Rx for Health Reform

Affordable, Accessible, Accountable

State Roles in Delivery System Reform

National Governors Association

Task Force Members

Governor Jim Douglas
Co-Chair, Vermont

Governor Joe Manchin
Co-Chair, West Virginia

Governor Mitch Daniels
Indiana

Governor Haley Barbour
Mississippi

Governor John Lynch
New Hampshire

Governor Ted Kulongoski
Oregon

Rx for Health Reform

AFFORDABLE, ACCESSIBLE, ACCOUNTABLE

State Roles in Delivery System Reform

National Governors Association

THE NATIONAL GOVERNORS ASSOCIATION (NGA), founded in 1908, is the instrument through which the nation's governors collectively influence the development and implementation of national policy and apply creative leadership to state issues. Its members are the governors of the 50 states, three territories and two commonwealths.

The NGA Center for Best Practices is the nation's only dedicated consulting firm for governors and their key policy staff. The NGA Center's mission is to develop and implement innovative solutions to public policy challenges. Through the staff of the NGA Center, governors and their policy advisors can:

- Quickly learn about what works, what doesn't and what lessons can be learned from other governors grappling with the same problems;
- Obtain specialized assistance in designing and implementing new programs or improving the effectiveness of current programs;
- Receive up-to-date, comprehensive information about what is happening in other state capitals and in Washington, D.C., so governors are aware of cutting-edge policies; and
- Learn about emerging national trends and their implications for states, so governors can prepare to meet future demands.

For more information about NGA and the Center for Best Practices, please visit www.nga.org.

Acknowledgements

This report was developed as part of 2009-2010 NGA Chair's Initiative, *Rx for Health Reform: Affordable, Accessible, Accountable.* NGA Chair Vermont Governor Jim Douglas has focused the initiative on the critical need for health reform to reduce health care costs, ensure Americans get the highest quality of care, and improve access to health insurance coverage.

Comprehensive reforms to improve health system performance and efficiency are critical components of the initiative. Governor Douglas, the Task Force Governors, and the NGA Center would like to thank the authors for their valuable contributions in expanding the tools available to governors and state leaders to address these concerns. Specifically, the NGA Center would like to express its gratitude and appreciation to:

- **Greg Moody, Lisa Duchon and Vernon Smith**—Health Management Associates (HMA)
- **Debra Lipson and Melanie Au**—Mathematica Policy Research, Inc.
- **Sharon Moffatt and Pellavi Sharma**—Association of State and Territorial Health Officials (ASHTO)
- **Harold Miller**—Center for Healthcare Quality and Payment Reform

The NGA Center would also like to thank the supporters of the initiative who shared in our recognition of these important opportunities for states. The *Rx for Health Reform* initiative received funding from a broad range of stakeholders, which are listed on the last page of the report. Their contributions supported a variety of activities and publications.

The NGA Center would especially like to thank The Commonwealth Fund and the Centers for Disease Control and Prevention for their support of this publication.

About the Authors

Greg Moody, a senior consultant at HMA, specializes in health policy planning, budgeting and program development, and currently serves as the interim director of the Health Policy Institute of Ohio.

Lisa Duchon, a senior consultant at HMA, specializes in Medicaid and CHIP programs, specifically addressing performance measurement, pay-for-performance, and expanding coverage for uninsured and vulnerable populations.

Vernon Smith, a managing principal at HMA, specializes in Medicaid and CHIP programs, focusing on health care policy development and evaluation in health care financing and delivery, managed care, quality improvement, reimbursements, and strategic planning.

Debra Lipson, a senior researcher at Mathematica, has expertise in a wide range of state health policy issues, including Medicaid financing, long-term care service delivery innovations, and federal and state programs to cover the uninsured.

Melanie Au, a researcher at Mathematica, has expertise in quality of care issues, including disparities in minority health care, HIV/AIDS care delivery, and use of health information technology for care delivery and coordination.

Sharon Moffatt, chief of health promotion and disease prevention at ASTHO, has worked in chronic disease prevention, maternal child health, school health, as well as with a variety of community partners to systematically improve the public's health.

Pellavi Sharma, senior analyst in primary care at ASTHO, focuses on access to care issues, including the safety net and intersections between state health agencies and community health centers.

Harold D. Miller, executive director of the Center for Healthcare Quality and Payment Reform, leads initiatives to design and encourage implementation of reforms to health care payment and delivery systems that will increase quality, control costs, and improve care coordination.

Table of Contents

EXECUTIVE SUMMARY 3

INTRODUCTION IMPORTANCE OF STATES IN DELIVERY SYSTEM REFORMS 5

CHAPTER 1 HEALTH CARE QUALITY IMPROVEMENT—THE BASICS 9
Greg Moody, Lisa Duchon and Vernon Smith
Health Management Associates

CHAPTER 2 CARE COORDINATION AND DISEASE MANAGEMENT 25
Debra Lipson and Melanie Au
Mathematica Policy Research, Inc.

CHAPTER 3 PRIMARY CARE AND PREVENTION 43
Sharon Moffatt and Pellavi Sharma
Association of State and Territorial Health Officials
Jason Hsieh
National Governors Association Center for Best Practices

CHAPTER 4 HEALTH CARE PAYMENT SYSTEMS 55
Harold Miller
Center for Healthcare Quality and Payment Reform

CHAPTER 5 THE ROLE OF MEDICAID IN DELIVERY SYSTEM REFORMS 75
Caryn Marks, Molly Voris, and Kathleen Nolan
National Governors Association Center for Best Practices

CONCLUSION 85

NOTES 87

Executive Summary

In many ways, the United States has a world-class health care system. The most technologically and medically advanced health care can be found in the nation's premier health facilities and in the high-quality health care organizations that operate throughout the nation. Many individuals in the U.S. health care system have a wide range of choices when it comes to health services, physicians, and hospitals.

Despite these advantages, Americans pay too much for care, often with below average outcomes, and there are still too many individuals who do not have access to quality health insurance. A lack of focus on the importance of a high-performing health care system has hindered efforts to create a more effective system and achieve better results.

Many leading experts have highlighted the need for system improvements to control skyrocketing health care costs and, simultaneously, improve health outcomes. Cost, quality, and efficiency must be addressed to get better value for every health care dollar and sustain health coverage, especially in the environment of expanding health insurance programs.

This report outlines the evidence in health system reforms, as well as the opportunities for governors to lead these efforts. With contributions from experts in the health care policy field, the report provides tools and levers available to states to create a more efficient and effective health care system. After an introduction, individual chapters touch on the following four focus areas as well as how the federal health law provisions affect these areas:

- **Chapter 1: Health Care Quality Improvement.** This is a key driver in moving toward a high-performing health care system. Advances can be achieved through measuring quality and value, aligning policies and goals around critical improvement areas, and ensuring financial incentives drive good health outcomes. This chapter outlines the major leverage points where states can exercise efforts to ensure transparent and consistent quality in health care delivery, including measurement initiatives, the health information technology (HIT) infrastructure, and the purchasing of quality health care.
- **Chapter 2: Care Coordination and Disease Management.** These are critical tools for improving health and managing the costs of chronic diseases. Over the past few years, a number of programs and strategies have been implemented to coordinate and manage disease, with mixed results. This chapter sorts through the evidence of what has worked, identifies the critical components and features of successful programs, and provides states with a framework for renewed progress in these areas.
- **Chapter 3: Primary Care and Prevention.** These are the cornerstones of good health outcomes, but the nation's health care system is not organized or incentivized to encourage consistent use of or access to prevention services and primary care. This chapter provides states with strategies for improving primary care and public health. The authors identify opportunities for working across these fields to accelerate progress in controlling costs.
- **Chapter 4: Health Care Payment Systems.** Such tools are necessary to combat the current problem of paying for volume rather than value. This chapter provides an overview of the major types of payment reforms that can be targeted toward hospital and primary care, such as those that pay based on performance measures or combine payments to separate providers. It also explores the structural and process changes that hospitals, specialists, and primary care practices need to make to adopt new payment systems.
- **Chapter 5: Medicaid's Role in the Health Delivery System.** Because Medicaid will soon cover as many as 75 million people, it is an important vehicle for states to enact delivery system reforms that will improve programmatic quality and decrease health care spending. This chapter provides options and opportunities for Medicaid involvement in systematic reform through quality improvement, care coordination and disease management, primary care and prevention, and payment policies.

