



Research Insights

■ Supply Side Implications of Insurance Coverage Expansions

Summary

The Affordable Care Act (ACA) of 2010, the broadest health care overhaul since the creation of Medicare and Medicaid in 1965, puts in place comprehensive health insurance reforms that will take effect over several years. A key component of the 2010 ACA is a large expansion in health insurance coverage to many more millions of Americans. The Congressional Budget Office has projected that the ACA will extend health insurance coverage to an estimated 32 million uninsured Americans by the end of 2019, including 16 million into public health insurance programs, although projections of uptake of the new coverage are uncertain.¹

Little is known about physicians' and hospitals' potential supply side responses to major coverage expansions such as those under the 2010 ACA. In 2006, however, the American College of Physicians warned that primary care in the United States, the backbone of the nation's health care system, is on the verge of collapse due to a dysfunctional health care financing and delivery system.² Moreover, the increased demand for primary care from the ACA will be dwarfed by the increased demand generated in the next decade as a consequence of U.S. population growth and the aging of the baby boomers.³

In December 2011, AcademyHealth's Research Insights program convened a meeting in Washington, D.C., that brought together about 50 leading researchers and representatives of federal agencies to consider the implications of the ACA for the capacity and willingness of health care providers to provide primary and hospital-based acute care sufficient to address the needs of populations that are newly insured under the ACA. Participants at the meeting reviewed the state of research relevant to the following questions:

- Is *the current capacity* to provide primary care and hospital-based acute care sufficient to address the needs of newly insured populations?
- What do we know about how *physicians and hospitals are likely to respond* to increases in the demand for care?
- What *policy levers exist for expanding the supply* of primary and hospital-based acute care and what are their implications?

Participants at the meeting also identified important research questions and data needed to track the impacts of the implementation of the ACA on the supply of primary care and hospital-based acute care. This issue brief presents some of the highlights of the

On December 13, 2011, AcademyHealth convened a meeting of about 50 researchers and federal employees to consider the state of research relevant to (1) the implications of large expansions in insurance coverage across the United States, most recently by the federal Affordable Care Act (ACA) of 2010, for the supply of physicians and hospitals across the country; (2) the capacity of physicians and hospitals to respond to the growth in demand for health care that results from such expansions; and (3) various policy levers for expanding the supply of health care providers to meet the demand and the implications of various options.

Chapin White of the Center for Studying Health System Change moderated the meeting, and he and the following individuals provided brief summaries of existing research findings to set the stage for subsequent discussions: Sean Nicholson, Cornell University; Craig Garthwaite, Northwestern University; Alison Evans Cuellar, George Mason University; Amanda Kowalski, Brookings Institution and Yale University; Tracy Yee, Center for Studying Health System Change. This policy brief is based on the presentations and ensuing discussions of the existing research and research needs that occurred at that meeting.

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presentations and discussions regarding capacity and trends, responses to increased demand, and policy levers to match supply of primary care and hospital-based acute care with needs.

Primary Care: Capacity and Trends, Responses to Increased Demand, Policy Levers to Match Supply with Needs, and Research Agenda

Aligning primary care resources and capabilities with patients' and communities' needs will be a major challenge for policymakers in the coming years. Currently, the United States has about 800,000 practicing physicians, and the number of physicians in practice has grown at a rate just above the rate of U.S. population growth for several years.⁴ Yet with the growth in population and aging of the U.S. population as the baby boomers enter their retirement years, analysts have projected a nationwide shortage of almost 100,000 physicians by 2020.

The supply of practicing primary care physicians is a particular concern. In 2010, less than one-third of the approximately 624,500 practicing U.S. physicians who spent the majority of time in direct patient care were primary care providers—that is, family physicians and general practitioners, general internists, general pediatricians, and geriatricians.⁵ Moreover, the percent of U.S. medical students planning to practice in primary care has dropped precipitously in recent years—from a high of 40 percent in 1997 to only 17 percent in 2011.⁶ The fact that primary care physicians receive far less lucrative compensation than physicians in most medical specialties no doubt contributes to U.S. medical students' decisions to opt for careers in specialties other than primary care, but there may be other contributing factors, as well.

The Congressional Budget Office has projected that the ACA will extend health insurance coverage to an estimated 32 million uninsured Americans by the end of 2019, including 16 million in public health insurance programs.⁷ The ACA's expansions of coverage will not improve access to care to newly insured patients unless physicians and other health care providers' are willing and able to participate in and to accept patients from those programs.

Physician willingness is a particular concern in Medicaid. Physician participation in Medicaid is already low throughout the nation, and the percentage of primary care physicians who accept all or most new Medicaid patients is considerably lower than the number who accept most or all new Medicare patients or privately insured patients. Low rates of physician participation in Medicaid negatively affect access to medical care among Medicaid enrollees.⁸

There is little information about how large expansions of public health programs affect physician labor supply and participation in newly expanded programs. A 2011 study following the State Children's Health Insurance Program (SCHIP) in the 1990s, physicians increased their participation in the expanded program

but also reduced the total number of hours they spent with patients probably as a result of shorter office visits.⁹

Policy levers with the potential to be used to boost the supply of primary care providers to meet the surging demand for primary care in the next several years, some of which are included in the ACA, include the following:

- Payment policies for primary care physicians (e.g., bonus payments, new payment models for physicians)
- Policies related to health workforce education, training, and accreditation
- Support for safety net providers that provide primary care
- Testing and evaluation of new models for primary care organization, delivery, and payment (e.g., patient-centered medical homes for primary care, accountable care organizations that manage the full continuum of care for a defined population, changes to state scope-of-practice laws for nonphysician primary care providers such as advanced practice nurses, the use of health information technology such as electronic health records in primary care, and initiatives to improve community-level health)¹⁰

It will be important to monitor and evaluate the impact of these and related efforts to ensure that the supply of primary care is adequate and to improve the quality, safety, and efficiency of primary care.

Hospital-Based Acute Care: Capacity and Trends, Responses to Increased Demand, Policy Levers to Match Supply with Needs, and Research Agenda

Accommodating the needs of the estimated 32 million Americans who will gain insurance coverage under the ACA by 2019 is not expected to pose the same challenges to hospitals as it does to primary care physicians. Over the past decade, the number of hospitals in the United States has remained fairly constant. In 2010, according to the American Hospital Association, there were 5,754 hospitals in the United States.¹¹ In 2010, the number of beds in all U.S. hospitals surveyed by the American Hospital Association was 941,995.¹²

At the national level, the number of inpatient days per 10,000 population has declined in the past several years, and the use of hospital outpatient care has increased.¹³ Hospital occupancy rates have generally swung between percentages in the low 60s to upper 60s. Evidence from the Community Tracking Study suggests that hospitals do have capacity problems in their emergency departments, but problems in other areas seem to be limited to only a few hospitals.¹⁴

Recent evidence regarding hospitals' experience following Massachusetts' enactment of far-reaching health reforms that

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expanded health insurance coverage throughout that state in 2006 suggests that expansions may actually reduce the demand for hospital-based acute care. A 2010 study found that following those coverage expansions, the number of hospital admissions in Massachusetts did not change; moreover, hospital cost per discharge and cost per day declined.¹⁵ Possibly, better care provided to newly insured populations in the community led to fewer hospitalizations, taking some of the pressure off the demand.

