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## HEALTH REFORM AND THE HEALTH CARE WORKFORCE

### INTRODUCTION

The Affordable Care Act (ACA), passed in 2010, established a set of programs and policies intended to expand health insurance coverage, implement financing changes to control costs, and propagate programs to improve quality (ACA 2010). The law's implementation has already begun, and most provisions will be in place by 2014. The intertwined components of the ACA provide consumer protection in health insurance markets, expand federal and state health insurance programs, facilitate the purchase of private health insurance plans, create and propagate Medicare and Medicaid financing approaches designed to improve affordability and quality, and establish a variety of other programs and regulations intended to address long-standing problems in the U.S. health care system. The effects of these changes will be far-reaching.

Health care services are provided by a variety of professions that comprise the health care workforce. These include physicians, nurses, pharmacists, and dentists, as well as the myriad "allied health" workers that include assistants, technicians, therapists, administrative personnel, and other professionals. All health and medical care involves at least one of these health workers, and thus the ACA will affect the work of—and demand for—most health professions. In addition, a variety of provisions in the ACA are specifically aimed at changing the supply and distribution of the health workforce.

This monograph assesses how the ACA will influence the demand for health care workers, as

well as the nature of the care they provide. After summarizing the main components of the ACA, the expected effects of each component are assessed. These impacts are then considered in the context of reported shortages of various health professionals, including physicians, nurses, and allied health workers. The ACA includes specific programs intended to address these shortages; these are assessed for their potential to ensure that the ACA successfully improves access to care for Americans while also enhancing efficiency.

### KEY PROVISIONS OF "HEALTH REFORM"

The ACA both reformed current regulations and programs and created new ones. Many of the provisions of the ACA were established with general guidelines, giving administrative agencies such as the Centers for Medicare & Medicaid Services (CMS) and state governments discretion as to precisely how the law will be implemented. Many details of ACA implementation are still in development. Moreover, much of the funding for ACA components was authorized by the law, but not specifically appropriated. How much funding will be dedicated to implementation of the ACA rests in the hands of Congress, adding uncertainty to ACA implementation. Key provisions of the ACA that are likely to impact health workforce needs are described below.

#### *Expanding Access to Health Insurance*

The ACA uses a variety of strategies to extend health insurance coverage to nearly all Americans. A centerpiece of the ACA is a mandate that all

U.S. citizens and legal residents have health insurance. In order to make insurance obtainable and affordable, the ACA enacts a mix of policies to target different uninsured populations. Provisions include mandating that most employers offer health insurance, providing government-funded insurance to those with low incomes, protecting those who presently have health insurance, and easing purchase of insurance for the non-poor uninsured. It was estimated that more than 46 million people did not have health insurance when the ACA passed (Trapp 2009). About 80% of the uninsured came from working families in 2004, primarily in low-wage jobs (Kaiser Family Foundation 2006). People who are unemployed, self-employed, adults without children, and immigrants are more likely to be uninsured (O’Neill and O’Neill 2009).

Most non-elderly Americans—about 59%—are now insured through employer-sponsored health insurance plans (Fronstin 2011). However, not all employers offer health insurance coverage. The ACA establishes a mandate that employers with more than 50 full-time equivalent employees offer health insurance or face fines if any of their workers receive a government subsidy for individual purchase of health insurance. Small businesses with fewer than 25 employees and average annual wages under \$50,000 will be eligible for new tax credits to purchase health insurance for their employees.

Individuals who are uninsured often find it difficult to purchase individual health insurance plans at affordable prices, as do small businesses. The ACA requires states to develop “health insurance exchanges” to facilitate individual, family, and small-group purchase of health insurance. These exchanges serve three purposes. First, by grouping individuals and small groups together, they strive to create a purchasing pool similar to those of large businesses that buy health insurance for their employees. Second, they make it easier for individuals and small businesses to get information about health plans and compare benefits and prices. Third, they provide a mechanism for states to offer subsidies

to individuals and families who do not qualify for Medicaid, but who might find health insurance unaffordable because their incomes are relatively low (up to 400% of the poverty line, which was \$22,350 for a family of four in 2011).

Families with very low incomes who do not presently qualify for Medicaid would benefit from an increase in the income threshold for eligibility. The ACA requires that state Medicaid programs be expanded to insure all persons with incomes up to 133% of the federal poverty level and offers matching federal funds to support this expansion. Existing state-administered children’s health insurance programs will receive additional funding to support expansions to greater numbers of children.

Specific provisions of the ACA were created to address two groups that have relatively high rates of uninsurance: young adults and early retirees. Young adults are now eligible to be enrolled in their parents’ health insurance plans up to age 26. Federal subsidies support employer-offered insurance for early retirees who are not yet eligible for Medicare through 2014.

The ACA will not affect eligibility for the Medicare program, but makes some changes in benefits for pharmaceuticals and preventive services. The coinsurance rate for Medicare pharmacy benefits will be gradually reduced. The ACA also establishes an office within the Centers for Medicare & Medicaid Services (CMS) to improve access to care and quality of care for persons who are dually eligible for Medicare and Medicaid.

The ACA offers protections to those with pre-existing conditions and those who become ill while insured. States have already established temporary programs to offer health insurance to patients with pre-existing conditions through 2014 and, beginning in 2014, private insurers will be required to offer coverage to individuals with pre-existing conditions. Insurance companies cannot rescind coverage of enrollees, even when they become ill, and insurers cannot place limits on the lifetime benefits received by enrollees. Annual limits to benefits also are regulated.

### ***Focus on Preventive Care***

There is a significant focus on expanding preventive health care in the ACA. The act establishes a national council to coordinate federal investments in prevention and public health, and appropriates specific funds for activities including health screenings, immunization programs, and research. A grant program will support community-based prevention services focused on reducing rates of chronic diseases and addressing health disparities. These grants emphasize preventive care needs in rural areas.

Preventive care will receive new prominence in the Medicare program. Medicare enrollees will not pay any portion of the cost of preventive services that are recommended by the U.S. Preventive Services Task Force, and the Medicare deductible will not apply to colorectal cancer screening tests. Medicare will cover annual comprehensive health risk assessments, and will reimburse non-physician providers, such as nurse practitioners and physician assistants, 100% of the physician fee schedule amount for services provided in an outpatient setting.