INTRODUCTION

Importance of States in Delivery System Reforms

With the cost of health care rising faster than the gross domestic product (GDP), it is vital for the United States to improve the delivery of health care services. While federal health reform has largely focused on health insurance coverage, there needs to be greater emphasis on system improvements that control the growth of health care costs, achieve better results, and improve the health of individuals and populations.

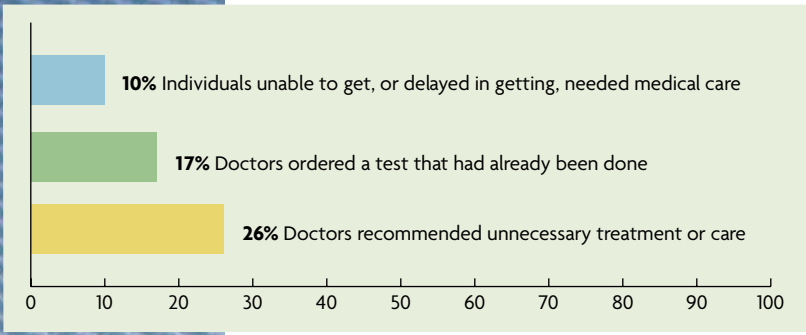
The U.S. spends almost $7,500 per person for health services each year—more than double the national average in other industrialized countries[1]—yet health outcomes are no better (Figure 1). Too often, the system encourages inefficiencies; fails to provide needed, high-quality services; and does not promote disease prevention, instead opting for expensive care after patients are already sick.

Many tools are available to improve system performance and increase sustainability. Changing the way care is delivered, aligning payments, and promoting health and wellness can result in a healthier population and drive value in the health care system. These efforts will be vital in guiding future progress. Business leaders, medical professionals, and governments should continue to make health care system reforms and performance improvements priorities in their work.

Governors have and will continue to be key players in successful health system reform efforts. They have the ability to set a vision and create the momentum for change in their states. Through initiatives ranging from prevention and wellness to payment reform and quality measurement, governors can make their health care systems more efficient and effective, leading to cost containment and better outcomes for state residents.

State policy efforts to improve health care delivery range from regulatory requirements to public education campaigns to market-based interventions. There are numerous best practices and evidence-based approaches that can be used as models for these programs. State and national government efforts and payer-driven initiatives can serve as a guide for managing health care costs and improving outcomes.

FIGURE 1. Percentage of Americans with Ineffective or Untimely Care



SOURCE: "Public Views on U.S. Health System Organization: A Call for New Directions." Commonwealth Fund, 2008 and MEPS Survey, 2007.

LANDSCAPE FOR CHANGE

Even as government leaders stand ready to move forward with system improvements, they do so at a time of major difficulty. State budgets are strained; large-scale fiscal challenges are forecast for several more years. This has resulted in stretched state agency personnel, limited state investment in health care improvements, and reduced private-sector interest in reforms as the health marketplace struggles to overcome its own economic difficulties.

While the current fiscal situation limits the capacity for system reform, it also makes it a critical necessity. The cost of health care cannot continue to increase at the current rate. As more individuals are offered coverage under new and

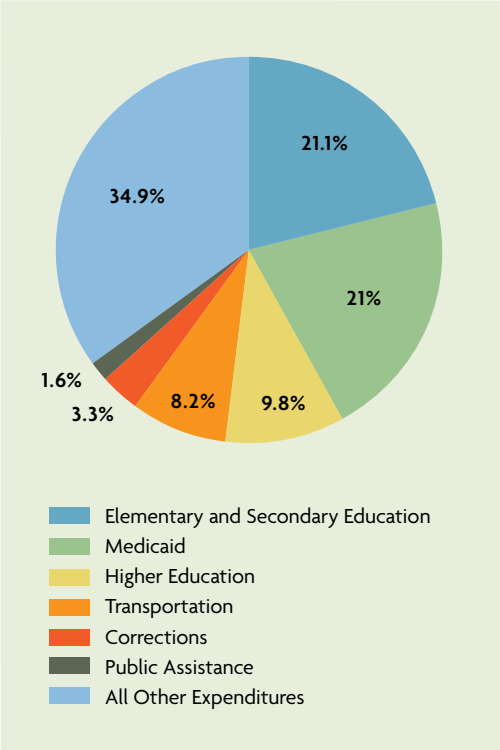
expanded programs in the wake of federal reform, cost containment and solid system performance become even more essential. Among the many challenges governors face, the issue of access to both affordable coverage and high-quality care remains a top priority (Figure 2).

The Patient Protection and Affordable Care Act (PPACA)—the federal health reform law—passed in March 2010. It expands coverage to millions of uninsured Americans and offers a number of pilot programs and grants to address health system improvements. The law offers support for patient-centered medical homes, bundling payments, preventive services, Medicare/Medicaid integrated care, and other important system reforms.

PPACA provides states with new opportunities and leverage points to make changes and renews the imperative to address system performance. While the sheer size and impact of the new law could make it more challenging to drive system improvements in the short term, governors should work to incorporate these newly created initiatives into their strategic planning for health reform. After all, without effective cost containment and a more efficient system overall, the coverage expansions in PPACA may not be sustainable.

As much-publicized changes to the health insurance system kick in over the next several years, governors have the opportunity to use the populations that will gain coverage in their states as a leverage point. As more residents get coverage through the Medicaid expansion, the new state-based health insurance exchanges, and existing state health programs, states will have the option to build system improvement initiatives into their negotiation contracting and certification agreements with carriers and providers. Without such efforts, states will struggle to contain costs and expand coverage in a system where spending is already rising more quickly than GDP.

FIGURE 2. Medicaid as a Component of Total State Spending (FY 2009)



SOURCE: The Fiscal Survey of the States, National Governors Association and National Association of State Budget Officers, Spring 2010

GOVERNMENT-LED HEALTH SYSTEM REFORMS

State governments have long recognized and acted to address the challenges in our health care system. The last few years have seen a range of activities and initiatives in a majority of states across the country, including cooperative efforts with the private sector, communication and information-sharing initiatives, and other innovative programs to boost health outcomes, control costs, and improve system function.

The federal government, likewise, can use Medicare, community health clinic funding, employee health plan purchasing, and public health efforts to improve system performance. The federal health reform law, the health information technology funding provided by the 2009 American Recovery and Reinvestment Act and other federal initiatives will accelerate reforms and increase the potential for federal-state partnerships.

State Leverage for Reforms

Governors have multiple leverage points from which to tackle system reforms. These levers can be used in conjunction or targeted to specific efforts. The following are the tools available to governors to lead or contribute to these efforts:

1. **Establish initiatives and spotlight opportunities for improvement.** The challenges in the health care system are often not well understood by the public or agreed on by stakeholder groups. Governors have a critical opportunity to formulate a vision for improvement in their states

and bring the resources of all stakeholders to the table. They can lead to develop and highlight ways in which the system can work more efficiently—while still providing high-quality, accessible care—by strategically coordinating system improvements with health reform implementation, participating in public health efforts, or working with stakeholders to communicate a unified message.

2. **Implement policy changes and regulatory reforms.** State government regulation mostly touches on the health care provider and insurer communities. As such, governors can use that regulatory role to implement policies that support system improvements and remove barriers to reform efforts, including through provider and facility licensure and the oversight of health insurance. With stakeholder buy-in, additional certification processes can allow providers and plans to meet reporting requirements and comply with new rules that advance state system improvements.

3. **Leverage state purchasing power to drive change adoption.** Through public health, Medicaid, state employees, safety net and other programs, states are a sizeable purchaser of health care services. States can also collaborate with private purchasers to ensure that efforts encompass a broad range of providers and patients across the state.

   Medicaid purchasing has been a frequently used health reform tool, but there is concern that the program does not give states enough leverage to make sustained and systemic changes. A number of states have recently worked to enhance their market influence in system reforms by combining purchasing power through both Medicaid and state employee insurance plans with changes to have a greater impact.