The ACA mandates several changes in hospital payment policy that are intended to constrain Medicare spending and improve the value of hospital services. It will be important to monitor and evaluate the effect of the ACA's and other hospital payment changes to ensure that they improve efficiency of hospital care without harming the quality of such care. Innovative payment models might be designed to help increase efficiency and alleviate any pressures on hospitals from coverage expansions.

As documented by the Dartmouth Atlas Project, the utilization of hospital inpatient care varies greatly across the country. Unwarranted geographic variation in the utilization of inpatient care suggests the possibility of opportunities to improve the efficiency with which such care is provided. Yet some evidence suggests that for-profit, nonprofit, and government hospitals may differ in their response to price incentives. Moreover, the ACA drastically cuts federal Medicare and Medicaid disproportionate share hospital (DSH) payments, which states distribute to safety net hospitals. Following the tightening of reimbursement under the Balanced Budget Act of 1987, there was some evidence that core safety net hospitals had lower quality than non-safety net hospitals. It will be critical to monitor the effects on various types of hospitals of both across-the-board cuts and cut in federal DSH payments under the ACA.

Introduction

President Obama signed the Patient Protection and Affordable Care Act into law on March 23, 2010, and its companion, the Health Care and Education Reconciliation Act of 2010, March 30, 2010. Together, the bills are known as the Affordable Care Act (ACA) of 2010. The 2010 ACA, the broadest health care overhaul since the creation of Medicare and Medicaid in 1965, puts in place comprehensive health insurance reforms that will take effect over several years. The law significantly expands eligibility for Medicaid beginning in 2014; prohibits insurance companies from denying coverage because of a preexisting condition in 2014; and requires states to establish health insurance exchanges to make coverage more affordable for individuals and small businesses in 2014.

A key component of the ACA is a large expansion in health insurance coverage to many more millions of Americans. The Congressional Budget Office has projected that the ACA will extend health insurance coverage to an estimated 32 million uninsured Americans by the end of 2019, including 16 million in public health insurance programs, although projections of uptake of the new coverage are uncertain.¹⁶ Moreover, whatever changes in demand occur as a result of the coverage expansions under the ACA will be dwarfed by the changes that occur in the next decade as a consequence of U.S. population growth and the aging of the baby boomers.¹⁷ The proportion of the U.S. population older than age of 65 is projected to grow from 12.4 percent in 2005 to 14.5 percent in 2015 and 18.2 percent in 2025.¹⁸ The fundamental challenge for policymakers, therefore, will be to align health care resources and capabilities with patients' and communities' needs.

In 2006, American College of Physicians warned of the impending collapse of the nation's entire primary care system and recommended sweeping reforms to avert a crisis.¹⁹ Given such warnings, the anticipated growth in demand from the coverage expansion under the ACA has generated concerns about the potential for dramatically longer waiting times for appointments, lower quality of care, and overloaded physician practices in the near future.²⁰ If primary care physicians are in short supply, many patients may delay seeking care or turn to hospital emergency rooms for care, and costs could rise substantially.

Little is known about physicians' and hospitals' potential supply side responses to major coverage expansions such as those under the ACA. Most modeling of coverage expansions, including the ACA, has been based on patient demand responses only and has relied on decades-old research, such as the RAND Health Insurance Experiment. More recent studies of previous expansions in public coverage through the State Children's Health Insurance Program (SCHIP)²¹ and the 2006 overhaul of health care coverage in Massachusetts²² offer additional insights regarding provider supply and the response to increases in coverage expansions under public programs.

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Participants at the meeting reviewed the state of research relevant to the following questions:

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Participants at the meeting also identified important research questions and data needed to track the impacts of the implementation of the ACA on the supply of primary care and hospital-based acute care. This issue brief presents some of the highlights of the presentations and discussions regarding capacity and trends, responses to increased demand, and policy levers to match supply of primary care and hospital-based acute care with needs. Because participants at the December 2011 meeting were informed that their comments would be "off-the-record," this issue brief does not attribute comments to specific individuals. The final section of this issue brief presents a selected bibliography with literature pertaining to the topics addressed at the December meeting.

Capacity and Trends in the Primary Care Physician Workforce

Aligning primary care resources and capabilities with patients' and communities' needs will be a major challenge for policymakers in the coming years. Currently, the United States has about 800,000 practicing physicians, and the number of physicians in practice has grown at a rate just above the rate of U.S. population growth for several years.²³ Yet with the growth in population and aging of the U.S. population as the baby boomers enter their retirement years, analysts have projected a nationwide shortage of almost 100,000 physicians by 2020.²⁴

In 2006, the Association of American Medical Colleges (AAMC) recommended a 30 percent increase in the capacity of U.S. medical schools to avert such a shortage. U.S. medical school enrollment has recently increased 13 percent, and 10 new medical schools are expected to open in the United States by 2015. A 2011 AAMC report highlighted dozens of state and national studies that have concluded that the U.S. physician workforce is facing current or future shortages in the supply of various types of physicians.²⁵

The supply of practicing primary care physicians is a particular concern. According to the Institute of Medicine, primary care is care that is accessible, comprehensive, coordinated, and accountable.²⁶ In 2010, less than one-third of the approximately 624,500 practicing U.S. physicians who spent the majority of time in direct patient care were primary care providers—that is, family physicians and general practitioners, general internists, general pediatricians, and geriatricians.²⁷ An adequate supply of primary care is the cornerstone of a well-functioning health care system that provides high-quality, accessible, and efficient care.

The American College of Physicians warned in 2006 that primary care in the United States, the backbone of the nation's health care system, is on the verge of collapse due to a dysfunctional health care financing and delivery system.²⁸ It offered a number of sweeping policy recommendations to avert the looming crisis, including fundamental changes in the way primary care is organized, delivered, financed, and valued.

Increased enrollments at U.S. medical schools will not necessarily translate into an increased supply in the supply of U.S. primary care physicians.²⁹ The AAMC reports that the percentage of U.S. medical students planning to practice in primary care has dropped precipitously in recent years—from a high of 40 percent in 1997 to only 17 percent in 2011.³⁰ The fact that primary care physicians receive far less lucrative compensation than physicians in most medical specialties no doubt contributes to U.S. medical students' decisions to opt for careers in specialties other than primary care, but there may be other contributing factors, as well.

To practice medicine in the United States, medical school graduates (M.D.s, D.O.s.) must complete three to five years of U.S. residency training, depending on the field of medicine they want to enter. The Balanced Budget Act of 1997 limited Medicare funding for additional trainees in graduate medical education. The number of residency training slots is limited, and both U.S. and foreign medical school graduates compete for the available slots. Yet given U.S. medical students' preferences for careers in fields other than primary care, providing new subsidies for residency training probably would not expand the supply of primary care physicians in the short term; to expand the supply, the subsidies would probably have to be restricted to primary care residency slots.³¹

Participants at a 2011 conference sponsored by the Josiah Macy Jr. Foundation recommended several reforms in graduate medical education intended to ensure that such education keeps pace with changing patient demographics, the evolution of health care delivery, the need to use health care technologies more effectively, and the demand for a more efficient, cost-effective health care.³² Among their recommendations were engaging the public in evaluating the graduate medical education, ensuring that the sites of graduate medical education reflect current and future patient care needs, improving efficiency in the delivery of graduate

medical education, and establishing a National Institute of Health Professions Education to coordinate, prioritize, and fund research on health professions education.