Medicaid and private insurance coverage of preventive services also will be expanded. States will receive greater federal matching funds if they offer full coverage for preventive services to Medicaid enrollees. Medicaid programs are required to provide coverage for tobacco cessation services for pregnant women. Most private health insurance plans also will be required to provide preventive services without cost-sharing by enrollees. This includes immunizations, preventive care for children (including infants and adolescents), and screenings for women.

### ***Broadening the Safety Net***

In addition to Medicaid expansions and subsidies for the purchase of health insurance, the federal government will increase funding to community health centers, school-based health centers, and nurse-managed health clinics. These health centers and clinics provide access to the poor and are often key sources of health services in rural communities.

### ***Quality and Efficiency Improvement***

The ACA establishes a number of strategies to improve the quality and efficiency of the health care system. Some of these approaches encompass programs that encourage innovations and pilot projects, while others continue Medicare's trajectory into "value-based purchasing." In value-based purchasing, health care providers are given financial incentives to improve the quality of care they provide. Current Medicare programs withhold additional reimbursements to hospitals when patients experience certain adverse events, and the Centers for Medicare & Medicaid Services (CMS) has piloted programs to offer higher payments to hospitals that achieve quality benchmarks. Under the ACA, CMS is developing plans to extend value-based purchasing programs to skilled nursing facilities, home health agencies, and ambulatory surgical centers.

The most prominent of the new value-based purchasing programs in the ACA is the Medicare Shared Savings Program, which is intended to encourage the development of "Accountable Care Organizations" (ACOs). ACOs represent a new strategy within Medicare to improve health for enrollees while slowing the growth of Medicare expenditures. An ACO is an organization of health care providers that takes responsibility for the care of at least 5,000 Medicare fee-for-service beneficiaries. ACOs are accountable for the quality, cost, and overall care of patients. If ACOs meet quality performance standards and generate financial savings, they will be able to share those savings with the CMS. The CMS explicitly recognizes that ACOs will need to focus on providing patient-centered care and primary care in order to achieve these objectives. ACO professionals include physicians, physician assistants, nurse practitioners, and clinical nurse specialists. Other health professionals—such as pharmacists, chiropractors, and nurse midwives—might play important roles in the care provided by ACOs, but they are not designated as eligible to participate in the Shared Savings Program.

Medicare also will launch a national pilot program to evaluate offering "bundled payments"

for patient care, including inpatient hospital services, physician services, outpatient hospital services, and post-acute care services. These payments would provide a fixed payment for an episode of care that begins prior to a hospitalization and continues through 30 days following discharge from a hospital. This program is designed to improve coordination of care before and after hospitalizations; if the pilot program maintains or improves quality while reducing spending, the program would be expanded. A similar program will be tested for Medicaid, creating demonstration programs that make capitated payments to safety net hospital systems, allow pediatric providers to organize as ACOs, and provide payments to psychiatric and mental health institutions for stabilization of patients with emergency conditions.

Home-based and community care programs will be established under the ACA, with the dual aim of improving care and lowering costs by reducing hospitalizations and institutionalization. A demonstration program will provide primary care services in the homes of high-need Medicare beneficiaries. Health professionals will share in any financial savings if they reduce preventable hospitalizations, prevent hospital readmissions, improve health outcomes, improve the efficiency of care, reduce the cost of health care services, and achieve patient satisfaction. States will have new opportunities to provide home- and community-based services through Medicaid, and will be able to offer full Medicaid benefits to individuals receiving home and community services. Medicaid programs also will engage in the “Community First Choice Option” to provide community-based support and services to people with disabilities who require an institutional level of care. A Community-based Collaborative Care Network Program will support consortiums of health care providers to integrate health services for low-income uninsured and underinsured populations.

To develop and support new, innovative models of care delivery for Medicare and Medicaid beneficiaries, a new Center for Medicare and Medicaid Innovation has been established within

the CMS. This center will fund projects to test, evaluate, and expand innovative payment structures and care delivery approaches with the threefold aim of improving quality, improving health, and controlling costs.

Finally, the ACA established the nonprofit Patient-Centered Outcomes Research Institute to focus on research about the comparative effectiveness of health care services. Findings from the research supported by the institute will examine and compare the effectiveness of medical treatments, although these findings are explicitly not to be construed as mandates or recommendations for payment, coverage, or denial of coverage.

### **Cost Controls**

The ACA includes a variety of explicit cost-control measures. Medicare cost growth will be limited through a variety of explicit provisions, and payments to Medicare Advantage plans will be reduced. Medicare will address fraud more aggressively. Private insurance plan rate increases will undergo scrutiny, and private plans must dedicate 85% of insurance premiums to patient care. Administration costs will be reduced in part by establishing electronic billing standards that will reduce paperwork.

### **Health Information Technology Investments**

The ACA continues the support of health information technologies (HIT) that were launched with the American Recovery and Reinvestment Act of 2009. These investments in HIT are expected to reduce health care costs and improve health outcomes by streamlining access to patient information, improving clinical guidance, and facilitating communication across care settings (Coffman and Ojeda 2010).

### **Workforce Programs**

There are a number of provisions in the ACA intended to bolster the health care workforce in the United States, particularly the primary care workforce. A new National Health Care Workforce Commission has been established to develop a

national workforce strategy. This commission will help to coordinate federal activities, evaluate education and training activities, and encourage innovations that address health care needs.

A variety of new and expanded incentives will increase the number of primary care doctors, nurses, and physician assistants through loan forgiveness programs and scholarships. Rural health care providers and primary care physicians will receive higher payments from federal payers. Training positions for providers will be expanded in several ways. Currently unused graduate medical education positions will be reallocated, with priority to primary care and general surgery, as well as to states with low resident physician-to-population ratios. Training in outpatient and rural settings will be expanded through greater regulatory flexibility and federal funds.

These programs include provisions to increase supply and education of non-physician providers, including nurses, nurse practitioners, physician assistants, mental and behavioral health professionals, and oral health professionals. A variety of approaches to expand the diversity and improve the cultural competency of the health care workforce will also be used.