   In addition, starting in 2014, the governors' market power could be greatly increased with an expanded Medicaid population and an influx of enrollees into private health insurance through the state-run exchanges. These will give states more leverage to push for greater changes in the health care system.

   Taken together, these approaches will help drive system improvement. All can be enhanced with broad participation from key stakeholders and accelerated when strategically aligned to a clear vision for a high-performance health system.

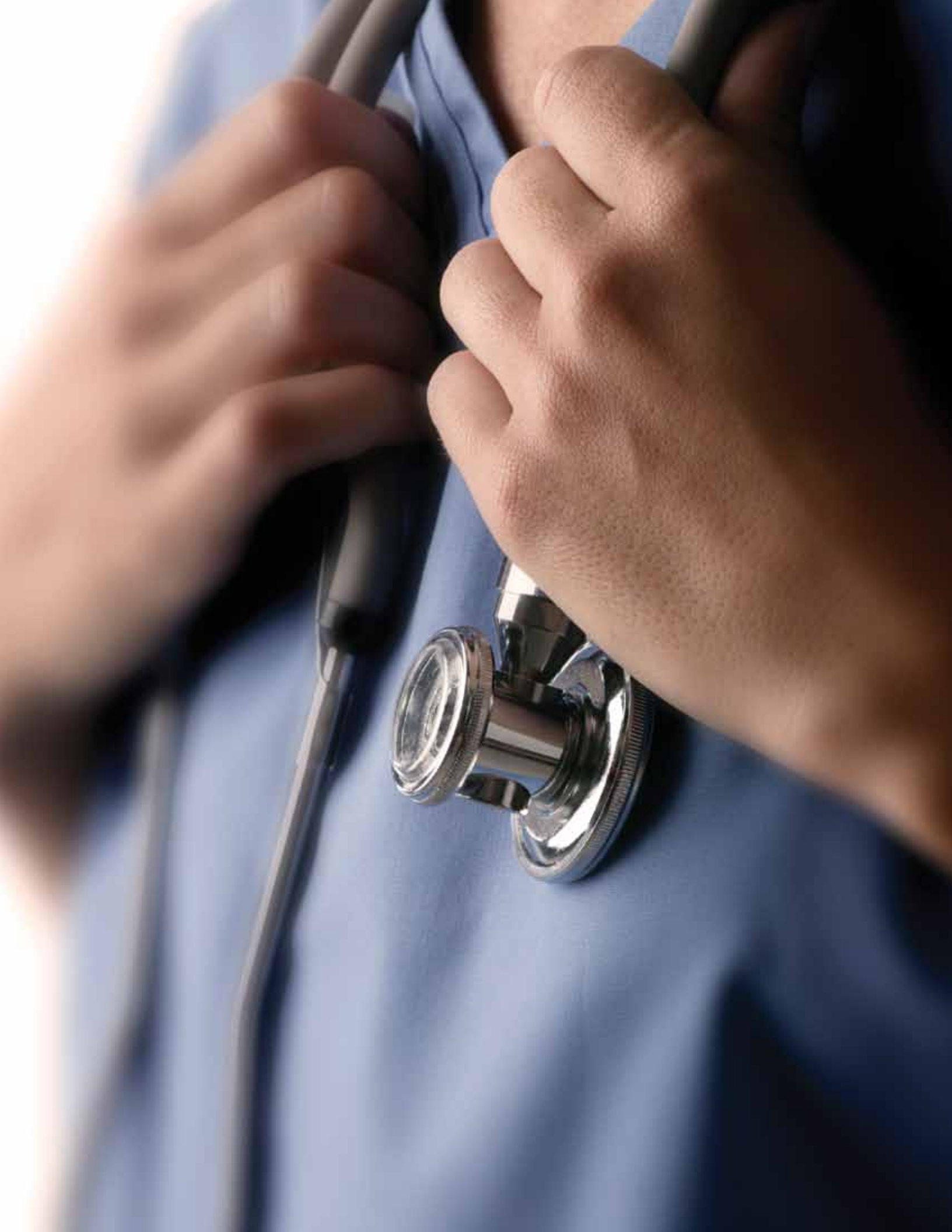
GOVERNORS ARE CRITICAL TO BROAD-BASED SYSTEM REFORMS

Through public programs, regulatory authority and public visibility, the support of governors for health care system improvements is critical to attaining long-term change. With the expansions of states' roles in health programs in PPACA, the opportunity for state leadership in system reforms has never been greater or more essential.

Strategic, coordinated efforts are critical to sustained system improvements. By working with the private sector and through state and federal programs, governors are poised to continue this important work.

To assist states, this report assembles models for achieving more efficient and effective care, identifies successful methods and lessons learned, and provides guidance to state policymakers who are working to improve the health care system. Because of its major relevance to these issues and to states, system improvements that can be driven through Medicaid are also highlighted.

Through targeted and coordinated efforts in quality measurement, care coordination, primary care and prevention, and payment reforms, states have many options to improve health system performance. Used effectively, these powerful tools can control costs, improve the quality of care, and enhance the health of all individuals.



CHAPTER 1

Health Care Quality Improvement—The Basics

Greg Moody, Lisa Duchon and Vernon Smith
Health Management Associates

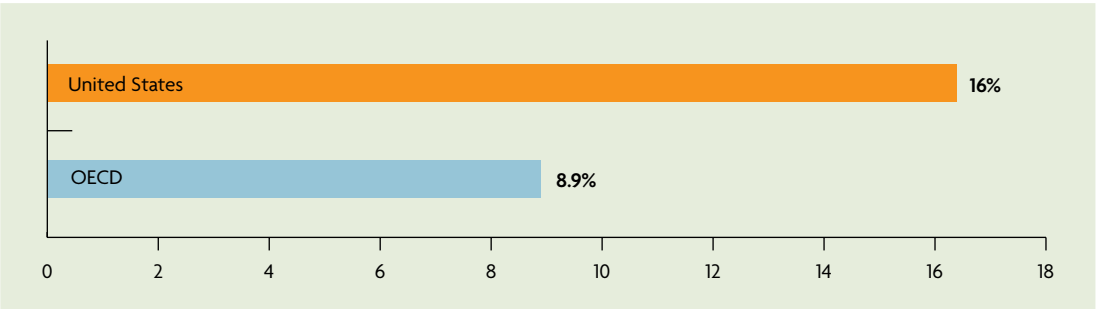
Until recently, most Americans took for granted that the quality of their health care was the best in the world. Then, in 1999, the Institute of Medicine (IOM) upset conventional wisdom when it reported that as many as 98,000 hospitalized Americans die each year due to medical errors. The IOM report, *To Err Is Human: Building a Safer Health System,* and a 2001 follow-up report, *Crossing the Quality Chasm,* presented clear and urgent evidence that Americans often do not receive the care they need or receive care that causes harm.

Significant quality improvements are within reach, however. The U.S. already offers some of the most advanced health care in the world, with some of the best trained providers and the most advanced technology. Today's challenge is to increase the value of health care spending by improving the quality of care while also controlling costs. Reaching these goals requires multiple strategies. Long-term efforts include improving individuals' health status through public health initiatives and reducing the incidence of disease and chronic conditions. Near-term strategies include improving the efficiency and effectiveness of health care delivery. This later strategy—to improve systems of care—is the focus of this chapter.

Current systems of care in this country often are a*d hoc,* poorly organized, uncoordinated, complex, and inefficient. They lack basic information to relate services to health outcomes, and they reward the quantity of services provided without regard to their quality. As a result of these inefficiencies, Americans spend twice as much for health care compared to citizens in other industrialized nations, yet health outcomes are no better (Figure 3).

The recent passage of national health care reform was, in large part, a response to spending ever more on health services without comparable gains in quality, health outcomes, or insurance coverage. Under federal health reform, states will have the opportunity to expand their influence as purchasers of health coverage, regulators of insurance and providers, and advocates for public health. These roles will grow with the federal expansion of the Medicaid program to 133 percent of poverty and the creation of state-run insurance exchanges. Assuming sufficient state flexibility, these coverage expansions provide additional

FIGURE 3. Health Care Spending in U.S. Compared to OECD



SOURCE: OECD Health Data 2009.

opportunities for state innovation and creativity to drive health system change.