At the other end of the physician supply pipeline, many practicing physicians in the United States are baby boomers age 56 or older who may be considering retirement.³³ States with the highest percentages of primary care physicians who are nearing retirement include Massachusetts (42.1 percent), West Virginia (36.1 percent), California (34.2 percent), and Connecticut (33.2 percent). In these and other states, especially in rural and other underserved areas, the retirement of older physicians may pose serious problems for residents' access to primary care. Massachusetts and possibly other states are now reconsidering their scope-of-practice laws for nonphysician primary care practitioners such as nurse practitioners (NPs) to help address such shortages.³⁴

When evaluating the availability of primary care, an important consideration is the distribution of primary physicians' practice patterns, including days or hours worked in direct patient care and focus (e.g., general primary care, sports medicine, hospitalist practice). The distribution of physicians and other health resources is uneven across the country and is often mismatched with patients' needs.³⁵ People who live in states in the South and Mountain West, for example, may have greater problems gaining access to primary care physicians than people who live in states in the Northeast. Similarly, Medicaid patients in rural areas may have greater problems gaining access to primary care physicians than privately insured patients in suburban areas.³⁶

The organization and delivery of primary care in the United States is evolving, and new models are emerging. In some communities, for example, retail clinics in drug stores and retail sites and urgent care providers are becoming more common. Such entities are often used by a mix of higher income individuals who are willing to pay for convenience and uninsured individuals who may lack other options.³⁷ Some physician groups have expressed concerns about retail clinics, including a possible low quality of care at such clinics, lack of follow-up and continuity with other medical care needs, and failure to take advantage of a patient encounter for recommended preventive care and health improvement.³⁸ Little is known about the effects of these new entities on the overall supply and quality of primary care.

Meanwhile, health purchasers, payers, physicians, and patient-advocacy groups have endorsed the medical home model for primary care—specifically, the patient-centered medical home (PCMH) model. The PCMH model emphasizes team-based care, the deployment of health information technology, and care coordination—especially for patients with chronic conditions and/or complex medical needs. The American Medical Association, the American College of Physicians, and numerous specialty societies have endorsed the PCMH model as a means to attract and retain

primary care physicians, improve quality, and lower overall costs. It will be critical to monitor developments with respect to the PCMH model and to evaluate their evolution and effects on health care and health in federally qualified health centers (FQHCs) and elsewhere. It will also be important to understand how the move to the PCMH model affects the overall supply of primary and other care at the national level and in specific geographic areas and communities.

Primary Care Physicians' Responses to Coverage Expansions

As noted earlier, the Congressional Budget Office projects that the ACA will extend health insurance coverage to an estimated 32 million uninsured Americans by the end of 2019, including 16 million in Medicaid.³⁹ The ACA's expansions of coverage will not improve access to care to newly insured patients unless physicians and other health care providers' are willing and able to participate in and to accept patients from those programs.

Physician willingness is a particular concern in Medicaid. Under the ACA, Medicaid will be expanded to include people in families with incomes up to 138 percent of the federal poverty level (about \$28,000 for a family of four) in 2014. In 2008, Medicaid fees on average equaled 72 percent of Medicare fees and 56 percent of private insurer fees. Physician participation in Medicaid is already low throughout the nation, and the percentage of primary care physicians who accept all or most new Medicaid patients is considerably lower than the number who accept most or all new Medicare patients or privately insured patients.

A March 2011 study by Cunningham found that both Medicare and privately insured patients were experiencing some problems in gaining access to primary care physicians in the United States, but the percentage of primary care physicians who reported being likely to accept all or most new Medicaid patients in 2008 (42 percent) was much lower than the percentage likely to accept all or most new Medicare patients (61 percent) or privately insured patients (84 percent).⁴⁰

Low rates of physician participation in Medicaid negatively affect access to medical care among Medicaid enrollees.⁴¹ A 2006 study by Cunningham and May found that despite increases in Medicaid payment rates and enrollment, the proportion of U.S. physicians accepting Medicaid patients had decreased slightly over the previous decade.⁴² Medicaid's relatively low fees in comparison to Medicare and private insurance were cited by 85 percent of physicians as the reason they do not accept more Medicaid patients.⁴³ Other reasons physicians said caused them not to accept Medicaid patients were the hassles of Medicaid billing requirements/paperwork (70.4 percent); delayed

reimbursement (64.8 percent); high clinical burden of Medicaid patients (52.5 percent); and full practice (43.5 percent).

Cunningham and May also reported in 2006 that the care of Medicaid patients was becoming increasingly concentrated among a minority of physicians who provide a relatively large amount of care to Medicaid patients.⁴⁴ This concentration was characterized by a shift of Medicaid patients away from small, office-based practices, toward larger group practices and practices based in institutions such as hospitals, academic medical centers, and community health centers. The reasons for and implications of the growing concentration of Medicaid patients among physicians in large group practices and institution-based practices are not clear. It may be that Medicaid's relatively low payment rates and high administrative costs are causing physicians in solo and group practices to limit their involvement with Medicaid patients. An important question is whether the increasing concentration is just market segmentation or instead is something to be concerned about.

In 2011, Garthwaite investigated how physicians responded to the implementation of SCHIP in the 1990s.⁴⁵ Like Medicaid, SCHIP—now known more simply as the Children's Health Insurance Program (CHIP)—is a joint federal-state program intended to provide health insurance to low-income individuals up to 19 years old. When created in 1997, SCHIP was the largest expansion of taxpayer-funded health insurance coverage for children in the United States since Medicaid's creation in the 1960s. Following SCHIP's implementation, physicians increased their participation in the expanded program but physicians reduced the total number of hours they spent with patients—probably as a result of shorter office visits. Because of the age of SCHIP's beneficiaries, the program disproportionately affected pediatricians.

The Medicaid coverage expansion authorized by the ACA will include both children and adults, and it will be important to track changes in access to primary care as the changes authorized in the law unfold. The Medicaid and CHIP Payment and Access Commission (MACPAC)—a nonpartisan congressional support agency established in the Children's Health Insurance Program Reauthorization Act of 2009 and expanded and funded through the ACA—is tasked with reviewing and advising Congress on federal and state Medicaid and CHIP policies regarding payment, access, eligibility, enrollment and retention, coverage, quality, and interactions of Medicaid and CHIP with Medicare and the U.S. health care delivery system generally. MACPAC's first two reports to Congress, from March 2011 and June 2011, are available at the organization's website: www.macpac.gov.

