional roles of preparing and dispensing medication is rising, this profession's increasing participation in collaborative direct patient care signifies an even greater need and demand for pharmacists in the years ahead. A recent supply estimate projects almost 305,000 pharmacists in 2020,¹²² but recent Aggregate Demand Index figures¹²³ suggest continued shortages.
4. Dentist-to-population ratios have been dropping for the past decade and are expected to decline further to a rate of 52-55 dentists per 100,000 population by 2020.¹²⁴
5. Allied health — an umbrella term for a broad range of health professionals — is experiencing massive growth, particularly in some new and emerging professions. Among the larger allied health fields, significant new openings are anticipated by 2014 for dental hygienists (82,000), occupational therapists (43,000), physical therapists (72,000), physician assistants (40,000) and respiratory

therapists (57,000).¹²⁵ The least trained and the most poorly compensated, an estimated 6.5 million frontline workers are likely to play an increasingly important role as the nation shifts from ambulatory care centers to home-based and long-term care, yet shortages here are already widespread.¹²⁶

6. Public health workers, the backbone of the nation's response to epidemics, disease surveillance and public health education, are estimated to be in serious short supply. The Association of Schools of Public Health estimates that more than 250,000 additional workers are needed by 2020; that the public health workforce is diminishing over time; and that there are shortages of public health physicians, nurses, epidemiologists, health care educators, and public health administrators.¹²⁷

AGING BABY BOOMERS CHALLENGE HEALTH WORKFORCE

The U.S. demographic landscape is changing dramatically with the aging of the baby boomer generation garnering attention, as forecasters predict an ever-increasing demand for health services and need for an expanded health workforce. Population diversification and shifting gender balances among students entering the health professions will compound these issues for the nation's health system.

These demographic changes are even more troubling when coupled with statistics on the general labor force. Economists note that if retirement and entry rates into the labor force in the U.S. continue to follow established trends over the next 30 years, the number of retired older Americans will grow by almost 25 percent but the number of people aged 16 to 64 will grow by less than 15 percent.¹²⁸



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RESPONSES TO LABOR SHORTAGES TEND TO BE SHORT TERM AND LACK UNDERSTANDING OF THE LARGER DEMOGRAPHIC SHIFTS.

According to the Employment Policy Foundation, the workforce will have to increase by 58 million employees over the next three decades if the same rate of productivity is to be maintained.¹²⁹ Yet, if the current population trend continues, the number of workers will only increase by 23 million. Thus, this systemic labor shortage will create an overall U.S. labor shortage of 35 million workers.¹³⁰

Most of these projected shortages are expected to involve workers having specific skills, including health professionals. Some experts argue that the consequences of such a skilled worker shortage at the national level would be substantial, including reduced growth in the standard of living compared to historical trends, higher wage-push inflation, potential decreases in international competitiveness, and even the erosion of future domestic production capacity.¹³¹

It is well documented that today's Americans are expected to live longer than did previous generations. In 2011, the first of the Baby Boomers will turn 65 and by 2030, one in five Americans will be older than 65, compared to one in eight today. The "oldest old" — those over 85 years old — are expected to more than triple by 2050. Older adults are more likely to suffer from chronic disease and co-morbidity: Eighty-four percent of those older than 65 have at least one chronic condition, compared with only 38 percent of 20- to 44-year-olds; seventy-nine percent of Americans older than 65 take at least one prescription medication daily, compared with 28 percent of those under the age of 44.¹³²

Sociological, economic and political forces will shape how aging generations live, and how they access the future health system and, in general, impact the world around them. For example, their lower birthrates and higher divorce rates make Baby Boomers more likely to live alone and less able to rely on children for support as they age. Older adults with little or no family support may especially need to rely more heavily on healthcare professionals to

fill their basic care needs. Older Americans may seek healthcare from the limited providers trained in geriatrics, but they are as likely to seek out an array of providers, including those in complementary and alternative medicine.

Studies reveal that responses to labor shortages tend to be short term and lack understanding of the larger demographic shifts. Workforce policy, which continues to search for the silver bullet to answer shortages, provides a case study to support such findings. A central information source or any mechanism to provide advice or analysis on the workforce at the national level has been lacking; thus demographic variables and the influence of the larger labor market have received little consideration in decision making.