### **WHO IS THE “HEALTH WORKFORCE”?**

The “health workforce” encompasses all health professionals and workers who contribute to the delivery of health care. Most people think of the health workforce as primarily consisting of physicians, nurses, dentists, and pharmacists; indeed, these are among the most visible and highly educated professionals providing health care in the United States. However, the health workforce also includes “allied health” professionals such as physical therapists, radiology technicians, and medical assistants. It also includes health professionals who do not work in health care delivery settings, but instead provide services in homes, educational institutions, and other venues (Matherlee 2003). In fact, a substantial share of the health care workforce includes semi-skilled or non-skilled workers, such as personal

care and home care aides (Bipartisan Policy Center 2011). In the broadest sense, the health workforce can thus be identified two ways in U.S. Bureau of Labor Statistics (BLS) data: People who identify their occupation as being in a health care profession, and/or people who indicate they work in the health care industry.

Employment in the health care industry was estimated at about 15.8 million in 2008, accounting for 10.5% of the total civilian workforce of the United States (Bipartisan Policy Center 2011). About 14.3 million people were employed in health occupations in that year (BLS 2010). The largest occupation is that of registered nurses (RNs), of whom about 2.2 million were employed in 2008. Licensed practical/vocational nurses represent the third-largest occupation, with about 619,000 people (BLS 2010). The U.S. Bureau of Health Professions (BHPr) estimates that there are about 158,000 people prepared to work as nurse practitioners (NPs) in the United States, with nearly 98,000 holding a position with the job title of “nurse practitioner” (BHPr 2010). About 64.5% of those with an NP job title report that primary care is their main area of work.

The BLS reports that there were about 512,500 physicians employed in the United States in 2008, although an alternative estimate is that there were about 688,300 physicians employed at least 20 hours per week in 2007 (Dall 2010). Of these, about 246,800 were working in primary care, of whom 94,600 specialized in general internal medicine, 86,000 were in family practice, and about 52,700 were pediatricians (Dall 2010). The American Academy of Physician Assistants estimates there are about 73,500 employed physician assistants (PAs) (Dall 2010), which is slightly higher than the BLS estimate of 66,200 (BLS 2010).

Other health professions employ smaller numbers than the nursing and physician occupations. The second-largest health industry occupation in 2008 was that of secretaries and administrative assistants, with 770,000 workers (BLS 2010). Other large occupations in health care include dental assistants; medical assistants, clerks, nursing aides, orderlies, and attendants; home

health aides; and housekeeping staff. There were 206,700 social workers and 171,300 counselors in the health industry, along with about 35,500 dietitians and nutritionists. There were about 67,500 pharmacists, 142,100 emergency medical technicians and paramedics, and 278,800 clinical laboratory technologists and technicians.

## **IMPACTS OF THE ACA ON THE HEALTH WORKFORCE**

The ACA has a direct impact on the health workforce through authorizing expanded training programs for health professionals, establishing the National Health Workforce Commission, and creating incentives to increase primary care provider education. Many other provisions will indirectly impact the health workforce by expanding access to health insurance and encouraging more efficient health care delivery. In fact, these indirect effects are likely to have a greater impact on the health workforce than the direct provisions of the ACA.

### ***Expanded Access to Health Insurance***

The central focus of the ACA is extending access to health insurance for all Americans, with the main expansions starting in 2014. It has been estimated that about 35.2 million Americans will be newly insured, and the share of people without health insurance will drop to about 3% (Dall 2010). Research has consistently found that people with health insurance use more health care services than those who are uninsured, even after taking into account differences in age, socio-economic status, and health status (Buchmueller et al. 2005; Freeman et al. 2008; Hadley 2003; Hoffman and Paradise 2008; Ezzati-Rice and Rohde 2008; Institute of Medicine [IOM] 2009; Kashihara and Carper 2009). Insured adults are particularly more likely to visit a physician, obtain preventive services such as screening tests and prenatal care, receive disease management services including education and monitoring, and use prescription medications (Buchmueller et al. 2005). Research on the effects of health insurance on use of emergency

rooms has produced inconsistent findings (Freeman et al. 2008). The ACA may also increase demand for care among those who are presently insured by lowering their out-of-pocket costs for care (Coffman and Ojeda 2010).

The services that will be needed by the newly insured are likely to increase demand for primary care providers in particular, because these health professionals focus on preventive care and disease management (Coffman and Ojeda 2010). Presently, about 30% of U.S. physicians work in primary care fields such as general internal medicine, geriatrics, family medicine, or pediatrics (Starfield et al. 2005). A recent analysis predicts that about 30,400 additional physicians will be needed, with about 12,600 of those in primary care (Dall 2010), although other projections are lower, with as few as about 4,300 additional primary care physicians needed (Hofer et al. 2011). An additional 8,000 nurse practitioners and 2,400 physician assistants may be needed in primary care (Dall 2010). The surge in demand for health care services will be greater in areas that now have high rates of uninsurance, many of which also have low physician supply (Liu et al. 2011). States such as Texas, Louisiana, Mississippi, Alabama, Nevada, Utah, and Idaho are projected to have a greater shortfall of primary care providers (Dall 2010).

Demand for other health workers will increase along with that for physicians, NPs, and PAs (Rohleder et al. 2010). Those who contribute to providing primary care services will likely experience the greatest growth, such as clinical laboratory professionals, imaging technicians, pharmacists and other pharmacy personnel, and health educators (Coffman and Ojeda 2010).

The 2006 enactment of comprehensive health insurance reform in Massachusetts provides some guidance as to what the impact of the ACA might be on demand for health services. A substantial increase in demand for health care has been documented (Long and Masi 2009), with increases in physician visits and prescription medicine use (Long and Stockley 2010). The increased demand for health care resulted in reports of patients facing challenges in finding physicians and other

providers who would accept new patients, and in scheduling appointments at busy medical practices. One study found that one of five nonelderly adults had difficulty receiving care (Long and Stockley 2010). An analysis of Bureau of Labor Statistics employment data found that total per-capita health care employment grew more rapidly in Massachusetts than in the rest of the United States after 2005, with most of the growth in administrative occupations such as management, financial operations, and office and administrative support (Staiger et al. 2011). There was not a significant difference in growth in non-administrative occupations in the health industry between Massachusetts and the rest of the country, although it should be noted that the supply of physicians, nurses, and other health professionals has historically been greater in Massachusetts than in most other states (Staiger et al. 2011).