In addition to coverage expansions, the Patient Protection and Affordable Care Act also calls for a National Strategy to Improve Health Care Quality. States will expand their partnership with the federal government as "learning laboratories" for quality and value-based purchasing initiatives. New federal funding will be available for state and community demonstrations, pilot projects to test quality improvement strategies, and efforts to better coordinate Medicare and Medicaid.

This chapter covers a variety of ways states can improve health care quality and safety by discussing:

- Progress and challenges to date and new opportunities created under federal reform;
- The state of health care quality in the U.S. and evidence that suggests there is significant room for improvement;
- Examples of state strategies to advance quality improvement; and
- Steps states can take to further develop a quality agenda.

The goal is to provide state policymakers with a quick reference to the substantial work already underway to improve health care quality and to stimulate new ideas for any state that wants to further improve health system performance.

HEALTH CARE QUALITY IN THE UNITED STATES

Every day, millions of Americans receive high-quality care that helps them maintain or restore their health. However, far too many individuals do not. This overview of health care quality in the United States takes into account the following factors:

- A definition of quality and the key attributes of high-quality care;
- A sample of the evidence that shows health care quality is not what it should be;
- Examples of quality measures to benchmark performance;
- Current initiatives to improve quality; and
- Barriers to achieving a system-wide transformation in health care quality.

Defining Quality

The IOM defines quality as "the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge."[2] The institute examined the "chasm" between what health care is and what it could be, and identified the following six areas for improvement. High quality care should be:

- **Safe.** Patients ought to be as safe in health care facilities as they are in their own homes.
- **Timely.** Care should continually reduce waiting times and delays for both patients and those who give care.
- **Effective.** The health care system should match care to science, avoiding both overuse of ineffective care and underuse of effective care.
- **Efficient.** The reduction of waste, and by extension, the reduction of the total cost of care should be never ending.
- **Patient-centered.** Health care should honor the individual patient, respecting the patient's choices, culture, social context, and specific needs.
- **Equitable.** The system should seek to close racial and ethnic gaps in health status.[3]

FACING THE EVIDENCE

A growing body of evidence shows that Americans often receive care that does not meet IOM's framework for quality care because it is:

- **Not safe.** As noted earlier, medical errors are the cause of unnecessary death and injury to tens of thousands of hospitalized Americans each year.[4] A 2006 IOM report estimated that preventable medication errors injure 1.5 million people in hospitals, long-term care, and outpatient settings at costs upward of $4 billion annually.[5]
- **Not timely.** Delayed screening, diagnosis and treatment for mental disorders, cancers, and certain acute conditions often lead to unnecessary suffering and even death.[6] A 2008 study by The Commonwealth Fund found that the U.S. fell to last place among 19 industrialized nations related to deaths that might have been prevented with timely and effective care.[7]

- **Not effective.** Overuse, underuse, and medical errors all contribute to ineffective care. Each year, an estimated 18,000 people die because they do not receive effective interventions.[8] Americans receive just 55 percent of recommended treatments for preventive care, acute care, and chronic care management.[9] In recent studies, only 24 percent of diabetes patients received all recommended testing; only 45 percent of heart attack patients received potentially life-saving beta-blocker medication; only 64 percent of elderly patients were offered a vaccine to protect against pneumonia, an important cause of death; and only 41 percent of children received recommended preventive care.[10]

- **Not efficient.** Various studies estimate that 20 percent to 30 percent of all health care spending is for unneeded care.[11] The greater the number of physicians, hospital beds, and diagnostic imaging equipment in a community, the higher the rates are of hospitalization, physician visits, and testing.[12] One study found that the unnecessary use of three low-cost tests—urinalysis, electrocardiograms, and x-rays—cost the system $50 million to $200 million annually.[13] Compared to citizens of other countries, Americans are more likely to experience unavailability of test results or records at the time of an appointment, duplication of testing, or conflicting information among a patient's various providers.[14]

- **Not patient-centered.** Physicians often miss the opportunity to communicate effectively with patients and other caregivers; involve patients in treatment decisions; or recognize patients' preferences, beliefs, and concerns.[15] Such effectiveness of communication is linked with an increased likelihood that patients will accept advice, adhere to treatment, and be satisfied with their care.[16] Almost half of all Americans feel that their doctor does not spend enough time with them and 40 percent feel that their doctor does not always listen carefully or explain things clearly.[17]

- **Not equitable.** The care that racial and ethnic minorities receive often is of lower quality compared to the care received by whites. Racial segregation and other health system disparities are contributing factors in unequal care. For example, primary care physicians who care mainly for black patients are more likely to report that they are unable to provide high-quality care to all their patients than physicians who care primarily for white patients.[18] And mortality after a heart attack is higher at hospitals with more black patients than hospitals with few admissions of blacks.[19]

In addition to the human costs described above, poor quality also imposes significant, unnecessary financial costs on an already expensive system. IOM estimated the total costs of preventable adverse events—including the expense of additional care necessitated by errors, lost income and household productivity, and disability—to be between $17 billion and $29 billion per year just in hospital expenses.[20] The annual costs of poor-quality care are estimated at $420 billion for direct care and between $150 billion and $210 billion in indirect costs.[21]

Measuring Quality

The key to accountability and quality improvement is performance measurement and reporting. Without efforts to assess and track system performance, very little can be done on a system-wide basis to improve performance. The most powerful health care quality measures are relevant to stakeholders, scientifically sound, not too burdensome to collect, and reveal something important that can be acted on to improve future results.[22] Different measures provide insight into different aspects of care, including access, outcomes, patient experiences, processes and utilization, and structural features (Figure 4).

Improving Quality

A tremendous amount of activity is already underway to make care safer, more efficient, evidence-based, and patient-centered. Numerous public and private organizations are committed to quality improvement. They test and endorse quality measures, collect data and report on performance measures, hold caregivers accountable for performance, conduct research about what works, disseminate best clinical practices, and "benchmark" results to encourage providers to perform at the best level shown to be achievable. Examples of these organizations and their activities in performance measurement and quality improvement are described below.

- **Accreditation and quality improvement organizations and foundations.** Accrediting bodies such as the Joint Commission and the National Committee for Quality Assurance (NCQA) develop and validate measurement

FIGURE 4. Examples of Health Care Quality Measures

Domain	Objective	Example
Access	Assess the patient's attainment of timely and appropriate health care.	Percentage of children who had a visit with a primary care practitioner in the past year.
Outcome	Assess the health state of a patient resulting from care, reflecting the cumulative impact of multiple processes of care.	Percentage of intensive care unit (ICU) central line associated blood stream infections during the past six months.
Patient Experience	Provide the patient perspective on health care by aggregating reports of patients about their observations of and participation in health care.	Percentage of patients who reported how often they were seen within 15 minutes of their appointment.
Process	Assess a health care service, usually by its adherence to recommendations for clinical practice based on evidence or consensus.	Percentage of adult members who had an outpatient visit and who had their body mass index (BMI) documented in the past year.
Structure	Assess the capacity of a health care organization or clinician to provide health care.	The practice can produce a register of all cancer patients.

SOURCE: National Quality Measures Clearinghouse, http://www.qualitymeasures.ahrq.gov/browse/browsemeasures.aspx.

standards for hospitals, health plans, and provider practices. They work with government, private purchasers and providers to implement measurement standards and publicly report results. Private organizations, such as the Institute for Healthcare Improvement (IHI) and the National Quality Forum (NQF) have advanced the business case for quality measurement and improvement. Private foundations, such as The Commonwealth Fund, Robert Wood Johnson Foundation, and Kaiser Family Foundation support the replication and evaluation of emerging best practices.

- **Academic medicine and medical societies.** Major medical research and teaching institutions have strong collaboration with the National Institutes of Health (NIH), the Agency for Healthcare Research and Quality (AHRQ), the Centers for Medicare & Medicaid Services (CMS), the Centers for Disease Control and Prevention (CDC), and other federal agencies in conducting research to advance clinical quality and safety standards and practices and to make the scientific evidence more useful and more accessible to clinicians and patients. National, state, and local chapters of various medical societies also play a role in vetting quality measures and clinical guidelines in their respective specialties, often collaborating with state Medicaid programs, CMS, and other private and federal agencies to disseminate best practices.