Policy Levers to Ensure an Adequate Supply of Primary Care

Policy levers with the potential to be used to boost the supply of primary care providers to meet the surging demand for primary care in the next several years include (1) payment policies for primary care physicians; (2) policies related to health workforce education, training, and accreditation; (3) support for safety net providers that provide primary care; and (4) the testing and evaluation of new models for primary care organization, delivery, and payment.⁴⁶

In 2006, the American College of Physicians offered a number of sweeping policy recommendations to avert what it said was a looming crisis in primary care. Among those recommendations were implementing the patient-centered medical home (PCMH) as a way of financing and delivering primary care; making fundamental reforms in the way that Medicare determines the value of physician services under the Medicare fee schedule; providing sustained and sufficient financial incentives for physicians to participate in programs to continuously improve, measure, and report on the quality of care provided to patients; and replacing the sustainable growth rate formula with an alternative that gives primary care practices sufficient and predictable reimbursement that is aligned with the goals of achieving quality and efficiency improvements and ensuring a sufficient supply of physicians.⁴⁷

In 2010, the Institute of Medicine recommended transforming the U.S. health care system to ensure that nurses—in particular advanced practice nurses such as nurse practitioners (NPs), clinical nurses, nurse anesthetists, and nurse midwives—practice to the full extent of their education and training to help meet the demand in America’s increasingly complex health system for safe, high-quality, and affordable health care.⁴⁸ It also recommended improvements in the nursing education system, involving nurses as full partners with physicians and other health care professionals in redesigning health care, and developing an improved infrastructure for collecting and analyzing workforce data.

As discussed below, the ACA provides for modest increases in payment to primary care physicians, the expansion of workforce programs for primary care providers, buttressing the primary care safety net by investing heavily in the expansion of federally qualified community health centers (FQHCs), and pilot testing of innovative payment and health care delivery models by the Center for Medicare & Medicaid Innovation at the Centers for Medicare & Medicaid Services (CMS).⁴⁹ It will be important to monitor and evaluate the impact of these and other efforts to ensure that the supply of primary care is adequate and aligned with the goals of achieving quality and efficiency improvements.

Payment Policies for Primary Care Physicians

In recent years, there has been a large and widening gap between the incomes of primary care physicians and those of physicians who specialize in surgery or other areas, discouraging medical school graduates from becoming primary care physicians.⁵⁰ The 2010 ACA includes several changes in payment that are intended to boost physicians’ willingness to provide primary care, including temporary payment increases for primary care physicians serving Medicare and Medicaid beneficiaries.⁵¹

Under the ACA, physicians will receive a 10 percent bonus payment on select primary care services furnished to Medicare beneficiaries in calendar years 2011 to 2016, which the Congressional Budget Office projects will cost Medicare roughly \$3.5 billion.⁵² Medicaid reimbursement for primary care physicians will be increased to at least Medicare payment levels in 2013 and 2014. Some research suggests that the modest, temporary payment increases for primary care physicians called for in the ACA are not likely to have a huge impact. In March 2011, Cunningham reported that states that currently have the fewest primary care physicians relative to the population—primarily in the South and Mountain West—already have reimbursement rates close to or exceeding Medicare rates.⁵³

The prevailing system of compensating primary care physicians in the United States is fee-for-service. Fee-for-service payment rewards providers for the volume of services rather than the quality or efficiency of care they provide. Moreover, it does not reward physicians for core components of the PCMH, including team-based care coordination and the development and use of health information technology. Moving away from fee-for-service payment to alternative mechanisms such as capitated payments that reward health care providers for the efficiency of care they provide could help transform the delivery of primary care. Additional work on the development and evaluation of new payment models for physicians is needed. Changing the way primary care physicians and other providers are paid could very well affect the amount and type of care they deliver and could help primary care providers cope with the coming coverage expansion under the ACA.⁵⁴

Policies Related to Health Workforce Education, Training, and Accreditation

The ACA reauthorizes existing health workforce programs and authorizes new programs that provide loan repayment, scholarships, fellowships, residencies, and other support to existing public health and clinical health workers.⁵⁵ It increases funding for loan forgiveness for clinicians willing to work in underserved areas, encouraging graduates to practice primary care, particularly in underserved geographic areas, and adds to the skills of practitioners already working in primary care.

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The ACA authorizes \$1.5 billion over five years to expand the National Health Service Corps, building on a \$300 million investment in the American Recovery and Reinvestment Act of 2009—and this investment is expected to result in an increase of more than 12,000 additional primary care physicians, nurse practitioners, and physician assistants by 2016.⁵⁶ The ACA also authorized a National Health Care Workforce Commission.

Whether Congress actually provides funding for the programs authorized by the ACA during the annual appropriations process remains to be seen. The ACA established state workforce grants, but Congress did not refund these in 2011.

Support for Safety Net Providers that Provide Primary Care

The ACA authorizes substantial investments in safety net providers that provide primary care. As an example, the law authorizes an extra \$11 billion for federally qualified health centers (FQHCs). FQHCs include community health centers, migrant health centers, and other entities defined by the Medicare and Medicaid statutes that provide comprehensive primary and preventive care (including medical, dental, and psychiatric care) to persons of all ages, regardless of their ability to pay.

About 19.5 million patients are currently seen in approximately 1,100 FQHCs in urban and rural areas throughout the country, and if Congress appropriates the full amount authorized by the ACA, the expectation is that FQHCs will be able to treat approximately 20 million more people by 2015. FQHCs already have many of the elements of a PCMH, with team-based care, the deployment of health information technology, and a heavy emphasis on care coordination.⁵⁷ It is expected that at least some FQHCs will be participants in the new provider-led entities known as accountable care organizations (ACOs) authorized in the ACA, which manage the full continuum of care for a defined population, as discussed below.

Testing and Evaluation of New Models for Health Care Organization and Payment

One policy lever for ensuring an adequate supply of primary health care is to support the testing and evaluation of innovative models for health care organization and delivery and new approaches to payment for health care that encourage the provision of high-quality, efficient care. The idea is to increase the efficiency with which the existing insured population is treated, so as to make room for treating the newly insured.

New models for health care organization and payment, as discussed below, include the following:

- PCMHs for primary care coordination
- Accountable care organizations (ACOs) that manage the full continuum of care for a defined population of at least 5,000 people

- Changes to state scope-of-practice laws for nonphysician primary care providers
- The use of health information technology to improve the quality, safety and efficiency of health care
- Improvements in the organization and delivery of health care intended to improve health at the community level.

Patient-centered medical homes (PCMHs) for primary care

The PCMH model has been widely endorsed by purchasers, payers, physicians, and patient-advocacy groups. Moreover, joint principles and guidelines for the PCMH were issued by four primary care organizations—the American Academy of Family Physicians, the American Academy of Pediatrics, the American College of Physicians, and the American Osteopathic Association.⁵⁸ The joint principles and guidelines specify that primary care in a PCMH should have the following characteristics: enhanced access to care, care continuity, practice-based team care, comprehensive care, coordinated care, population management, patient self-management, health information technology, evidence based care plans, patient-centered care, shared decisionmaking, cultural competency, and quality measurement and improvement.

The 2010 ACA gives states the option under Medicaid and CHIP to provide coordinated care to individuals with chronic conditions through a medical home or enhanced care coordination program, either on a pilot or statewide basis. Almost every state has now established such a medical home or enhanced care coordination program, and monitoring and evaluating the results of these state programs will be critical.⁵⁹

The ACA also authorizes federal grants/contracts to support medical homes through (1) community health teams that increase access to coordinated care; (2) community-based collaborative care networks for low-income populations; and a Primary Care Extension Center program to provide technical assistance to primary care programs. If Congress does not appropriate funding for the program, it may be quite challenging for states to obtain it.

ACOs that manage the full continuum of care

ACOs are provider-led entities that are to be “held accountable” for managing the full continuum of care for a defined population.⁶⁰ Medicare offers several ACO programs,⁶¹ including the Medicare voluntary shared savings program. The ACA also directed the Secretary of Health and Human Services to establish a voluntary Medicare shared savings program that “promotes accountability for a patient population and coordinates items and services under Medicare Parts A and B, and encourages investment in infrastructure and redesigned care processes for high quality and efficient service delivery” no later than January 1, 2012. Apart from Medicare, states have the ability to incorporate

ACOs into state-funded health programs such as Medicaid and CHIP.