### ***Focusing on Preventive Care***

The ACA intentionally emphasizes preventive care as a strategy to both improve the health status of Americans and control costs. The focus on preventive care should increase demand for primary care providers; research indicates that primary care physicians spend about half of their time on preventive care and screenings, and much of this care can be offered by nurse practitioners, physician assistants, and registered nurses (Yarnall et al. 2003; Bates et al. 2011). Expanded use of preventive care also will have substantial impacts on the demand for laboratory personnel and imaging specialists, such as clinical laboratory scientists, radiation technologists, laboratory technicians, and phlebotomists.

### ***Broadening the Safety Net***

Community Health Centers (CHCs) will be expanded through the ACA as a mechanism to increase access to services. These centers presently serve about 19 million people, and it has been projected that about 50 million people will receive care in CHCs by 2019 (Robert Wood Johnson Foundation [RWJF] 2011). CHCs are mainly staffed by primary care providers, further increasing the

need for them in areas with relatively few health professionals, such as rural and center-city areas. More than \$900 million has already been awarded to CHCs to expand services (RWJF 2011). To ensure an adequate supply of providers to CHCs, the Department of Health and Human Services (DHHS) has created 11 new teaching health centers to train more primary care physicians and dentists to work in community settings (RWJF 2011). There will also be new or expanded residency programs in community mental health centers and Indian Health Services (IHS) centers. In addition, a grant program has been broadened to provide funds to nurse-managed health clinics that provide primary care and wellness services in underserved communities. These clinics are typically led by nurse practitioners who focus on care for vulnerable populations, and provide training opportunities for NP students.

### ***Emphasizing Home and Community Care***

The ACA provides incentives for greater use of home and community care services, which will lead to greater need for professionals with community-oriented skills. Community health workers and public health professionals will be needed, as might lay health workers such as promotoras, who are outreach workers that provide a link between health care providers and patients, including offering patient education, making referrals, conducting needs assessments, and providing language services. Registered nurses are likely to have central roles as care coordinators and in providing home health services, thus increasing the need for nursing education to emphasize community health, social and psychological services, and management. Unskilled health workers such as home health assistants also may be in greater demand as efforts are expanded to help individuals avoid institutional care settings.

### ***Performance-based Payment***

The provisions in the ACA intended to increase the efficiency of health care delivery are likely to affect the mix of health workers demanded. The fee-for-service and negotiated fee reimbursement system

dominant in the United States generally results in health care providers receiving the same payment regardless of the quality of care they provide. Thus, mediocre care receives the same reward as excellent care, and there is little incentive—or funding—to strive for excellence. Performance-based payments, which will be expanded by CMS, provide financial incentives to hospitals and other health care providers to improve quality. The expectation is that financial incentives will lead providers to improve quality of care while controlling expenditures, because the gain (or loss) accrued by a provider depends both on quality and the cost of obtaining that quality (Clarke et al. 2008; Davis and Guterman 2007).

Achieving quality gains will likely require changes in the ways in which care is delivered and adjustments in the deployment of the health workforce. For example, a large body of research has demonstrated that higher RN staffing levels in hospitals are linked to better patient outcomes (e.g., Aiken et al. 2002; Cho et al. 2003; Lang et al. 2004; Needleman et al. 2002; Kane et al. 2007; Cho et al. 2008; Sales et al. 2008). At present, hospitals have little financial incentive to increase nurse staffing because nursing services are aggregated into the overall billing rate, and higher quality nursing care is not rewarded. The move to performance-based payment may alter the financial incentive; research suggests that performance-based payment will impact demand for and utilization of registered nurses as hospitals seek to use this workforce more effectively to achieve quality goals (Kurtzman and Buerhaus 2009).

While in theory, performance-based payment should improve quality and efficiency of care, there has been little research that finds that such payment schemes achieve these goals in the inpatient setting (Mehrotra et al. 2009). The most rigorous studies focused on the CMS Premier Hospital Quality Incentive Demonstration and measured significant improvements in the performance metrics for participating hospitals, but other studies have found no significant improvements in quality (Lindenauer et al. 2007).

Some investigators have raised concerns that performance-based payment programs provide incentives for providers to focus strictly on the metrics used to determine payment, thus encouraging them to “game” the system or ignore other important aspects of quality of care (Mehrotra et al. 2009; Peterson et al. 2006). Thus, the final impact of performance-based payment on health workforce demand and utilization is uncertain.

### ***Bundled Payments, Accountable Care Organizations, and Other Innovations***

The bundled payment program for Medicare and the ACO program both create financial incentives for health care providers to take full responsibility for an episode of care. This is a significant change from the current fee-for-service approach, which favors care that is specialized and procedurally focused care of single-disease events (Ginsburg and Grossman 2005). Bundled payments and ACOs allow health care organizations to retain financial savings from delivering care efficiently, as long as quality is improved or maintained.

Payment bundles are expected to draw more attention to the care patients receive after hospitalization because, if a patient is rehospitalized, the hospital does not receive any additional payment to cover the expenses of the additional hospitalization. This should bring more emphasis to post-acute care, which ideally involves expanded education about post-hospital care, nursing case management, home care visits, and careful monitoring. Many of these functions are well suited to the skills of registered nurses, and thus it is anticipated that the role of the RN will expand in the future (IOM 2010). To the extent that home care becomes an important part of post-hospital care, the need for home health aides and assistants also may rise.

ACOs will face similar incentives regarding care management, but their focus will likely be ambulatory care. Patients who choose to receive care from ACO providers may become part of the ACO’s assigned population, and the ACO is thus responsible for their overall care. Patients who

have chronic conditions and/or are noncompliant with treatment recommendations will require care that is multifaceted and patient-centered. CMS intends for the ACO program to lead to the creation and improvement of patient-centered processes that will improve patient engagement in their own care (DHHS 2011). This will likely increase the need for RNs, patient educators, medical assistants, and others who can be engaged in the total care of patients.