- **Other private-sector stakeholders.** Many private employers—through dedicated quality organizations they support, such as The Leapfrog Group, or through state and regional business coalitions—use their purchasing power to engage providers and health plans in quality improvement through performance measurement and performance-based incentive programs. These programs often seek to replicate the high quality achieved in integrated health systems such as Geisinger Health Systems in **Pennsylvania,** Inter-Mountain Health Care in **Utah,** the Mayo Clinic in **Minnesota,** and the closed health maintenance organization (HMO) model of Kaiser Permanente in **California** and other states. These systems have all been recognized for having an infrastructure that supports high quality through care coordination and sophisticated applications of health information technology (HIT). For example, Inter-Mountain implemented systematic protocols to analyze bedside care and use the results to modify and standardize practice patterns, frequently with large-scale improvements in health outcomes.

- **Federal government.** CMS and AHRQ lead federal efforts in the area of quality improvement. The health programs that CMS administers—Medicare and Medicaid—account for 40 percent of total U.S. health care spending,[23] which creates a significant opportunity and responsibility to improve the delivery and cost effectiveness of health care. The actions of these agencies impact the private sector as well because it often follows their lead. CMS' existing role in funding national demonstrations designed to test promising approaches to quality improvement and value-based purchasing was expanded under

federal health care reform. CMS has also been a leader in standardizing health measures and collecting and publicly reporting hospital quality data. For example, the CMS Hospital Quality Compare website[24] provides information on how well hospitals care for patients with certain medical conditions or surgical procedures, and shows results from a survey of patients about the quality of care they received during a recent hospital stay.

AHRQ is the lead federal agency designated to develop and test measures of quality. AHRQ sponsors a National Quality Measures Clearinghouse (NQMC) database and website with information on specific evidence-based health care quality measures and measure sets.[25] Under health care reform, AHRQ will establish a Quality Improvement Network Research Program for the purposes of testing, scaling, and disseminating interventions shown to improve quality and efficiency. AHRQ also supports a "State Snapshots" website to help state leaders, researchers, consumers, and others understand the status of health care quality in individual states.[26] State Snapshots provide state-specific quality information, including strengths, weaknesses, and opportunities for improvement.

- **State and local governments.** States promote quality and safety by regulating insurance markets, licensing and overseeing health professionals and facilities, providing legal protections for consumers, and purchasing and funding health care services and coverage. State governments often assume special responsibilities in assuring the availability of providers for vulnerable and underserved populations (the federal government and local communities also play a role). Also, state universities are major institutions of training and education for medical and allied health professionals.

There are significant lessons to be learned from the substantial amount of quality improvement work already underway. Recent trends include a greater emphasis on prevention and primary care, care coordination and disease management, and payment reform that shifts volume-based reimbursement systems toward overall accountability for quality and costs (each trend is covered elsewhere in this report). The success of these strategies, however, is often limited by systemic barriers within the current delivery system.

Barriers to Transforming Health Care Quality

Despite significant progress to improve quality measurement and reporting over the last decade, key features of the current system continue to undermine the quality of care that Americans receive. Because these challenges are far reaching and interrelated, experts have concluded that nothing short of a fundamental redesign of the entire system will make it better.[27] Some of the major challenges to achieving a high-performing health system are described below.

- **The payment system rewards quantity not quality.** The prevailing fee-for-service system creates incentives to provide more care and more intensive treatments, with little regard for the effectiveness of those treatments in terms of improving health at the lowest possible cost. Many valuable services such as effective preventive care and coordinated care after a hospital stay are often underutilized because doctors and hospitals do not have adequate financial or other support to provide them. Without payment reforms that reward value over volume, quality before quantity, and organized delivery over uncoordinated care, incremental delivery system reforms and quality initiatives are unlikely to be adequate to address the current gaps in quality and value.

- **There is a lack of evidence about the effectiveness of care.** Medical science and technology have advanced at an unprecedented rate during the past half-century. New technologies, which account for at least half of the growth in health care spending over the last few decades, are often adopted without proven effectiveness over existing and less expensive treatments.[28] Faced with such rapid changes, the nation's health care delivery system has fallen far short in its ability to translate knowledge into practice and apply new technology safely and appropriately. As a result, there are wide variations across the country in the use and cost of medical services. And places with higher levels of health care spending are not necessarily associated with better quality of care or outcomes.[29]

- **Care is fragmented and uncoordinated.** The U.S. health care system is decentralized in terms of insurers and payers and, its physicians are uncoordinated. Patients and their families often navigate unassisted across multiple providers and care settings. When this occurs, it becomes easier for providers—few with access to complete information—to make mistakes or to duplicate tests and

screenings. Fragmentation also makes it difficult to hold providers accountable for practicing evidence-based medicine and, as a result, exacerbates variations in the use and cost of medical services.

- **Health information technology is deficient.** The U.S. has been much slower than other industrialized nations to adopt HIT and use it to exchange health information electronically. For example, less than half (46 percent) of U.S. physicians have electronic medical record (EMR) capabilities compared with more than 90 percent of physicians in Australia, Denmark, Italy, The Netherlands, New Zealand, Norway, Sweden, and the United Kingdom (Figure 5).[30] Paper-based record systems in the U.S. limit communication among patients' doctors and have been shown to lead to unnecessary hospitalizations, especially among patients with multiple chronic diseases.[31] Better tools have the potential to improve patient safety and overall quality of care by encouraging physicians to adhere to evidence-based guidelines, avoid preventable errors, and reduce paperwork and other administrative costs.

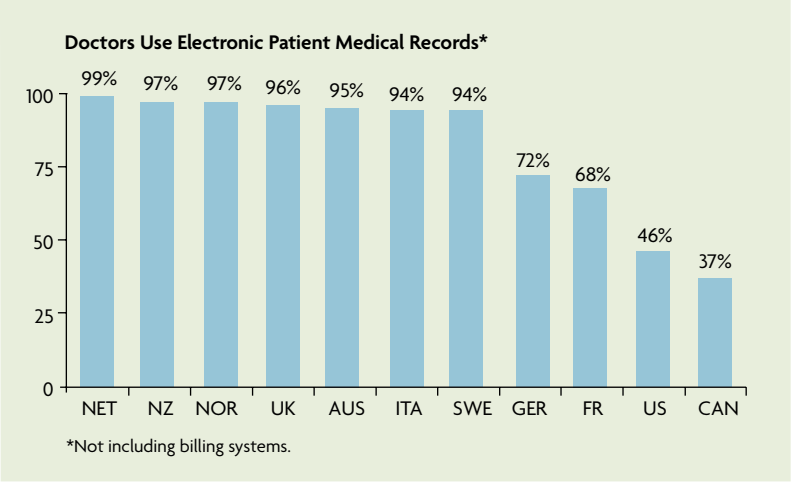
All of the barriers described above contribute to wide variations in health system performance across states. A scorecard created by The Commonwealth Fund to highlight state-to-state variations on key dimensions of health system performance[32] clearly shows that states are making progress to improve quality, but it also shows how much more is possible if all states performed at the level of the best-performing states. Here is how states compare when looking at the following health system parameters:

Quality. The percentage of adults age 50 or older receiving all recommended preventive care ranges from 50 percent to 33 percent across the states, and the percentages of diabetics receiving basic preventive care services varies from 65 percent to 29 percent.[33] If all states reached the levels achieved among the top-ranked states, nearly 9 million more older adults would receive recommended preventive care and almost 4 million more diabetics would receive care to help prevent disease complications.

Preventable utilization and costs. Rates of potentially preventable hospital admissions among Medicare beneficiaries range from more than 10,000 per 100,000 beneficiaries in the five states with the highest rates, to less than 5,000 per 100,000 in the five states with the lowest rates.[34] If all states reached the lowest levels of admissions and readmissions, hospitalizations could be reduced by 30 percent, saving Medicare $2 billion to $5 billion each year.[35]

Achieving the highest levels of health system quality ultimately requires changing the structures and processes of the environment where health professionals and organizations function. Quality improves by systematically applying evidence about the best care to clinical practice, using electronic health information exchange to put the right information at the right place at the right time to improve care and aligning payment policies to reward the quality instead of the quantity of services. States have a vital role to play here. They can lead others toward a vision for quality improvement that ultimately improves the nation's health and well-being.