RETIREMENTS OF BABY BOOMER PRACTITIONERS LOOM LARGE

Just as the need for health services expands, the pool of existing clinicians will shrink as large numbers of physicians, nurses, pharmacists, dentists and other health professionals retire. In 2004, 86 percent of licensed pharmacists were actively practicing, but 23 percent indicated that they probably would leave their positions within a year; 80 percent of pharmacy directors and 77 percent of middle managers said that they expected to leave within a decade.¹³³ Fifty-five percent of nurses surveyed in 2006 cited an intention to retire between 2011 and 2020.¹³⁴ Substantial retirements of faculty in all schools of the health professions add to the problem.

VULNERABILITIES MAGNIFIED IN LONG-TERM CARE WORKFORCE

As the number of Americans needing long-term care is expected to outpace the pool of workers able to care for them, long-term care represents an increasingly important subset of the health workforce. Long-term care providers — a heterogeneous group with a wide range of educational preparation, responsibilities and salary levels — now work in a variety of settings, including nursing homes, assisted-living facilities, and increasingly within patients' own homes.

Unfortunately, many aspects of the workplace that drive workforce shortages (e.g., low wages, high stress, shift work and job dissatisfaction) are magnified in the long-term care sector. Further, as this sector grows, any changes in the settings, organization, and delivery of care will have major implications for credentialing, oversight, and continuing education requirements.



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CHANGING DEMOGRAPHICS OF HEALTH WORKFORCE COME WITH CHANGING VALUES AND PERCEPTIONS

As Baby Boomers retire from the health workforce, new generations are taking over, bringing with them the current and emerging values of contemporary society. For example, perception of controllable lifestyle is a major determinant of specialty choice among medical school seniors¹³⁵ and between 2000 and 2004, the number of hours worked by full-time pharmacists decreased and the number of part-time pharmacists increased.¹³⁶

Younger generations are also finding jobs in the healthcare industry less appealing. While the Department of Labor projects that health professional careers will be among the top careers in demand in the coming decades, current realities paint a picture of a shrinking pool of human capital for the health workforce.¹³⁷ The findings point to a profound national need to give priority attention and consideration to the future health workforce, to find ways to rapidly respond to the individual and institutional issues creating barriers to developing the nation's health workforce, and to develop coordinated communications on the labor market and health professions career opportunities.

For many years, experts have remarked on the relatively diminishing appeal of health-related careers. Once viewed as high-tech, hospital work, for example, is now often viewed as low-tech.¹³⁸ The healthcare fields, once seen as secure and stable, are now viewed as somewhat volatile and not as insulated as they once were from market forces.

Psychic rewards for practitioners have also declined, according to studies that show exciting, well paid, less stressful careers attracting the best and the brightest. There is much anecdotal evidence that frustrated health workers are publicizing their dissatisfaction to family and friends, which sends a negative message about working in the health sector. Other health workers are also affected by images and negative stereotyping. For example, unfortunate widespread negative perceptions of the elderly and of nursing homes make it

difficult to attract potential workers to the long-term care sector.¹³⁹

The workforce is also becoming increasingly female. In 1970, women comprised only 7.6 percent of the physician workforce and were virtually absent from dentistry. Although these professions are still dominated by men, between 1995 and 2005, female enrollments rose from 36.7 percent to 44.3 percent in dental school,¹⁴⁰ 42.7 percent to 48.5 percent in medical school,¹⁴¹ and 63.8 percent to 64.2 percent in pharmacy school.¹⁴² Women are projected to constitute 52 percent of medical school applicants by 2015.¹⁴³ Today, women comprise 16 percent of professionally active dentists,¹⁴⁴ 26 percent of physicians,¹⁴⁵ and 46 percent of pharmacists.¹⁴⁶

Nursing and most allied health professions still remain predominantly female. Notwithstanding some successful targeted recruitment campaigns, only 5.7 percent of nurses in 2004 were male, only a slight increase from 5 percent in 1996.¹⁴⁷ A 2002 study found that male nurses have higher dropout rates in nursing school, are nearly twice as likely as females to leave nursing within four years of graduation, and tend to have lower job satisfaction.¹⁴⁸

The feminization of the health workforce is also driving changes in health-care delivery. This is bringing some positive outcomes (e.g., female physicians tend to spend more time with each patient and engage in more psychosocial counseling and emotional conversation).¹⁴⁹

However, female dentists, pharmacists and physicians are more likely to work part-time and to spend fewer hours per year providing patient care than do their male counterparts,¹⁵⁰ so increased enrollments in health professions schools may be partially offset by decreased productivity per clinician. Female physicians are also less likely to work in rural areas and are more likely to choose non-surgical specialties, largely because of their greater consideration of family and work/life balance when making practice decisions,¹⁵¹ possibly exacerbating shortages in these areas.