The patient-centered medical home (PCMH) model of care is aligned with the goals of the ACO program. A PCMH engages a team of providers in the delivery of care—physicians, NPs, RNs, medical assistants, health educators, pharmacists, and others. The PCMH ideally includes behavioral and mental health services, thus integrated mental and physical health care (Bates et al. 2011). This and similar models may help to manage rising demand for physicians by increasing the roles of other health care professionals (Bates et al. 2011), and also may lead to greater demand for primary care physicians relative to specialists (Soman et al. 2010). Even though early studies have found that higher staffing ratios and better staff training are required to successfully operate a PCMH, there are net cost savings because emergency room use and hospitalizations can be reduced (Soman et al. 2010). It remains uncertain, however, whether and to what extent patients will agree to participate in the PCMH model and view it as providing value (Goodson 2010).

### ***Investing in Health Information Technology***

Effective implementation of integrated care delivery models such as ACOs and PCMHs will likely rely upon use of well-designed electronic medical records (Bates et al. 2011). Implementation of these health information technology (HIT) systems is complex and the success of these systems is dependent on both the design of the system and organizational culture (Spetz et al., in press). Policy analysts have urged that technical assistance and dissemination of best practices in HIT are needed to optimize the potential of these systems (Ormond et al. 2011). Demand for health

informaticists, who have both clinical and HIT expertise, is likely to increase (Coffman and Ojeda 2010).

### **SHORTAGES IN THE HEALTH WORKFORCE AND THE ACA**

An underlying concern throughout the establishment of the ACA has been the adequacy of the health workforce to address the needs of all Americans, particularly as health insurance expands to near-universal coverage (Ormond et al. 2011). Uninsured and under-insured people often face difficulty accessing care (Doescher et al. 2009; Shipman et al. 2011), and their demand for care is expected to rise when they receive insurance. When Massachusetts implemented its health insurance reform, with about 340,000 people gaining health insurance in one year, widespread shortages of primary care providers were reported (Sack 2008). Many health workforce experts believe there is now or soon will be a shortage of primary care providers, even before the ACA's main health insurance expansions begin (Dill and Salsberg 2008; Iglehart 2008; Bodenheimer and Pham 2010; Whitcomb and Cohen 2004; Buerhaus et al. 2009; BHPPr 2008; Cooper et al. 2002; Cooper et al. 1998; Colwill et al. 2008; Anderson and Horvath 2004; Nicholson 2009).

The question of whether a shortage of providers exists is complex. Economic theory predicts that shortages lead to increases in wages, which in turn lead to greater supply because compensation is more lucrative. At the same time, wage increases dampen demand; the net effect is a rebalancing of the labor market and an end to the shortage. There are several reasons that such normal adjustments might not occur in the labor market for primary care providers. First, wages may not change. The current fee-for-service reimbursement system favors specialized, complex, and procedurally oriented services; “basic” office visits receive lower payment and thus primary care provider compensation is lower. In 2008, median annual incomes of primary care physicians (family medicine, pediatrics, and

general internal medicine) ranged from about \$180,000 to \$192,000—far below the medians for emergency medicine (\$258,131), general surgery (\$320,116), dermatology (\$368,407), and other fields. Significant changes in payment methods will be needed to rectify this differential.

The second reason the labor market for primary care physicians might not function as predicted is that the supply of primary care providers is driven by the choice of residency program by new medical school graduates. Education of a primary care physician requires four years of medical school education, followed by three or more years of residency. Interest in primary care among medical school students has been dropping for years, with particularly little interest in family medicine (McGaha et al. 2010; Kruse 2011; Association of American Medical Colleges [AAMC] 2010). Students' choice of specialty is influenced by potential earnings (particularly as compared with medical school debt), anticipated career satisfaction, and expected overall lifestyle (Bodenheimer et al. 2007; Bodenheimer and Pham 2010; Fincher 2004; Grumbach and Bodenheimer 2002; Hauer et al. 2008). A 2010 survey revealed that primary care physicians were the least satisfied group of physicians (MedScape 2011). These factors tend to dampen the supply of primary care physicians—and even if greater numbers of prospective medical students want to enter primary care, there is a long delay between selection of the field and entering the workforce. About 32% of physicians select primary care fields (American College of Physicians 2009), although recent data suggest that there is some renewal of interest in primary care (Kruse 2011; Kavilanz 2011). Whether this is a persistent change remains to be seen.

The demand for physicians is driven by population growth and health, as well as the organization of the health care system. Independently, population growth and aging are expected to increase the workloads of primary care providers over the next 15 years (Colwill et al. 2008), and increased access to health insurance is likely to push demand upward even more (Mertens 2010). Given the well-documented difficulties

Americans now face in obtaining health care, and the experience in Massachusetts after health insurance coverage expanded, it seems safe to assume that demand for primary care will rise substantially in the future.

Whether there is adequate supply of physicians to meet demand is hard to predict (Cooper 1995; Iglehart 2008; Mick 2004; Goodman and Fisher 2008), and how labor markets will adjust to future shortages is unknown. It has been estimated that the current shortage of primary care physicians is about 9,000 and will rise to about 29,800 by 2015 (Dill and Salsberg 2008). If current trends persist, the deficit will reach 35,000 to 44,000 by 2025 (Doherty 2009). The problem is not limited to primary care; across all physician specialties, shortages of 85,000 to 200,000 have been forecasted for 2020 (Cooper et al. 2002; Council on Graduate Medical Education 2005; Dill and Salsberg 2008). Not all health policy experts agree with these projections. Some researchers argue that there are enough physicians, but that their utilization is inefficient because the health care delivery system is fragmented and poorly coordinated (Goodman and Fisher 2008; Nicholson 2009). Nonetheless, the Association of American Medical Colleges has called for a 30% increase in the number of medical schools (AAMC 2006). New allopathic medical schools have opened in recent years, and about a dozen more are in planning stages (Hartocollis 2010; Hedger 2010). Osteopathic medical schools also are expanding (Shannon 2010; BHPPr 2008).