FIGURE 5. U.S. HIT Integration Compared to Other Countries



SOURCE: 2009 Commonwealth International National Health Policy Survey of Primary Care Physicians.

STATE STRATEGIES TO ADVANCE QUALITY IMPROVEMENT

As major purchasers of health care—for state employees, Medicaid beneficiaries, wards of the state, and residents who receive public health services—state governments have been pioneers in broad-based strategies to improve health care while holding down the growth in costs. This focus has been driven in part by state budget shortfalls and the resulting imperative to obtain the best possible value for the considerable state dol-

lars invested in health services. Key strategies that states are pursuing to improve quality include:

- Engaging providers, purchasers, and consumers by collecting and publicly reporting data on medical errors, adverse events, and other quality outcomes;
- Leveraging the purchasing power of Medicaid and state employee health programs to encourage and support integrated systems of care; and
- Accelerating the adoption of HIT.

Measuring and Reporting Quality

Public reporting of data that measures aspects of health system performance is a critical ingredient for system accountability, a necessary tool for consumer choice, and an effective way to drive quality improvements. Quality improvement depends on making price and quality information transparent to consumers and purchasers. Many states are achieving greater transparency by standardizing reporting requirements, publicly reporting quality outcomes, and convening multi-stakeholder quality forums, all of which are discussed below.

STANDARDIZE REPORTING REQUIREMENTS

The first step in achieving price and quality transparency is to standardize data requirements and quality measures. States often play a role in establishing standard quality guidelines or measures and setting standard data reporting requirements for hospitals, nursing homes, other providers, and health plans. Uniformity of measures and reporting standards help to align requirements across purchasers, eliminate duplicative or unnecessary reporting requirements, give providers confidence that employers and consumers are making fair comparisons, and allow providers to focus improvement on quality measures that reflect evidence-based medicine. States typically adopt performance standards based on national measures and best practices, such as those developed by NCQA and the Joint Commission.

PUBLICLY REPORT QUALITY AND SAFETY OUTCOMES

Research shows that simply publishing provider performance data can have a significant and positive effect on hospital quality and physician practice patterns. About half of the states publicly report quality information. In six states—**Kentucky, Maine, New Jersey, Oregon, Pennsylvania,** and **Rhode Island**—all payers are required to supply quality data to state collection efforts. States commonly disseminate quality data through Web sites.[36]

Some states are using the information they collect from health plans and providers to create "value" measures—a combination of quality and costs—to present comparative information. Early examples of publicly reported comparative information include the **Wisconsin** Hospital Association's Hospital CheckPoint and PricePoint programs, which allow health care consumers and purchasers to see online how virtually every hospital in the state compares with others and with national and state benchmarks for quality.[37]

Some impact of comparative reporting is already evident. Health plans report that they are paying attention to the publicly available data for how they compare to other health plans and how hospitals and physicians in their network compare to others. Anecdotal evidence indicates that hospitals and many physicians also pay attention to how they compare to their peers and, as a result, appear to be making efforts to improve their scores. Some businesses are also using publicly reported measures in discussions and negotiations with health plans; however, in most areas, employers do not often use the information and consumers rarely consider it.[38]

CONVENE MULTI-PAYER QUALITY FORUMS

States can leverage the impact of uniform standards by encouraging other health care purchasers to use the same standards the state is using or by joining a purchasing coalition and adopting its measures. Twenty-one states report participating in a public-private collaborative or forum for the purpose of improving the quality of health care. Of these, 12 report that the state convened the initiative.[39] These efforts can amplify impact by ensuring uniformity of approach and priorities across payers.

Several states—including **Iowa, Massachusetts, Maine, Minnesota, Vermont,** and **Wisconsin**—support a standalone organization with a specific mission to collect and publicly report cost and quality information. These organizations are at the center of public-private partnerships to standardize quality measurement and reporting, raise public and health sector awareness of quality problems, and support the use of innovative technology and the exchange of information across health care settings to improve quality and reduce errors. In some cases, these organizations were originally established by physician leaders or hospital systems to improve patient care. Today, they function as a

MINNESOTA'S QUALITY MEASUREMENT AND PUBLIC REPORTING INITIATIVES

Minnesota's employers were among the first in the nation to identify great variation in health plan and provider quality. In 1988, General Mills, 3M, and other large self-insured employers in the state created a Buyer's Health Care Action Group to challenge the state's health plans and providers to publish quality results so that consumers and employers would have the information they need to reward optimal health plan and provider performance. Despite some initial tension, Minnesota's health plan and provider community embraced market transparency as a strategy to drive quality. Strong physician leaders and the state's non-profit health plans worked together to create the Institute for Clinical Systems Improvement (ICSI) and MN Community Measurement (MNCM).

ICSI was established in 1993 by HealthPartners, Mayo Clinic, and Park Nicollet Health Services to improve patient care through innovations in evidence-based medicine. Today, 85 percent of Minnesota physicians and all of the state's health plans participate in ICSI. MNCM was created by Minnesota's health plans in 2004 to report statewide health care quality measures across medical groups. Using ICSI guidelines and data that the health plans supply, MNCM measures, compares, and reports "HealthScores" for more than 700 provider groups and clinics across the state. ICSI and MNCM put Minnesota ahead of most states in its capacity to understand what contributes to health care value and health system performance by creating a forum to discuss, test, and act on new ideas.

SOURCE: Commonwealth Fund, "Aiming Higher for System Performance," October 2009.

multi-stakeholder forum to align statewide quality improvement and cost-control initiatives.

These organizations are "on call" to evaluate and adopt emerging best practices and have enabled their host states to act quickly to adopt quality-oriented delivery system reforms, including patient-centered medical homes, electronic health information exchange, and payment reforms that reward caregivers for the quality rather than the quantity of services provided. They often are instrumental in supporting other collaborative efforts, such as value-based purchaser coalitions and initiatives to adopt HIT.

Leveraging State Purchasing Power

State and local governments are responsible for 17 percent of all health spending in the U.S. much of which—38 percent—is related to Medicaid.[40] As a major purchaser of care, states have significant leverage to demand high quality from providers, and to specify the delivery system through which care is provided. States are using a variety of tools to leverage their purchasing power for quality improvement, including contract requirements, direct financial incentives, alignment across state agencies, and value-based purchasing collaboratives, all of which are discussed below.

REQUIRE QUALITY IMPROVEMENTS IN CONTRACTS

State agencies that purchase health services commonly use managed care delivery systems, because these approaches can provide an organized, integrated structure for care. States sometimes choose these systems of care specifically because they hold the promise of higher quality while assuring access, resulting in cost savings and allowing the state to hold a single entity responsible for performance. State agencies can build quality and safety standards into their contracts with health plans and providers. Most that do so, require reporting on nationally developed or endorsed quality measurements, such as those from AHRQ, CMS, NCQA, Joint Commission, and NQF. State Medicaid and Children's Health Insurance Program (CHIP) plans also commonly use state-developed measures, particularly to assess quality outcomes for children. Contract requirements to report patient safety are less common than quality measures, although a few states—including **Florida** and **Oregon**—require reporting on patient safety measures on all contracts.[41]

PROVIDE FINANCIAL INCENTIVES FOR QUALITY IMPROVEMENT

Many states use direct financial incentives to influence the behavior and decisions of providers, health plans, consumers, and private purchasers of health coverage to promote

higher quality and better health care value. Traditionally, purchasers have focused on cost containment—getting discounts from suppliers or shifting costs to workers—rather than trying to use their market power to improve value and system performance. Increasingly, states are working with other purchasers to pursue new, innovative, incentive-based techniques to achieve quality improvement.