These changes have major implications for employers and the capacity of the health system. Notwithstanding various projections of physician shortages, the future physician workforce may effectively be lower than actual numbers would indicate when one considers full-time practice equivalents.¹⁵² This may hold true for other professions as well. Employers will continue to redefine work roles, offer alternate scheduling, assist with employees' personal needs (e.g., by providing concierge services or on-site daycare), and/or make part-time employment more feasible. This may spur further development of alternate delivery models that rely more heavily on teams of health professionals.

HEALTH PROFESSIONS STRUGGLE TO RESPOND TO DEMOGRAPHIC DIVERSITY

Less than adequate responses to the changing demographic diversity in the U.S. have been noted for some time in the recruitment of minorities into the health professions. U.S. Census Bureau projections indicate that by 2050, for the first time, no single racial or ethnic group will constitute a majority of the population.

Among groups traditionally identified as minorities, African Americans are expected to increase from 35 million in 2000 to 61 million in 2050, Asian Americans to increase from 10 million to 33 million, Hispanic Americans to increase from 35 million to 102 million and ‘all other races’ (which includes Alaska Native, Native Hawaiian, Native American and biracial Americans) to increase from 7 million to 22 million.¹⁵³ Global migration into the U.S. continues apace from throughout the world, which also increases racial and linguistic diversity in the U.S., both as patients served and potentially in the health workforce.

However, even as racial minorities account for a greater proportion of the population, African Americans, Hispanic Americans, and Native Americans — who together constitute more than one-fourth of the U.S. population today — are still underrepresented in the health workforce. Collectively, they constitute just nine percent of nurses, six percent of physicians and five percent of dentists. They are similarly underrepresented among health professions faculties, accounting for just 10 percent of faculty at BSN nursing schools, 8.6 percent at dental schools and 4.2 percent at medical schools.¹⁵⁴

For several decades, there have been numerous efforts to encourage minorities to pursue health careers, supported by national and local associations, foundations, organizations, educational institutions and others. More than one-third of the recommendations in a 2004 report from the Sullivan Commission on Diversity in the Healthcare Workforce related specifically to



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the pipeline, including public awareness campaigns and “bridging programs” to help graduates of two-year programs enroll in baccalaureate programs.¹⁵⁵ Some pronouncements have specifically focused on the link to disparities, such as the Institute of Medicine’s recommendation to boost the number of minority health professionals as one way to reduce health disparities.¹⁵⁶

The under-representation of minorities in the health workforce has real implications for the healthcare system. Greater diversity among health professionals is associated with improved patient choice and presumed satisfaction, better patient-provider communication, and improved educational experiences for minority and non-minority students alike. It will also increase the likelihood of improved access to many underserved communities and populations.

CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

For nearly a century, our health workforce policy has been characterized by a decentralized and distributed approach for workforce regulation and oversight. As a result, there is no overarching coherent health workforce policy.

Chapter One suggests that examining the history and evolution of this approach to health workforce policymaking offers important lessons regarding our ability to respond to the national and global challenges facing our current and future health workforce. In particular, public and private policymakers have had difficulty sustaining planning initiatives that were potentially significant in scope and impact, and their tendency to fund crisis responses (rather than long term strategic investments) has contributed to the inadequacy of current health workforce infrastructure.

In the absence of consistent health workforce policies coordinated across jurisdictions and among both public and private regulatory and standard-setting bodies, powerful market forces and payment policies have had an impact on the health workforce, frustrating many health workforce policy objectives. In fact, these distortions of the health workforce have been, or are in danger of becoming, so severe that achieving other important domestic policy objectives, such as health system reform, are at risk of being undermined and compromised by our collective inability to sustain effective health workforce policy and planning. Based on these findings, the report's first conclusion is:

- 1. A broader, more integrated strategic vision than that which has characterized our historic approach to health workforce policy-making and planning is needed if complex and urgent health workforce issues are to be addressed effectively.**

With respect to public policymaking processes and infrastructure, Chapter Two illustrates how federal and state stakeholders have not established a complementary relationship that anticipates and compensates for inherent

weaknesses and vulnerabilities of our traditionally decentralized and distributed health workforce policymaking. The federal government has been unable to serve this integrative role, in large part because it lacks substantial active coordination across its own multiple agencies, missions and constituencies.