A wide variety of provider collaborations can become ACOs in Medicare's shared savings program—for example, existing integrated delivery systems, physician networks such as independent practice associations, physician-hospital organizations, hospitals that have a primary care physician network, and multispecialty group practices. Each ACO seeking to participate in the program must have the ability to provide or manage the continuum of care as a real or virtually integrated delivery system; be of sufficient size to support comprehensive performance measurement and expenditure projections; and be a formal organization capable of internally distributing shared savings payments and prospectively planning budgets and resource needs.

When the Centers for Medicare and Medicaid Services (CMS) first released its proposed rule on ACOs in Medicare's shared savings program in early March 2011, hospital and doctor groups complained that the program created more risks than rewards.⁶² CMS subsequently modified its final rule to reduce the burden and cost for participating ACOs and to make the Medicare shared savings program more appealing to health care providers. Applications from ACOs seeking to participate in the shared savings program were received in January 2012, and the first Medicare ACOs are expected to launch in April 2012.

In part because ACOs are so new, there are considerable uncertainties and concerns about their implementation and effects. It will be important to monitor the development and impacts of ACOs on primary and other care and on health care providers as these entities expand under Medicare and elsewhere. Some critics fear that ACOs, which are supposed to improve the care of individuals and populations and curb the growth in health care expenditures, may actually reduce the quality of health care and increase costs.

Dartmouth University and the Brookings Institution are working with health systems, physicians, commercial health insurers, state governments, and the federal government to engage stakeholders in the challenge of addressing delivery system reform by piloting the ACO model.⁶³ Five diverse provider groups—Norton Healthcare in Louisville, Ky.; Carilion Clinic in Roanoke, Va.; Tucson Medical Center and affiliated physician groups in Tucson, Ariz.; Monarch HealthCare based in Irvine, Calif., and HealthCare Partners based in Torrance, Calif.—have been chosen to participate as pilot sites to implement the ACO model with private payers.

Changes to state scope-of-practice laws for nonphysician primary care providers

Strategies to boost the supply of primary care physicians through training programs will take decades to yield results. For that reason, policymakers may want to consider ways to accelerate primary care workforce expansion by examining how changes in state scope-of-practice policies might increase the supply of nonphysician practitioners such as nurse practitioners (NPs) and physician assistants (PAs).⁶⁴ According to the Association of American Medical Colleges (AAMC), if advanced practice nurses—usually NPs, 85 percent of whom are in primary practice—and PAs (only 26 percent of whom are in primary care practice and who must work under a physician) were able to provide 25 percent of primary care services currently delivered by physicians, the demand for primary care physicians would decrease by approximately 9 percent by 2025, or about 75,100 fewer full-time equivalent physicians.⁶⁵

State scope-of-practice laws, which determine the tasks nonphysician health professionals such as NPs and PAs can perform and the extent to which they may work independently, vary widely. Participants at a 2010 conference sponsored by the Josiah Macy Jr. Foundation called for changes in state and national legal, regulatory, and reimbursement policies to remove barriers that keep NPs and PAs from serving as primary care providers and leaders of PCMHs or other models of primary care delivery.⁶⁶ In 2010, the Institute of Medicine reported that legal barriers in many states prohibit advanced practice registered nurses (including NPs, nurse midwives, nurse anesthetists and psychiatric clinical nurse specialists) from practicing to their full education and training; it recommended that states remove such barriers to help meet the demand in America's increasingly complex health system for safe, high-quality, and affordable health care.⁶⁷

Changing state scope-of-practice laws is a highly politicized process, which can be expected to generate considerable controversy. Some physician organizations, including the American Academy of Family Physicians, oppose broadening scope-of-practice laws for advanced practice nurses. In the face of shortages of primary care physicians, however, some states, including Massachusetts and Michigan, have been reexamining their scope-of-practice laws with a view toward allowing NPs and PAs to practice to the fullest extent of their training. Massachusetts, for example, is considering legislation that would define "primary care provider" as a health care professional qualified to provide general medical care for common health care problems who (1) supervises, coordinates, prescribes, or otherwise provides or proposes health care services; (2) initiates referrals for specialist care; and (3) maintains continuity of care within the scope of practice.⁶⁸ The federal government could consider gathering and disseminating information about state scope-of-practice laws and creating financial incentives for states to adopt best practices in this area.

The use of health information technology to improve primary care

Many people hope that the widespread use of health information technology can help to improve the quality, safety, and efficiency of U.S. health care and expand access to primary and other health care. Currently, most health care providers in the United States use medical record systems based on paper, but efforts to change that situation are yielding successes.

The Health Information Technology for Economic and Clinical Health Act (HITECH)—enacted as part of the American Recovery and Reinvestment Act of 2009—included an unprecedented \$22 billion to accelerate the adoption and meaningful use of health information technology, including software, hardware and infrastructure, by physicians and hospitals.⁶⁹

The HITECH Act authorized \$18 billion for CMS to use as financial incentives to encourage physicians and hospitals to increase their use of electronic health records. Under the CMS electronic health record incentive program, eligible health care professionals and hospitals can qualify for Medicare and Medicaid incentive payments when they adopt certified electronic health record technology and use it to achieve specified objectives. Physicians can get up to \$44,000 in Medicare incentives for the “meaningful use” of electronic health records and up to \$63,750 in Medicaid incentives for such use.⁷⁰

The federal Office of the National Coordinator for Health Information Technology (ONC) is the entity at the forefront of the federal government’s efforts to develop the infrastructure to accelerate the adoption and use of health information technology. The HITECH Act authorized \$2 billion for the ONC for health information infrastructure, as well as another \$1.5 billion for the renovation and repair of health centers and the purchase of health information technology and other things within Indian Health Service facilities.

Currently, the ONC is funding, among other things, a program of 62 Regional Extension Centers to help more than 100,000 primary care providers adopt and use electronic health records. It is also funding the Beacon Communities Program, which has made \$220 million in grants available to 17 communities throughout the United States to serve as pilot communities for eventual wide-scale use of new health information technology to help achieve meaningful and measurable improvements in health quality, safety, and efficiency in the selected communities.⁷¹

Community-level health care and health initiatives

There are significant disparities among communities in health and in access to high-quality, affordable health care. One important way of addressing such disparities is to engage community participants, health care practitioners, and researchers in community-based, participatory health initiatives and research.⁷²

The Robert Wood Johnson Foundation’s Aligning Forces for Quality (AF4Q) initiative, for example, is an effort to help communities build health care systems where none existed. Begun in 2006, the AF4Q initiative is engaging people who give care, get care, and pay for care in local communities to collaborate in the development and investigation of fundamental, cutting-edge changes to improve health care and health across entire local communities.⁷³

The Community Transformation Grant (CTG) program authorized by the ACA represents a major new investment in community-level prevention.⁷⁴ CTG grants are available to state and local agencies, nonprofits, national networks of community-based organizations, and American Indian/Alaska Native tribal and territorial organizations. In the first round of grants, the Centers for Disease Control and Prevention (CDC) awarded \$103 million in grants to 61 states and communities (serving approximately 120 million Americans) to undertake initiatives related to their top community prevention priorities and needs. The hope is that CTG grants, by promoting healthy lifestyles, especially among population groups experiencing the greatest burden of chronic disease, will help improve health, reduce health disparities, and control health care spending. CDC’s Prevention and Public Health Fund Strategy and Implementation Office is responsible for monitoring CTG grantees and providing a framework for program evaluation, and all CTG grantees must provide an annual report to CDC about the activities carried out under their grants.