Pay-for-performance (P4P). These programs exemplify financial incentives. P4P ties a portion of the provider's fee to one or more objective measures of performance. These programs use extra payments to reward health plans or physician practices for meeting benchmarks or improving on process of care measures (e.g., immunization rates), structural measures (e.g., adopting medical home practices), or other desired outcomes. These efforts have shown some improvements in quality but little evidence of cost savings.[42]

More than half of all Medicaid programs have established a P4P initiative.[43] Seventy percent of existing Medicaid P4P programs operate in managed care or primary care case management (PCCM) environments, and the vast majority focus on quality improvement rather than cost containment, sometimes with impressive results. For example, **Pennsylvania**'s managed care P4P program led to a 9 percent increase in mammograms for early breast cancer detection and a 20 percent increase in adolescent well-child visits.[44]

States have also recently started providing incentives directly to hospitals, nursing homes, and other providers through fee-for-service programs. For example, the **Arkansas** Medicaid hospital P4P initiative offers bonuses for reaching target performance levels on CMS quality measures that hospitals were already reporting.[45] **Pennsylvania** Medicaid's P4P initiative measures seven-day readmission rates and rewards hospitals on structural measures that include e-prescribing and computerized physician order entry (CPOE).[46]

Nonpayment for "never events." This is another type of incentive program where providers are not reimbursed for services rendered in error. In addition to paying for good performance, some states are not paying for certain types of poor performance. More than half of the states have enacted legislation, regulations, or executive orders creating reporting systems for preventable, adverse events. Many of these reporting systems focus on "serious reportable events" identified as events that should never occur in a health care setting, hence the phrase "never events."[47] The National

Academy for State Health Policy (NASHP) recommends that states implement nonpayment for preventable, adverse events or conditions as a relatively easy, visible, and noncontroversial first step to promoting patient safety.[48]

Currently, in 12 states—**Colorado, Kansas, Maine, Maryland, Massachusetts, Minnesota, Missouri, New Jersey, New York, Oregon, Pennsylvania,** and **Washington**—Medicaid or other health care purchasers deny or adjust payment for certain adverse events or preventable conditions. At least six additional states have CMS approval to implement a Medicaid non-payment policy, and others are considering such a policy.[49] All but one of the states that have implemented nonpayment policies base them on NQF's list of serious reportable events or Medicare's nonpayment policy, which includes NQF's list plus certain other preventable hospital-acquired conditions.[50] One state—**Maryland**—uses a unique list of 50 potentially preventable complications.[51]

The following other incentive programs can be explored:

- **Consumer incentives.** A few Medicaid programs are working with their health plans to offer incentives that encourage people to take a more active role in their own

care. Initiatives have generally focused on lifestyle changes related to smoking or obesity or on seeking preventive or follow-up care.[52] At least five states have enacted legislation to begin or consider initiatives that build on the concept of "patient engagement" promoted by the U.S. Department of Health and Human Services as a way to control costs and improve health outcomes. Incentives for the desired behavior may include reduced cost sharing (**Florida**), additional benefits that are not part of the standard benefit package (**Michigan, Texas**), and gift certificates or movie passes (**California**).[53]

- **Tiered premiums or copayments.** Some states are using tiered premiums or copayments to steer care toward more efficient and effective providers. For example, the Group Insurance Commission (GIC) in **Massachusetts**, which administers state employee health benefits, worked with six of the seven largest private insurance carriers in Massachusetts to develop physician performance profiles based on quality and cost-effective care. GIC provides results for individual physicians to all of its contracted health plans and requires the plans to develop and implement tiered cost sharing that is based on the provider's performance ranking. The provider's performance group (e.g., tier-one, tier-two, or tier-three) is communicated to enrollees through the plans, and differential co-pays are attached to each tier to reward enrollees who seek care from higher-performing providers.[54]

Convene Value-Based Purchasing Collaborative

Some states are forming multi-payer purchasing coalitions with private purchasers to make measurement, reporting, and incentive programs uniform for providers and to establish common benchmarks for improvements in quality and safety (Figure 6). Most public-private health care purchasing initiatives have focused more on cost containment than on quality improvement. Only about half of public-private health care purchasing initiatives that include states specifically address quality. Among these, the **Washington** Medicaid program and public employee health plan participate in the Puget Sound Health Alliance, a regional partnership involving employers, providers, health plans, and patients working together to use evidence to identify and measure quality and produce publicly available comparison reports designed to help improve health care decision-making; and the **Wisconsin** state employee plan participates in a public-private initiative to purchase pharmacy benefit management services.[55]

FIGURE 6. Examples of State Medicaid Programs Participating in Multi-Payer Value-based Purchasing or P4P Initiatives

State	Program Name
Kansas	Multi-Payer Program
Maine	Maine Quality Forum
Minnesota	Smart-Buy Alliance
New Hampshire	Citizen's Health Initiative
New York	Regional Pay-for-Performance Grant Program
Oregon	Oregon Health Care Quality Corporation
Vermont	Vermont Blueprint for Health

Source: K. Kuhmerker and T. Hartman, 2007.

Ensure Interagency Quality Efforts

Many state agencies have a role in improving health care quality. However, there is often no focal point for state efforts to address quality. State responsibility tends to be spread across an array of professional licensure boards, licensing and certification agencies, Medicaid, insurance, public health, and other departments. Without a natural vehicle to organize quality activities, states' efforts may be fragmented.

Some states use their leverage internally to drive quality and efficiencies through inter-agency contracts and grant requirements. Others have developed quality collaboratives, agendas, and forums to craft coordinated strategies across their agencies. For example, eight states—**Colorado, Kansas, Massachusetts, Minnesota, Ohio, Oregon, Vermont,** and **Washington**—participate in a State Quality Improvement Initiative (SQII) sponsored by AcademyHealth and The Commonwealth Fund to develop and implement specific statewide strategies.[56]

A wide range of potential issues and quality efforts can be furthered by interagency coordination. For example, states can bring multiple agencies together around a common chronic condition, ensuring that all purchasing and patient support efforts are targeting critical quality gaps in a coherent and supportive fashion. Public health, Medicaid, and state employee programs will be at the core of such efforts, but efforts can be further enhanced through other agency programs (e.g.,—aging units with consumer outreach tools).

VERMONT'S BLUEPRINT FOR HEALTH

Vermont's Blueprint for Health aligns goals across all state agencies and coordinates with the private sector to create an integrated statewide system of high-quality health care for all Vermonters, improving the health of the overall population, and improving control over health care costs by promoting health maintenance, prevention, care coordination, and management of individuals with and at risk for chronic conditions. It is designed to provide patients with the knowledge, skills, and supports needed to manage their own care and make healthier choices; give providers the training, tools, and financial incentives to ensure treatment consistent with evidence-based standards of care; support communities to address physical activity, nutrition, and other behaviors to prevent or control chronic diseases; assist providers in acquiring information technology tools to support individual care and population-based care management; and link financing mechanisms and insurance reimbursement with the attainment of chronic care treatment goals.

From the beginning, Vermont approached health reform with an emphasis on public health. Public health and clinical medicine have common roots but over time have grown apart: The Blueprint is attempting to bring them back together. Clinical professionals and public health prevention specialists work together on the Blueprint's Community Care Teams. The state's health information exchange collects and shares information that is relevant for individuals at the point of care and used to track risk factors across populations. Catamount Health, the state's subsidy program for low-income Vermonters to purchase private insurance, includes coverage and waives cost-sharing for chronic care management and preventive care, and Medicaid includes new benefits and reimbursement incentives to improve chronic care management.

STATE OPPORTUNITIES TO FURTHER ADVANCE QUALITY IMPROVEMENT

States are at very different places along a continuum of quality and quality improvement strategies. All states have made some progress—and every state has room to improve. The good news is that there is a growing body of evidence about what works to improve health care quality, and many states have learned valuable lessons that are now available to others that also want to improve. The checklist below summarizes some of these lessons and provides new ideas for states that want to further advance quality improvement.

Create a Vision for Quality Improvement

State governments—and particularly governors' offices—are well positioned to create a vision for quality improvement that benefits the health sector overall. States have considerable influence as purchasers of health coverage, regulators of insurance and providers, and advocates for vulnerable populations. These roles create opportunities—and responsibilities—to make high-quality care and quality improvement an explicit and high-profile objective for all state health policies and programs. This vision can be expressed as instructions to state agencies, through executive orders, or in legislation. Regardless of the means, the message needs to be clear that high-quality care and quality improvement are priorities for the state and that continuous improvement is expected of all stakeholders.