While discussions of primary care shortages have largely focused on physicians, many researchers and policy analysts argue that non-physician providers can and should play a larger role in the delivery of primary care. About 65% of nurse practitioners enter primary care (American College of Physicians 2009). Numerous research studies demonstrate that the quality of care delivered by NPs is at least equivalent to that of physicians, and some research has found that NPs have stronger patient communication skills (Office of Technology Assessment 1986; Mundinger 2000; Lenz et al. 2004; Horrocks et al. 2002; Christian

et al. 2007). NPs are more likely to work in underserved settings, including rural communities (DHHS 2010b). However, NPs face barriers to their practice, including scope-of-practice laws that require them to work under physician supervision and limit their ability to prescribe medications (Rudner et al. 2007; Wing et al. 2005; Sekscenski et al. 1994; Christian et al. 2007; Pearson 2010), and inconsistent reimbursement policies (Chapman et al. 2010). Removal of these barriers would enable NPs to practice to their fullest potential to meet health care needs (IOM 2010).

## THE WORKFORCE PROVISIONS OF THE ACA

The ACA recognizes the likely need for more health care providers to care for the newly insured, and also the increased efficiency that could come from increased use of primary care and non-physician health professionals. A large number of health workforce development programs are authorized by the ACA, many of which build upon programs that received funding through the American Reinvestment and Recovery Act of 2009 and the Fiscal Year 2010 Appropriations Act (Coffman and Ojeda 2010). It is important to note that the authorizations in the ACA do not guarantee funds for these programs. Congress must appropriate funds to support these programs, and may choose to appropriate none or less than authorized. The ACA's investment in the health workforce represents a modest portion of the overall cost of the ACA (Ormond et al. 2011), but this relatively small commitment could be essential to the success of the ACA in improving access to health care services.

### *Expansions of the Health Workforce*

A number of programs authorized by the ACA are intended to alleviate current and projected shortages of primary care providers, as well as shortages of oral, mental, and public health professionals. The two main avenues for increased funding are the National Health Service Corps (NHSC) and Title VII primary care education funds (Doherty 2010). The NHSC provides scholarships

and loan repayment to professionals in primary care, dental, and mental health who practice in federally designated "Health Professions Shortage Areas" (HPSAs). Funds for this program were increased through the American Recovery and Reinvestment Act of 2009 and the FY 2010 appropriation, and total growth was over 227% in two years (DHHS 2010a). Continued expansion is authorized by the ACA. Many NHSC participants work in community health centers (CHCs), and demand in CHCs is expected to increase due to expansions in the ACA.

Title VII was reauthorized by the ACA, with higher funding levels, following years of declining funding. In addition, the ACA reinstated a separate line of funds for oral health education. Title VII provides grants to health professions education institutions for training of family physicians, general internists, general pediatricians, physician assistants, general dentistry, pediatric dentistry, dental hygiene, and public health dentistry. These grants can cover the cost of operating education programs as well as provide financial assistance to students. The ACA added projects to Title VII that train primary care physicians to provide care in patient-centered medical homes. The ACA also authorized additional funds to support interdisciplinary recruitment, training, and faculty development in primary care fields.

There will be changes in Medicare reimbursement for graduate medical education under the ACA, which will include funds to create and expand education of medical residents in non-hospital settings such as federally-qualified health centers, community mental health centers, rural health clinics, and health centers operated by the Indian Health Services. Medical residency programs will be required to redistribute 65% of unfilled non-primary care slots to primary care or general surgical residency programs. An additional 500 new primary care physicians are planned by 2015, and 600 new primary care physician assistants. The ACA also establishes the Primary Care Extension Program both to support best practices in primary care and to train more advanced-practice nurses (Morgan 2010).

Nursing education also is expanded through the ACA, particularly at the graduate level. Title VIII supports nurse training and was reauthorized, offering more funds to nursing schools for a variety of programs. A new and widely observed program offers grants to nurse-managed health clinics that provide both primary care services to underserved populations and nurse practitioner (NP) education opportunities. A demonstration program has been authorized to provide grants to federally qualified health centers and nurse-managed health clinics to prepare new NP graduates to practice in these centers. A new loan repayment program is available for nursing faculty. The Nursing Scholarship Program and the Nursing Education Loan Repayment Program provide financial assistance to students and graduates of registered nursing (RN) education programs who agree to practice full-time for at least two years in a health care facility with a critical shortage of RNs. The ACA authorizes grants to support career ladder programs for nursing assistants, home health aides, licensed practical nurses, and associate-degree RNs to pursue baccalaureate nursing education. Grants also can be awarded for new RN graduates to participate in internship and residency programs.

A variety of provisions of the ACA emphasize public health-oriented education. The Prevention and Public Health Fund is designed to expand education in preventive care and public health, with a goal of reducing long-term health care cost growth (Coffman and Ojeda 2010). The program includes primary care residencies, physician assistant education, NP education and clinical training, state primary workforce initiatives, Centers for Disease Control and Prevention public health fellowship programs, and public health training centers. The ACA also authorizes a new “United States Public Health Sciences Track” to increase the number of physicians, dentists, nurses, nurse practitioners, physician assistants, public health professionals, and behavioral and mental health professionals trained to provide team-based care, public health, and emergency preparedness services. This program will be administered by the U.S. Surgeon General and will provide health

professions students with tuition assistance and a stipend in exchange for completing a residency in an approved specialty and serving in the Public Health Service’s Commissioned Corps. Other public health fellowship programs have been reauthorized as well.

Funding focuses on certain specialized fields of medicine that are of high priority and face shortages. A new loan repayment program is available to pediatric specialists because there are shortages of such specialists in many parts of the United States. Geriatric training also is emphasized in the ACA to ensure adequate care in the future for older Americans. The ACA established a new grant program for geriatric education centers to operate fellowship programs to provide intensive, short-term education in geriatrics to faculty in health professions schools who do not have formal education in geriatrics. The ACA also expanded to all health professions the Geriatric Academic Career Award program, which provides financial support to faculty.