Likewise, foundations and other stakeholders have, for different reasons, often been unable to effectively bridge the gaps in fragmented, uncoordinated health workforce policymaking and planning processes. Not surprisingly, this lack of integration is also reflected in our inconsistent health workforce taxonomies and fragmented and incomplete data and research capabilities. Based on this chapter's findings, the report's second conclusion is:

2. A mechanism is needed to serve the currently unfilled integrative role that existing health workforce policymaking and planning processes are not designed, and are ill-equipped, to serve.

Without a mechanism to coordinate policymaking and planning across myriad public and private entities with overlapping roles and responsibilities, the health workforce will continue to be plagued by the problems that arise from fragmented and inconsistent policymaking. Chapter Three discusses examples relating to scope of practice laws, licensing and accreditation where lack of harmonization has engendered numerous challenges, including barriers to health professionals' mobility and practice, resources wasted on "overtrained" health professionals, inadequate technical support for state decision making processes, and burdensome inconsistencies and incompatibilities in compliance requirements. Based on this chapter's findings, the report's third conclusion is:

3. A primary mission of the mechanism serving this integrative role should be to assess and harmonize health workforce laws, standards, and requirements to improve their effectiveness and remove the arbitrary barriers and burdens created by their lack of consistency and compatibility.

The first three chapters of *Out of Order, Out of Time* focus on health workforce policymaking and planning processes; the next three chapters focus on the health workforce itself, health professions education and educational institutions, and the global migration of health professionals.

Chapter Four documents factors that are discouraging pursuit of health professions careers, including job dissatisfaction among health professionals,

characteristics of the work environment that are not conducive to the expectations of new workers, and occupational hazards that discourage careers in the health workforce. It also explores the limited success of recruitment and retention strategies, as well as the need to align market incentives with workforce needs in order to counterbalance trends toward increased specialization, with special emphasis on addressing the cost of education and financial burdens generally. Based on the chapter's findings, the report's fourth conclusion is:

4. A primary mission of the mechanism serving this integrative role should be to develop innovative policies and strategies that counteract the economic and environmental factors discouraging pursuit of health professions careers at a time when the nation is already facing current and projected shortages in many health professions.

Chapter Five examines the challenges health professions educational institutions face in their efforts to increase students' access to health professions education while simultaneously ensuring that the outcome of the educational process matches health workforce needs. Among the issues discussed are the consequences of the elevation of minimum credentials, pressures being exerted on the quality and consistency of education, the need to address persistent faculty shortages, the need to assess increased entrepreneurialism and privatization in education and their compatibility with health workforce objectives, and the untapped potential contribution that mainstreaming inter-professional education and practice could make to meeting health workforce objectives. Based on the chapter's findings, the report's fifth conclusion is:

5. A primary mission of the mechanism serving this integrative role should be to develop innovative policies and strategies that address the economic and environmental factors obstructing access to health professions education, burdening educational institutions, and distorting health workforce objectives.

Up to this point, the report examined primarily domestic health workforce policy issues; Chapter Six focuses specifically on global dimensions of health workforce policy and planning, including increasing reliance on migrant health workers and the complex economic and individual choices that result. Based on the chapter's findings, the report's sixth conclusion is:

6. A primary mission of the mechanism serving this integrative role should be to develop consistent national policies with respect to global health workforce issues.

Finally, in Chapter Seven, the report details the socioeconomic and demographic forces are exacerbating and accelerating the concerns in the previous chapters. These trends demand that past policies and commitment of resources be reevaluated in light of the increased longevity of a growing population and its impact on changing national health care needs, which will intensify concurrent to the retirement of the baby boom cohort of health professionals, exacerbating shortages in the health care workforce at precisely the time when increased supply is needed.

Generational changes in values, perceptions, and expectations also impact health professions supply. The convergence of these trends is particularly acute in the long-term care workforce, which is especially vulnerable to socioeconomic trends. Similarly, the health workforce's past difficulty in responding to the diversity of the U.S. population will intensify as our diversity increases. Based on the chapter's findings, the report's seventh conclusion is:

7. It is critically important to act immediately to develop and implement an integrated, comprehensive national health workforce policy before rapidly intensifying health workforce needs outpace available resources, putting the U.S. at risk of losing its status as the global health care leader.