Primary Care Research Agenda and Data Needs

Research to evaluate the far-ranging effects of the ACA’s provisions on all aspects of the U.S. health care system will be critical, but evidence about the effects of the ACA on the U.S. health care system will take a while to emerge. In fact, some of the law’s provisions will not even take effect for a few more years.

Researchers and representatives of federal agencies at the December 2011 meeting were asked to identify some high-priority research questions pertaining to the adequacy of the supply of primary care in the United States in light of the ACA’s coverage expansions. In identifying research questions, they focused in particular on high-priority research questions to address between now and 2014, when the large coverage expansions under the ACA take effect.

Important Research Questions Pertaining to the Supply of Primary Care

1. How do the ACA's coverage expansions affect the willingness and capacity of primary care physicians to provide care? How do these effects vary by location, practice setting, patient's source of insurance coverage, age of physician, and other factors?
2. The ACA calls for a temporary increase in the fees that primary care physicians receive from Medicaid programs. Will that fee increase result in expanded access to primary care for Medicaid beneficiaries? Should the fee increase, be extended, or made permanent?
3. What is the scientific basis for state scope-of-practice laws? Do existing state laws limit the ability of nonphysician primary care providers such as advanced practice nurses (including NPs) to practice to the full extent of their education and training? If so, what can be done to change these laws?
4. What are the causes of the increasing concentration of Medicaid patients among larger group physician practices and practices based in institutions such as hospitals, academic medical centers, and community health centers? What are the implications of this trend for the supply and quality of primary care?
5. What is leading to the expansion of retail clinics in retail stores and walk-in urgent care centers, and what are the implications of such entities for the supply and quality of primary care?
6. How do intermediaries such as physician group practices and managed care organizations affect physicians' ability and willingness to provide primary care and to participate in public programs such as Medicaid?
7. How do Medicaid and other health insurance billing and paperwork requirements affect productivity and physicians' ability and willingness to provide primary care and to participate in public programs?
8. What are the key financial and other factors that determine U.S. medical students' decisions about whether to become primary care physicians or to become specialists? What incentives can be used to get more trainees to opt for primary care?
9. What are the key financial and other factors that determine physicians' decisions about where they are employed and under what organizational arrangements?
10. What do physicians in different settings with particular board certifications actually practice and what factors influence their decisions about what to practice? How many primary care physicians provide direct patient care as generalists and how many work in settings other than physician offices (e.g., as hospitalists)? How much blurring is there across primary care and other physician specialty lines in practice? What incentives might be used to encourage practicing physicians to offer direct primary care?
11. How many days and hours a week do primary care physicians who provide direct patient care devote to this? What are the characteristics of the patients they serve? How long are their office visits? How does this vary by location and other factors?
12. What are the obstacles to the establishment of PCMHs and how can they be overcome? What can be learned from the implementation of PCMHs by federally qualified health centers (FQHCs) in the Medicare FQHC Advanced Primary Care Practice demonstration?
13. How can health information technology be used to improve physicians' efficiency in providing primary care? How can such technology be used to improve the quality and safety of such care?
14. What are the impacts of the ACA's provisions regarding FQHCs on the supply of primary care?
15. How does the move to provider-led accountable care organizations (ACOs) with responsibility for managing the full continuum of care for a defined population affect primary care physicians' fees and incomes and willingness to participate in insurance programs such as Medicaid? What are the downstream impacts of ACOs for patients, specialists, hospital stays, etc.?

Data Needed to Monitor Changes in Primary Care

The data needed to monitor changes in the primary care workforce and the ability of primary care providers to meet increased demands for care from the ACA, as well as from the growth and aging of the U.S. population, include data on health care and shortages in local communities and states; data on physicians and nonphysician health care providers; and data on state initiatives related to primary care.

Data on health care and shortages in local communities and states

With the coverage expansions and other changes in the ACA, it will be important to track changes in access to primary care as the changes authorized in the ACA unfold. The Health Resource and Services Administration (HRSA) recognizes that information regarding health care access or other problems under the ACA should be developed as quickly as possible. For that reason, HRSA is considering approaches such as polling that would allow it to obtain information from consumers to identify health care access or other problems in real time.

HRSA's county-specific Area Resource File is a database containing more than 6,000 variables for each of the nation's counties from more than 50 sources, including the American Medical Association, the American Hospital Association, the U.S. Census Bureau, CMS, the Bureau of Labor Statistics in the U.S. Department of Labor, and the National Center for Health Statistics.⁷⁵ This database has information on health facilities, health professions, measures of resource scarcity, health statutes, economic activity, health training programs, and socioeconomic and environmental characteristics. Currently, HRSA is working

to change the Area Resource File to provide additional state-level information on the supply of nurse practitioners and other physician extenders. There may also be a possibility of providing data on providers from the AMA Physician Master File and Medicare claims data that is at a level of detail more fine-grained than county-level data.

The new Medicaid and CHIP Payment and Access Commission (MACPAC) is working on measures to track access to care among the beneficiaries of these program. Various states define what constitutes physician participation in Medicaid in differing ways (e.g., some states count physicians with just one Medicaid claim as participating). MACPAC is now in the process of gathering information about each state's definition and trying to figure out how Medicaid participation relates to adequacy of provider supply and Medicaid beneficiaries' access to care.

Data on Physicians

To track the ability of primary care providers to meet increased demands for care stemming from coverage expansions under the ACA, as well as from the growth and aging of the U.S. population, data are needed on the current and projected supply of primary care physicians in the United States by geographic locale, practice size and setting, organizational arrangement, etc. Current sources of data on physicians include HRSA's Area Resource File, the American Medical Association, the Center for Studying Health Systems Change, the Medical Group Management Association, and others. Nevertheless, there are gaping holes in data on physicians, including data on how many physicians actually provide primary care and how much care they provide.

Among the data that need to be collected from physicians are their demographic information, specialty, number of years in practice, participation in various insurance programs, number of patients served, method and amount of compensation, hours per week spent in the provision of primary care, populations served, and other items. As noted below, HRSA and the Agency for Healthcare Research and Quality (AHRQ) are in the process of trying to figure out what data on physicians are needed to answer policy questions and how best to develop such data.

HRSA's National Center for Health Workforce Analysis is involved in coordination efforts to make sure agencies in the U.S. Department of Health and Human Services are working together on a data and research agenda. The agencies involved include HRSA, the Office of the Assistant Secretary for Planning and Evaluation, the National Center for Health Statistics, and AHRQ, etc.