Allied health professional supply will be expanded through the ACA, in part through funds from the U.S. Department of Labor. This agency provides support for a variety of training programs, with an emphasis on low-wage professions. The funds have been used to support RN education, but are more commonly used to educate people as licensed practical nurses, nursing assistants, direct care workers, and in other assistive fields. The ACA creates a new program with incentives for higher education institutions to provide financial aid to direct-care workers in long-term care settings who are enrolled in programs in geriatrics, disability services, long-term care services, or chronic care management. Another new program will provide 15 grants to establish training programs for alternative dental health care providers, and new grants will be available to award scholarships to enable “mid-career” allied health and public health professionals to obtain additional education in their fields.

Some programs in the ACA are designed to increase the supply of health care providers in rural areas. A new grant program is authorized for rural-

focused education in medical schools, and grants can be used to create, improve, or expand rural-focused education with admissions criteria that give priority to students who are likely to work in rural areas. In addition, tax benefits will be offered for working in rural areas.

People from disadvantaged and diverse backgrounds will receive additional opportunities to obtain financial support for health professions education. The Centers of Excellence program was reauthorized and provides grants for programs to increase the number of qualified applicants among underrepresented minorities, enhance student academic performance, improve recruitment and retention of underrepresented minority faculty, fund community-based training opportunities, and support research and resources on minority health issues. The Health Careers Opportunity Program also was reauthorized, offering grants to colleges and universities for programs that support students from disadvantaged backgrounds in their pursuit of a health professions education. New grants will be offered for demonstration projects to prepare people receiving Temporary Assistance for Needy Families and other low-income people to pursue a health occupation education. The Scholarships for Disadvantaged Students program provides grants allowing health professions schools to award scholarships to financially needy full-time students from socioeconomically disadvantaged backgrounds. The Nursing Workforce Diversity Grants program provides nursing schools with grants to prepare students from disadvantaged backgrounds for careers in nursing, with a focus on programs that advance nursing education to the baccalaureate and graduate levels. The Faculty Loan Repayment Program assists health professionals from disadvantaged backgrounds who agree to serve as faculty for a health professions education program for at least two years.

### ***Higher Payments to Incentivize Primary Care and Rural Health Practice***

Medicare and Medicaid payments will be offered to encourage practice in primary care and rural areas. Medicare will offer Incentive Payments to

primary care providers, and there will be a two-year increase in Medicaid payments to primary care providers. In addition, there will be Medicare bonus payments for primary care and for general surgeons in health professions shortage areas. The bonus payments will offer an additional 10% to providers for whom primary care services account for at least 60% of charges. Primary care physicians, physician assistants, NPs, and clinical nurse specialists are eligible. The bonuses to surgeons also provide an additional 10% for major surgical procedures performed in shortage areas. These payment increases should increase supply of these providers by increasing earnings.

### ***Health Workforce Analysis and Planning***

The ACA established the National Health Workforce Commission to develop information about the health workforce and make recommendations to federal and state agencies about health workforce needs. The commission is charged with addressing a wide range of topics, including supply and demand, education, workforce needs of specific populations (such as minorities and rural populations), worker safety, and the interface between federal workforce programs. The commission was appointed in 2010, although it has yet to be funded.

The ACA also established the National Center for Workforce Analysis, part of the Bureau of Health Professions (BHP) in the U.S. Department of Health and Services. The center coordinates with the National Health Workforce Commission to gather and analyze data on health workforce needs, develop performance measures for federal health workforce policies and programs, track federal grants awarded for workforce development, and provide grants or contracts for state or regional health workforce analysis. Regional health workforce centers were funded by BHP from 1997 to 2007 but were discontinued due to lack of funding. The ACA authorized funds for these activities, which are contingent upon appropriation by Congress.

States have been offered grants to support their own health workforce planning and development.

Most of the initial grants were awarded to plan workforce development strategies. States are required to develop partnerships that include health care employers, labor unions, educational institutions, public secondary education agencies, and philanthropic organizations. States that received the one-year planning grants will be eligible for implementation grants, pending appropriation of funds. Many states moved quickly to establish the planning collaborations required to receive planning grants, and also are engaged in other activities to prepare for the increased workforce needs anticipated as health insurance expansions accelerate (Kaiser Family Foundation 2010b).

## RECOMMENDATIONS

The implementation of the ACA will place significant pressure on an already thinly-stretched health workforce, as millions of newly-insured Americans seek more health care services.

The impact is likely to be greatest for health professionals involved in the delivery of primary care, including those who provide related services such as laboratory staff, diagnostic technicians, pharmacy personnel, and medical assistants. Some of the provisions of the ACA will encourage the development of new, collaborative models of providing care, and other components will help to increase the supply of various health professionals. In order to address potential shortages that might be driven by the ACA, and take full advantage of the ACA's focus on preventive care and integrated care delivery, policymakers and health care leaders should look toward a variety of actions in three areas: expanding the health workforce, supporting collaboration, and evaluating outcomes.

### *Expanding the Health Workforce*

Many analysts believe the United States now faces a shortage of physicians and registered nurses, as well as other health professionals. Although advocacy for expanded health workforce education often centers on single professionals, there is a need to refocus efforts to align with the specific

gaps presently faced, and that will emerge with implementation of the ACA.

- The primary care physician, physician assistant, and nurse practitioner workforce needs to be expanded. The ACA includes a number of provisions toward this aim, which should be fully funded to both mitigate a shortage of primary care providers and improve the efficiency of health care through increased attention to primary care needs.
- Current health care payment systems are focused on reimbursements for procedures and office visits, which has led to primary care providers earning significantly less than specialists. Payment systems need to be reformed both to provide an incentive to deliver primary care, and to encourage more physicians, PAs, and NPs to select primary care as their field of work.
- Shortages of allied health professionals who support primary care need to be addressed, through expanded education programs, scholarships, and loan repayments. This includes laboratory workers, pharmacists and pharmacy staff, health educators, and imaging technicians. Many of these professionals are educated in vocational schools and community colleges, which face funding challenges. Health professional education is often more expensive than other fields of study, due to the need for supplies, clinical placements, and low student-to-faculty ratios. Educational programs need sufficient funds to maintain and expand these programs.
- The pipeline of students who can enter health professions needs to be assessed. Are primary and secondary educational systems preparing students to enter the health professions? Are there educational gaps, such as in science, that need to be addressed?
- Efforts to remedy shortages of health professionals need to be mindful of distributional concerns, such as the severe lack of providers in many rural and central-city communities. Simply expanding education programs is not likely to bring more providers

to the areas of greatest need. Promising strategies include offering loan repayments and scholarships for providers who commit to working in underserved communities, and recruiting students from communities with the greatest need.