RECOMMENDATIONS

This report's findings and conclusions offer a compelling argument that we are running out of time to address what is out of order in our health workforce. Collectively, all interested stakeholders must work together to:

- **Make the U.S. health workforce a priority domestic policy issue; and**
- **Begin addressing health workforce issues immediately to avert crises in national workforce capacity and infrastructure.**

Traditional approaches to decision-making are no longer viable or appropriate when transformative change is needed to meet rapidly-evolving national health workforce needs. The appropriate response to this demanding policy challenge is to:

- **Develop an integrated, comprehensive national health workforce policy that recognizes and compensates for the inherent weaknesses and vulnerabilities of current decentralized and distributed multi-stakeholder decision making.**

Development of an integrated, comprehensive, national health workforce policy can be accomplished if all interested stakeholders work together to:

- **Create a national health workforce planning body that engages diverse federal, state, public and private stakeholders with a mission to:**
 - Articulate a national workforce agenda;
 - Promote harmonization in public and private standards, requirements and prevailing practices across jurisdictions;
 - Address access to the health professions and the ability of educational institutions to respond to economic, social, and environmental factors that impact the workforce; and
 - Identify and address unintended adverse policy interactions.

With regard to its mission and agenda, the health workforce planning body should:

- **Take account of the need to increase supply while ensuring quality of care and promoting effective and efficient delivery of services; and**
- **Invest in a comprehensive health workforce research component that will:**
 - Address development and dissemination of consensus definitions and terminology;
 - Identify gaps in data collection and modeling; and
 - Promote consistent approaches to research across all health professions.

With respect to promoting harmonization of public and private standards, requirements, and prevailing practices across jurisdictions, the health workforce planning body should:

- **Promote harmonization of private, professional, and institutional standards, requirements, and prevailing**

practices within and across health professions and institutions;

- **Enhance awareness of, and sensitivity to, the unintended adverse consequences such standards, requirements, and prevailing practices have on the health workforce (e.g., mobility, maldistribution, faculty shortages); and**
- **Promote standards, requirements, and prevailing practices that minimize adverse impact.**

With respect to access to the health professions and the ability of educational institutions to respond to economic, social, and environmental factors that impact the workforce, the health workforce planning body should:

- **Evaluate societal and economic challenges to entry to the professions, including costs, debt, and work environments;**
- **Assess national, state, professional, and academic responses to date;**
- **Identify and promote effective ways to improve careers, educational programs, and training, and make best use of new technologies in the work environment;**
- **Analyze social and environmental factors that influence patterns of practice; and**
- **Propose solutions to educational and practice issues creating barriers to educational innovation and practice.**

With respect to the economic impact of health workforce policy, the health workforce planning body should:

- **Examine health workforce issues in the framework of local, regional, national and global labor markets, paying particular attention to unintended policy interactions;**
- **Develop measures that hold promise as solutions to problems associated with both intra- and international health workforce mobility; and**
- **Coordinate health workforce policy with interrelated national and global economic development policies.**

COMMITMENT TO TRANSFORMATIVE CHANGE

Academic health centers are unique in that their educational and research operations are integrally connected to patient care, all of which ultimately depend on the health workforce. Given their vantage point as engines of economic development within their communities and throughout the nation, academic health centers have a responsibility to analyze current issues and develop new approaches to solving persistent problems. *Out of Order, Out of Time: The State of the Nation's Health Workforce* reflects the historic commitment of academic health centers to addressing national health policy needs. The Association of Academic Health Centers and its more than 100 member institutions urge public and private stakeholders to recognize the urgent need for action and commit themselves to transformative change, following the blueprint laid out in this report.

APPENDIX A: ADVISORY COMMITTEE

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Anthony Knettel, JD, *Assistant Vice President for Policy and Program*

Michal Cohen Moskowitz, *Program Associate*

Andrew Lyzenga, MPP, *Program Associate*

APPENDIX B: COMMISSIONED PAPERS

Bentley JD. Work Environment Factors that Influence Recruitment and Retention**

Collier SN. Changes in the Health Workforce: Trends, Issues and Credentialing***

Combs CD. Our Nation Today and in 2020: Are We Preparing the Health Professionals We Will Need?***

Detmer DE and Steen EB. Information and Communications Technology and the Future Health Workforce: Transformative Opportunities and Critical Challenges***

Dower C. Pulling Regulatory Levers to Improve Health Care***

Henderson TM. Public Policy and Health Professions Education: Challenges and Opportunities**