In addition, HRSA's National Center for Health Workforce Analysis is doing several things to improve data on the primary care workforce:

- It is working with Office of the Assistant Secretary for Planning and Evaluation within the U.S. Department of Health and Human Services to investigate whether existing sources of data on the supply side could be used to improve physician workforce data.
- It is working on an initiative with the Lewin Group and others to establish parameters for the development of minimum data sets for physicians and other primary care providers using census data. The plan is to develop a list of five to eight questions (e.g., what providers are doing new, what kind of care they are providing) that would provide a picture of big trends for HRSA's projections of doctors, NPs, PAs, and others in the health workforce. It will probably be five years before the first data from this initiative are available for the research community.

AHRQ is in the planning stages of developing an ongoing national physician survey in the United States, but full-scale data collection for such a survey would not begin until after 2014. A federally funded ongoing physician survey would fill a major gap in the data landscape. The American Medical Association used to conduct regular physician surveys and release the results, but that effort was discontinued; and the Center for Studying Health System Change has conducted several physician surveys, but its surveys occur only irregularly and are vulnerable to the vagaries of private funding.

AHRQ has funded a contract with the National Bureau of Economic Research and Mathematica to conduct a feasibility study for an ongoing national physician survey. The feasibility study has three components:

- Performance of an environmental scan to identify what data are already being collected and have the potential to answer questions
- Development of a strategic options—for example, whether and how to collaborate with entities already collecting data such as the provider survey portion of AHRQ's Medical Expenditure Panel Survey or the National Ambulatory Medical Care Survey of the Centers for Disease Control and Prevention; and whether the focus should be on physicians and/or their practices or some combination thereof
- Development of an early prototype of the proposed ongoing physician survey that will be field tested as an early experiment

An effort will be made in the feasibility study for the ongoing physician survey to develop data that can help answer important policy-relevant questions. A stakeholder process related to the survey was scheduled to be held in February 2012. Getting information that is reliable and valid from a physician survey will be challenging. The number of things on which data might be collected is almost infinite. Moreover, one of the first questions to be addressed is what is a primary care physician? What about physicians with a primary

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care designation who are not providing direct primary care (e.g., physicians employed as hospitalists)? What about specialist physicians (e.g., neonatologists) who are providing or could be providing primary care?

Data on nonphysician primary care providers

To track the supply of and access to primary care under the ACA, it will be critical to have data on nonphysician primary care providers such as NPs and PAs and the populations they serve. Some survey data on NPs and PAs are collected by the Medical Group Management Association, but the number of NPs practicing in primary care in the United States is not known.

There are definitional challenges related to determining the number of nonphysician primary care providers that are similar to those related to determining the number of physician primary care providers. HRSA's National Center for Health Workforce Analysis is in the process of developing a survey of 22,000 NPs in which it will ask NPs about their area of certification and their actual practice specialty.

The health providers for which HRSA's National Center for Health Workforce Analysis is developing five- to eight-question minimum data sets using census data will include—in addition to physicians—NPs, PAs, and others in the health workforce.

Data on state initiatives and laws

To monitor changes in the primary care workforce and the ability of primary care providers to meet increased demands for care from the ACA, data will be needed on health care and shortages in local communities and states; on physicians and nonphysician health care providers; and on state initiatives and demonstrations related to primary care, as well as on state laws and recent changes in laws governing the scope of practice of nonphysician primary care providers such as NPs and PAs. HRSA's National Center for Health Workforce Analysis is working with the states and has a cooperative agreement with the National Governors Association that might prove useful in the development of such data.

Hospital-Based Acute Care: Capacity And Trends, Responses To Increased Demand, And Policy Levers To Match Supply With Needs

Capacity and Trends in Hospital-Based Acute Care

Over the past decade, the number of hospitals in the United States has remained fairly constant. According to the American Hospital Association there were 5,754 hospitals in the United States in 2010.⁷⁶ Among these were:

- 4,985 community hospitals,
- 213 federal government hospitals,
- 433 nonfederal psychiatric hospitals, and
- 111 nonfederal long-term care hospitals.

In 2010, the number of beds in all U.S. hospitals surveyed by the American Hospital Association was 941,995.⁷⁷ Admissions to community hospitals, numbering 36.9 million, constituted the bulk of admissions. At the national level, the number of inpatient days per 10,000 population has declined in the past several years, and the use of hospital outpatient care has increased.⁷⁸ At the national level, hospital occupancy rates have generally swung between percentages in the low to upper 60s. Evidence from the Community Tracking Study suggests that hospitals do have problems with respect to the capacity of their emergency departments, but problems in other areas seem to be limited to only a few hospitals.⁷⁹

As documented by the Dartmouth Atlas Project (<http://www.dartmouthatlas.org/>), the utilization of hospital inpatient care varies greatly across the country. Thus, for example, hospitals in the Northeast have higher rates of hospital discharges per population than hospitals in the West do. The utilization of hospital inpatient care varies among local communities and hospitals in different communities, as well. Unwarranted geographic variation in the utilization of inpatient care suggests the possibility of opportunities to improve the efficiency with which such care is provided.

Hospitals' Responses to Increased Demand and Tightened Medicare Reimbursement

Accommodating the needs of the estimated 32 million Americans who will gain insurance coverage under the ACA by 2019 is not expected to pose the same challenges to hospitals as it does to primary care physicians. At the national level, it appears that some hospitals have excess capacity and are able to respond to increased demand if they are given the right price incentives, although safety net hospitals may be at risk. The ACA mandates several changes in hospital payment policy that are intended to constrain Medicare spending and improve the value of hospital services. Some of the available evidence regarding hospitals' responses to increased demand and to tightening or cuts in reimbursement is discussed below.

Hospitals' responses to increased demand

Recent evidence from Massachusetts, where far-reaching health reform in 2006 expanded health insurance coverage in the state, suggests that health utilization patterns changed as a result of the legislation. In a study published in 2010, Kolstad and Kowalski found that while the overall number of hospital admissions did not change following Massachusetts' expansion of health insurance coverage, hospitals' cost per discharge and cost per day declined. The researchers also found that length of stay, the number of the admissions originating from the emergency room, and hospitalizations for preventative conditions decreased.⁸⁰ The reasons for these findings are not known. One possibility is that following the expansion of coverage in Massachusetts, better care provided to newly insured populations in the community led to fewer hospitalizations, taking some of the pressure off the demand.

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The generalizability of Kolstad and Kowalski's findings about hospitals' responses to increased demand in Massachusetts to other situations is not known. The fact that Massachusetts is one of the few states that has been receiving a relatively large Medicaid disproportionate share hospital (DSH) payments may make Massachusetts different from other states.⁸¹ As discussed below, federal Medicare and Medicaid disproportionate share hospital (DSH) payments are going to be significantly reduced in the near future under the 2010 ACA.