- Distance-based education and care modalities, such as online and video-based education and electronic medical consultations, should be evaluated as potential strategies to address rural shortages of health professionals.
- Opportunities for medical assistants to increase their knowledge of electronic health records, database searches, and patient communications should be offered, so that these workers can better help primary care providers better manage the overall needs of patients.
- Community health centers should take advantage of opportunities afforded by the ACA to offer community-based residencies and training programs for physicians, dentists, and nurse practitioners.

### ***Supporting Collaboration and Improved Care Delivery***

The ACA includes several programs that are intended to drive health care provision toward a “patient-centered” model, in which the needs of patients are coordinated across care settings and providers. Successful implementation of this approach to care will require greater emphasis on working in inter-professional teams and linking inpatient and outpatient care. Educational programs need to be realigned with this approach, to ensure that health providers have the needed skills.

- Health care providers should attend to the needs of their patients across the continuum of care, so that office-based providers are connected to hospital providers, and hospital providers are connected to the services that benefit patients post-hospitalization. Some programs in the ACA will encourage a patient-centered approach to care, but providers should strive to improve collaboration across care settings regardless of whether ACOs and

bundled payments are fully implemented.

- Scope-of-practice regulations for all health professionals should be reviewed and modified to ensure that they are designed to take full advantage of the knowledge and skills of each professional and foster cost-effective care. All professional associations should support such an effort.
- Health professional education programs should be re-evaluated to ensure they are aligned with current and future needs. Many professionals, such as physicians and nurses, are educated with an emphasis on hospital-based care. Greater exposure to the unique needs of community-based care is needed. Programs should include training in care coordination, and inter-professional education should be expanded.
- Curricula on interpreting research and implementing evidence should be added to health professional education programs, to help providers successfully apply research findings to the care they provide and achieve quality improvement goals. Performance-based payment will not be successful if health professionals are not prepared to enact changes in how they provide care.
- Medical and mental health providers should collaborate more closely. Educational programs should lay the foundation for providers to more effectively recognize often-intertwined mental and physical health needs. Similarly, oral health care should be integrated more closely with medical care.

### ***Evaluating Outcomes***

As the ACA is implemented, it is essential that the effects of its provisions are evaluated, so that health workforce planning can align with changing knowledge and needs.

- Improved data is needed about all health professions so that current and emerging shortages can be identified. The National Center for Health Workforce Analysis in the Health Resources and Services Administration should

be fully funded to collect and analyze data to inform health workforce planning.

- The National Health Workforce Commission should be fully funded to fulfill its mission of fostering communication and collaboration across federal agencies to bolster the health workforce.
- New care delivery models, such as the patient-centered medical home, should be evaluated to learn whether they effectively improve inter-professional collaboration and health outcomes.
- Access to care for the newly insured should be carefully monitored to learn whether obtaining health insurance leads to the ability to obtain needed health services. Ideally, such analysis will also examine whether improved access to care affects overall health. Gaps in access and failures to achieve targeted outcomes should be identified, and approaches to improving care delivery should be implemented to address problems.
- The effectiveness of the ACA's health workforce provisions should be evaluated to learn which approaches are most successful in addressing health workforce needs.

## CONCLUSIONS

The ACA will have a large impact on the need for health workers, both through insurance expansions and incentives to improve the efficiency of the provision of care. It is widely believed that the increase in demand will be most significant for primary care providers, including physicians, physician assistants, and nurse practitioners (Coffman and Ojeda 2010; Buchmueller et al. 2005; Freeman et al. 2008; Hoffman and Paradise 2008; IOM 2009). Provisions of the ACA that emphasize preventive care and public health also will increase demand for primary care providers. Health workers who support primary care will be in greater demand as well, such as clinical laboratory workers, imaging professionals, and pharmacy workers.

Programs designed to control costs while maintaining or improving quality, such as bundled

payments, Accountable Care Organizations (ACOs), and patient-centered medical homes, will encourage care organizations to reconsider the mix of health professionals used to deliver care. Non-physician providers can play a larger role in ensuring that patients are well-educated to promote their own health, monitored for chronic conditions, and assessed for emerging problems. Nurse practitioners, RNs, and medical assistants are likely to have increased prominence in these emerging models of care. The ACA provisions that support community-based and home care will spur demand for home health aides, care managers, and home health nurses.

A key question is whether all the components of the ACA will be fully implemented, which is in part dependent on the authorization of funds to support provisions such as Centers for Medicare & Medicaid Services (CMS) demonstrations and health professional education programs. It is not yet known whether demonstration programs for ACOs, patient-centered medical homes, and performance-based payment will be successful and thus broadly disseminated. Federal agencies and state governments have substantial latitude in how they implement various aspects of the ACA, and their adherence to the intentions of the legislation will affect the net impact of the law. Although demand for some health professions and medical specialties should increase at a greater rate due to the ACA's emphasis on prevention and public health, medical schools and other higher education institutions might not be responsive to efforts to reshape the health workforce. Health professional groups might seek to block other professionals from contributing more significantly to the delivery of care.

Even if the ACA is fully implemented, short-term dislocations between supply and demand are likely to emerge. Health insurance will be nearly fully extended in 2014, but programs to increase the supply of primary care providers will not bear fruit for four to seven years. Many allied health professions face significant shortages of both workers and education programs; development of new programs will take time. If the ACA is not

fully implemented, there may still be shortages of primary care providers, geriatric specialists, and other professions that will be needed to care for the growing and aging U.S. population. The ACA's health workforce provisions offer opportunities to address both current and future shortages, even if these programs are small relative to the legislation overall.

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