Kohler PO and Parham J. Establishing a Regional Academic Health Campus***

Manasse HR and Speedie MK. Pharmacists, Pharmaceuticals and Policy Issues Shaping the Workforce in Pharmacy

Moore J. Health Workforce Research: What are the Issues?***

O'Neil EH. Causes and Effect of Health Workforce Demand and Supply**

Rogers B. Trends and Issues Related to Work and the Work Environment Impacting the Health Workforce***

South-Paul JE and Like RC. Cultural Competence for the Health Professions Workforce***

Stone RI. The Long-Term Care Workforce: Current and Future Trends, Challenges and Potential Solutions***

Valachovic R. How Applicable is the Nursing Faculty Shortage to Dentistry?***

Yordy K. The Nursing Faculty Shortage: A Crisis for Health Care*

* Prepared for a separate project and used with permission from The Robert Wood Johnson Foundation.

** In *Factors Affecting the Health Workforce*, ed. Holmes, D. and K. Pryce-Jones. Washington, DC: Association of Academic Health Centers, 2006.

***In *From Education to Regulation: Dynamic Challenges for the Health Workforce*, ed. Holmes, D. Washington, DC: Association of Academic Health Centers, preprint, 2008.

APPENDIX C: AAHC WORKSHOPS AND FORUMS

AAHC Workshop: Factors Affecting the Health Workforce

October 27, 2005, Washington, D.C.

Forum on Workforce Policy

February 23, 2006, Washington, D.C.

Academic Health Centers Explore Capacity: Strategic Expansion and Enhancement of our Nation's Health Workforce

June 5-6, 2006, Washington, D.C.

AAHC Roundtable: The Policy Agenda to Expand the Health Workforce

November 8, 2006, Washington, D.C.

Practice Models for the New Health Workforce

May 2, 2007, Washington, D.C.

Participating Organizations and Government Agencies

Academy Health; Accreditation Council for Graduate Medical Education; American Academy of Nursing; American Academy of Physician Assistants; American Association of Colleges of Nursing; American Association of Colleges of Osteopathic Medicine; American Association of Colleges of Pharmacy; American Association of Community Colleges; American Association of Retired Persons; American College of Clinical Pharmacy; American College of Nurse Practitioners; American College of Physicians; American Council on Pharmaceutical Education; American Dental Education Association; American Dental Hygienists Association; American Health Care Association; American Hospital Association; American Medical Association; American Nurses Association; American Occupational Therapy Association; American Organization of Nurse Executives; American Osteopathic Association; American Pharmacists Association; American Physical Therapy Association; American Society of Health System Pharmacists; Association of American Medical Colleges; Association of American Veterinary Medical Colleges; Association of Clinicians for the Underserved; Association of Schools and Colleges of Optometry; Association of Schools of Allied Health Professions; Association of Schools of Public Health; Association of

Specialized and Professional Accreditors; Association of State and Territorial Health Officials; Bureau of Health Professions, U.S. Health Resources and Services Administration; Center for Health Workforce Studies, University at Albany, State University of New York; Commission on Accreditation of Allied Health Education Programs; Commission on Collegiate Nursing Education; Council for Adult and Experiential Learning; Council on Social Work Education; Educational Commission for Foreign Medical Graduates; Federation of American Hospitals; Federation of State Medical Boards; Foundation for Advancement of International Medical Education and Research; Health and Medicine Council of Washington; Hispanic Serving Health Professions Schools; Institute of Medicine; Joint Commission on Accreditation of Healthcare Organizations; Kaiser-Permanente San Francisco; Maryland Department of Health and Mental Hygiene; Maryland Hospital Association; Medicare Payment Advisory Commission; Milbank Memorial Fund; National Association of Community Health Centers, Inc.; National Association of Public Hospitals and Health Systems; National Coalition on Healthcare; National Conference of State Legislatures; National Council of State Boards of Nursing; National Governors' Association; National League for Nursing; Robert Graham Center; Service Employees International Union; SE Regional Center for Health Workforce Studies; U.S. Centers for Disease Control and Prevention.

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- ¹⁵⁶ Smedley, B.D., A.Y. Stith, and A.R. Nelson, eds. 2002. *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care*. Washington, DC: The National Academies Press.

Out of Order, Out of Time: The State of the Nation's Health Workforce presents compelling reasons for making the health workforce a priority domestic policy issue that receives immediate attention to avert a smoldering crisis in national workforce capacity and infrastructure.

This report calls for a new, collaborative, coordinated, national health workforce planning initiative.



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