Hospitals' responses to tightening of medicare payment policies

Historical evidence regarding hospitals' responses to the implementation of Medicare's diagnosis-related group prospective payment system in 1983 suggests that hospitals generally can change their production function to accommodate changes in payment incentives. Hospitals, particularly teaching institutions, responded to this challenge by developing new management reports, by analyzing physicians' practice patterns, and by estimating more precisely the fixed and variable costs of various ancillary services.⁸²

Some evidence suggests that for-profit, nonprofit, and government hospitals may differ in their responses to price incentives. In a study published in 2000, for example, Duggan found that the change in financial incentives created when California's DSH program increased the reimbursement rate for patients insured by Medicaid led private, for-profit and private, not-for-profit hospitals to respond by cream skimming the most profitable indigent patients, leaving public hospitals with the more complex and less generously reimbursed cases.⁸³

One particularly important change under the ACA is drastic cuts in federal Medicare and Medicaid disproportionate share hospital (DSH) payments. Federal government DSH payments have been used by states since the 1980s to provide financial assistance to safety net hospitals that serve a large percentage of uninsured, low-income and Medicaid patients. For many safety net hospitals, DSH payments constitute a large portion of the compensation they receive. Federal DSH payments are highly concentrated in a few states (e.g., New York, California).⁸⁴ In 2009, federal DSH payments totaled about \$10.1 billion for Medicare and \$11.3 billion for Medicaid.⁸⁵

Section 2551 of the ACA specifies aggregate reductions in federal Medicaid DSH payments of \$14.1 billion between 2014 and 2020 (\$5 billion in 2014, \$6 billion in 2015, \$6 billion in 2016, \$1.8 billion in 2017, \$5 billion in 2018, \$5.6 billion in 2019, and \$4 billion in 2020).⁸⁶ Section 3133 of the ACA requires that federal Medicare DSH payments be reduced by 75 percent beginning in fiscal year 2014 and then be adjusted by the Secretary of Health and Human Services using factors specified in the law to better account for hospitals' uncompensated care costs. Aggregate federal Medicare DSH expenditures are expected to decline by \$22 billion over 10 years.⁸⁷

The historical lessons from the Balanced Budget Act of 1997 are useful for understanding how hospitals respond to tightening of Medicare reimbursement. The Balanced Budget Act of 1997 included the largest cuts in the history of Medicare and initiated several changes to Medicare payment policy in an effort to slow growth of hospital Medicare payments and ensure the future of the Medicare Hospital Insurance Trust Fund. These changes were implemented at a time when hospitals in the United States faced private sector payment restraints.⁸⁸ Following the implementation of the Balanced Budget Act, hospitals instituted measures to contain Medicare cost growth, to expand outpatient care, and to contain hospital staffing. Some hospitals reduced their charity care activities and indigent care became more concentrated in other hospitals.⁸⁹ Moreover, there was some evidence that core safety net hospitals had lower quality than non-safety net hospitals.

Policy Levers to Ensure an Adequate Supply of Hospital-Based Acute Care

Research on hospitals' responses following the implementation of Medicare's prospective payment system in 1983 suggest that hospitals are generally capable, with the correct price incentives, of responding to increases in the demand for hospital-based acute care services. In light of the ACA's payment cuts for federal Medicare and Medicaid DSH allotments, however, the situation for safety net hospitals that serve low-income and uninsured patients with more complex needs and less generous reimbursement should be monitored closely. The fundamental challenge in the case of hospitals, as in the case of other health care providers, is to align health care resources and capabilities with patients' and communities' needs.

Researchers at the Dartmouth Institute for Health Policy & Clinical Practices have suggested reducing unwarranted variations through improvements in the organization and delivery of care and a move to payment mechanisms such as capitation and/or pay for performance to reward health care providers for the quality and efficiency of their services rather than the volume of services.⁹⁰ The tremendous variations in the use of inpatient care hospitals around the country suggest that there may be an opportunity for efficiency gains in some areas. As described below, there are ongoing experiments in payment for hospital-based acute care at both the federal and state levels.

Federal payment innovations for hospitals

Hospitals in the United States are paid by several quite distinct methods, depending on who is paying.⁹¹ The Medicare program typically pays hospitals a flat fee per discharge, with adjustments for specific diagnostic categories (e.g., a hip replacement without complications). Private insurers pay hospitals predominantly on the basis of discharges, per diems, or discounted charges that are negotiated annually between each hospital and insurance carrier.⁹²

The ACA authorized the establishment of the Center for Medicare & Medicaid Innovation within CMS to research, develop, test, and expand innovative payment and delivery arrangements to reduce federal spending while preserving or enhancing the quality of care. Currently, the CMS Center for Medicare & Medicaid Innovation is working in partnership with hospitals and physicians to develop innovative models of bundling payments to improve care coordination for Medicare beneficiaries who are hospitalized and when they leave the hospital.⁹³

A Dartmouth Health Atlas report on care after hospitalization suggested that better coordination of care for patients leaving the hospital after a stay to treat an acute or chronic illness could reduce readmission rates and improve patients' lives while reducing costs.⁹⁴ Under Medicare's post-acute care bundling demonstration, hospitals and physicians are being encouraged to collaborate to bid on providing high-quality, low-cost, inpatient and post-discharge care to patients under any of four different payment models:⁹⁵

- *Model 1:* Retrospective payment models for the acute inpatient hospital stay only
- *Model 2:* Retrospective bundled payment models for hospitals, physicians, and post-acute providers for an episode of care consisting of an inpatient hospital stay followed by post-acute care
- *Model 3:* Retrospective bundled payment models for post-acute care where the bundle does not include the acute inpatient hospital stay
- *Model 4:* Prospectively-administered bundled payment models for hospitals and physicians for the acute inpatient hospital stay only

It is hoped that bundling payments across episodes of care will allow physicians and hospitals to limit the use of low-value services, coordinate patient care and work together to improve efficiency. It is also thought that bundled payment might also be an effective way to control health care costs. The Medicare bundled payment initiative for inpatient and post-discharge care is just getting underway and should be monitored closely.

State payment innovations for hospitals

Payment innovations to give clinicians more financial autonomy and provide rewards to providers who can organize and allocate resources more effectively from a clinical standpoint can be adopted not only at the national level but also at the state level. The Maryland Health Services Cost Review Commission, for example, is planning a pilot project in which 25 to 30 rural and urban/suburban hospitals will voluntarily agree to global, episode-based, or bundled payment arrangements. State payment innovations such as Maryland's will provide opportunities for learning about what works.

Hospital-Based Acute Care Research Agenda and Data Needs

The fundamental challenge in the case of hospitals, as in the case of other health care providers, is to align health care resources and capabilities with patients' and communities' needs. In light of the ACA's payment cuts for federal Medicare and Medicaid DSH allotments, the situation for safety net hospitals that serve low-income and uninsured patients with more complex needs and less generous reimbursement should be monitored closely. For other hospitals, there may be opportunities to improve the efficiency with which hospital-based acute care is provided by instituting changes in payment incentives.

Important research questions pertaining to the supply of hospital-based acute care

1. What are the effects of the ACA's across-the-board tightening of Medicare payments for hospital-based care?
2. What are the effects of the ACA's very substantial cuts in federal Medicare and Medicaid DSH payments on safety net hospitals?
3. Can the innovative payment models designed to increase in efficiency in the health sector—including the Medicare post-acute care bundling demonstration and ACOs—help alleviate pressures on hospitals from the coverage expansions in the ACA?
4. What effect do state certificate-of-need (CON) laws aimed at restraining health care facility costs and allowing coordinated planning of new services and construction have on the supply of hospital-based acute care?

Data needed to monitor changes in hospital-based acute care

The data needed to monitor changes in the supply of hospital-based acute care are available from several sources. Aggregate data on U.S. hospitals are collected by the American Hospital Association, which conducts an annual survey of hospitals.⁹⁶ Other sources of data include AHRQ's Healthcare Cost and Utilization Project (data on volume and type of admissions; Medicare Hospital Compare (data on hospital quality); the American Hospital Association (data on hospital staffing); and Medicare hospital cost reports.

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