Assess the State's Capacity for Quality Improvement

Some states have focused on quality improvement for years; others are just getting started. Regardless of a state's current stage, it is important to periodically assess the state's capacity for further improvement. Many factors affect a state's capacity for quality improvement, political culture, economic outlook, population characteristics, and existing medical infrastructure. Each must be balanced to realistically assess what is possible while pushing the system toward its full potential. States also need to anticipate resistance and plan ahead to address challenges as they arise. Examples of resistance include: systemic barriers to quality improvement, such as paper-based record systems; wide variation in medical practice; and worries about who will bear the cost of new systems and processes.

Focus First on Standard Measures and Public Reporting

Quality improvement depends on performance measurement and public reporting. This step is a prerequisite for

quality improvement and cannot be skipped. The goal is to make quality and cost information as transparent as possible and use that information to drive system accountability and quality improvements. The path toward greater transparency typically involves significant state involvement to establish uniform quality measures, standardize reporting requirements, and publicly report the results. Some states are using the information they collect from health plans and providers to create "value" measures to compare performance across providers and plans. A few states assign responsibility for collecting and publishing quality information to a stand-alone organization that is "on call" to evaluate and adopt emerging best practices.

Regardless of whether an initiative to measure and report quality standards is led by states or by an independent organization, it should bring together multiple stakeholders—including providers, purchasers, and regulators—to obtain their input, hear their suggestions and concerns, and build a sense of ownership and buy-in. The measures should not be onerous for providers to collect and report and, to the extent possible, should build on data already being collected by other organizations (e.g., Joint Commission, CMS). The measures also should be seen as useful to purchasers for selecting and reimbursing providers, and to providers, who will likely monitor them and try to improve their own performance. Broad input is critically important to establishing trust in the measurement system, ensuring reporting compliance, and making the reporting process easy to administer and meaningful in its results.

Build Stakeholder Interest Around Targeted Initiatives

Most states—including those that today manage a comprehensive quality agenda—start with a focused quality initiative that allows them to build trust and support across diverse stakeholders. One state, for example, might focus first on care coordination and disease management for people with diabetes—and leverage that initiative to introduce medical home concepts, payment reforms, or HIT. Other high-value starting points include reducing emergency department visits related to asthma or reducing hospital admission rates for congestive heart failure.[57] Once established, these initiatives can be expanded to include other disease states and objectives—all the while building the state's overall capacity to take on larger scale quality initiatives.

Enhance Activities by Ensuring State Agency Coordination

Most states align priorities across specific departments, such as health and human service agencies and Medicaid, but a few also align quality improvement activities across state employee benefit programs, professional licensure boards, public health, insurance, and other systems that provide health coverage, such as prisons. Working together, these agencies can increase their leverage to drive quality improvement through inter-agency contracts and grant requirements, quality measurement and reporting, and payment reforms.

Convene a Broad Coalition of Purchasers

In addition to aligning quality improvement activities internally across state agencies, states also have an opportunity to coordinate activities externally by participating in multipayer purchasing coalitions. This public-private approach enhances a state's leverage to drive quality improvements and efficiencies, eliminates duplicative reporting requirements, and reduces confusion among payers, providers, and patients. To date, most public-private health care purchasing initiatives have focused on cost containment, not quality improvement. States have an opportunity to lead these initiatives in a new direction—still focusing on cost containment but also taking quality into consideration, with the ultimate goal of adopting value-based purchasing.

Prioritize Health Information Exchange

The federal government is working with states to support the adoption of HIT and electronic health information exchange (HIE). Over the next four years, the Office of the National Coordinator (ONC) for HIT will spend $40 billion to create a nationwide health information exchange and support Medicare and Medicaid providers in their effort to become "meaningful" users of electronic health records (EHRs). The following programs, which depend on state involvement, are included in the initiative:

- **State Health Information Exchange Cooperative Agreement Program.** ONC awarded $547 million to all 50 states to establish electronic HIE capacity among health care providers and hospitals.[58]
- **Health Information Technology Extension Program.** ONC awarded $632 million in two rounds of grants to 60 newly created Regional Extension Centers to offer tech-

nical assistance, guidance, and information on best practices to assist health care providers in their efforts to become meaningful users of certified EHRs.[59]

- **Medicaid and Medicare "Meaningful Use" Incentive Payment Program.** ONC will provide up to $35 billion over four years (2011-2014) in incentive payments for eligible providers who demonstrate "meaningful use" thorough certified EHR technologies that, among other things, electronically exchange health information to improve quality of care.[60,61]

There are multiple resources available to states to share best practices for HIT adoption. The National Governors Association Center for Best Practices also provides policy assistance to states through the ONC-funded State Alliance for e-Health.[62] The Alliance provides a nationwide forum for states to work together to identify inter- and intrastate—based HIT policies and best practices, and explore solutions to programmatic and legal issues related to the exchange of health information.

In seeking linkages between HIE and quality, states can explore some of the following ideas:

- Use HIT to support evidence-based medicine and improve patient care through transparent reporting of health outcomes and costs;
- Work with electronic health record vendors to build in practice-based tools and reporting; and
- Incorporate quality reporting and data aggregation tools into a health information exchange build-out.

LEVERAGE FEDERAL HEALTH CARE REFORM FUNDING AND RESOURCES

While responses to federal health reform will be unique to each state's circumstances, all states will have opportunities to explore new federal funding and resources related to quality improvement. The Patient Protection and Affordable Care Act (PPACA) expands opportunities for states and communities to participate in demonstration and pilot projects to test quality improvement and value-based purchasing strategies. The law funds the following programs to advance these efforts:

- **Medicaid Global Payment System Demonstration Project.** Up to five states will be selected to receive funds for large safety net hospital systems or networks to transform from a fee-for-service system to a capitated global payment structure.
- **Medicaid Integrated Care Hospitalization Demonstration Program.** Up to eight states will be selected to use bundled payments to promote integration of care around hospitalization.
- **Medicaid health home for chronic conditions.** This new Medicaid state plan option will provide health homes for enrollees with chronic conditions at 90 percent FMAP during the first two years that the state plan amendment is in effect.
- **Pediatric Accountable Care Organization Demonstration Project.** This provision allows pediatric providers to organize as ACOs and share in federal and state cost savings generated under Medicaid.

The following additional new resources and technical assistance will be available to states to improve quality and health system performance:

- **CMS Center for Medicare and Medicaid Innovation.** The center will test new provider payment models designed to improve quality and reduce costs and, if successful, implement models in Medicare, Medicaid, and the State Children's Health Insurance Program.

- **Federal coordinating council for comparative effectiveness research.** This new council will conduct and disseminate research on comparative effectiveness of clinical procedures, practices and treatments.
- **Patient-centered Outcomes Research Institute.** This private non-profit institute will be established to set a national research agenda and conduct comparative clinical effectiveness research.
- **Development of quality measures for use in federal programs.** The U.S. Department of Health and Human Services (HHS) will involve multiple stakeholders to select quality measures to be used in reporting to and payment under federal health programs.

Going forward, the role of quality efforts in the Medicaid expansion and in the new insurance exchanges must be considered. Within each of these initiatives, new opportunities exist to use program dollars, participation, and policies to drive quality improvement. For example, the insurance exchanges will be a new venue for sharing quality information with the public and could also be leveraged to drive system performance.

In addition to PPACA implementation, states also can take advantage of the following other federal initiatives to improve health care quality and achieve quality objectives:

- **Child Health Insurance Program Reauthorization Act (CHIPRA).** Passed in 2009, CHIPRA provides states with technical and financial assistance to create high-quality systems of care for children in Medicaid and CHIP, including new core quality measures, an enhanced federal match for quality reporting activities, and demonstration grants to test new strategies for improving child health quality.[63] An important element of each demonstration project is use of electronic data sources, including electronic health records and data from outside the Medicaid/CHIP agencies to provide a more complete picture of children's health.
- **American Recovery and Reinvestment Act (ARRA).** The 2009 federal economic stimulus package provided additional federal funding to support state Medicaid programs. In addition to enhanced federal matching payments for Medicaid services, the stimulus law also provided significant new investments in HIT, as described above. HIT and information exchange funding was also included in ARRA under a section known as HITECH.

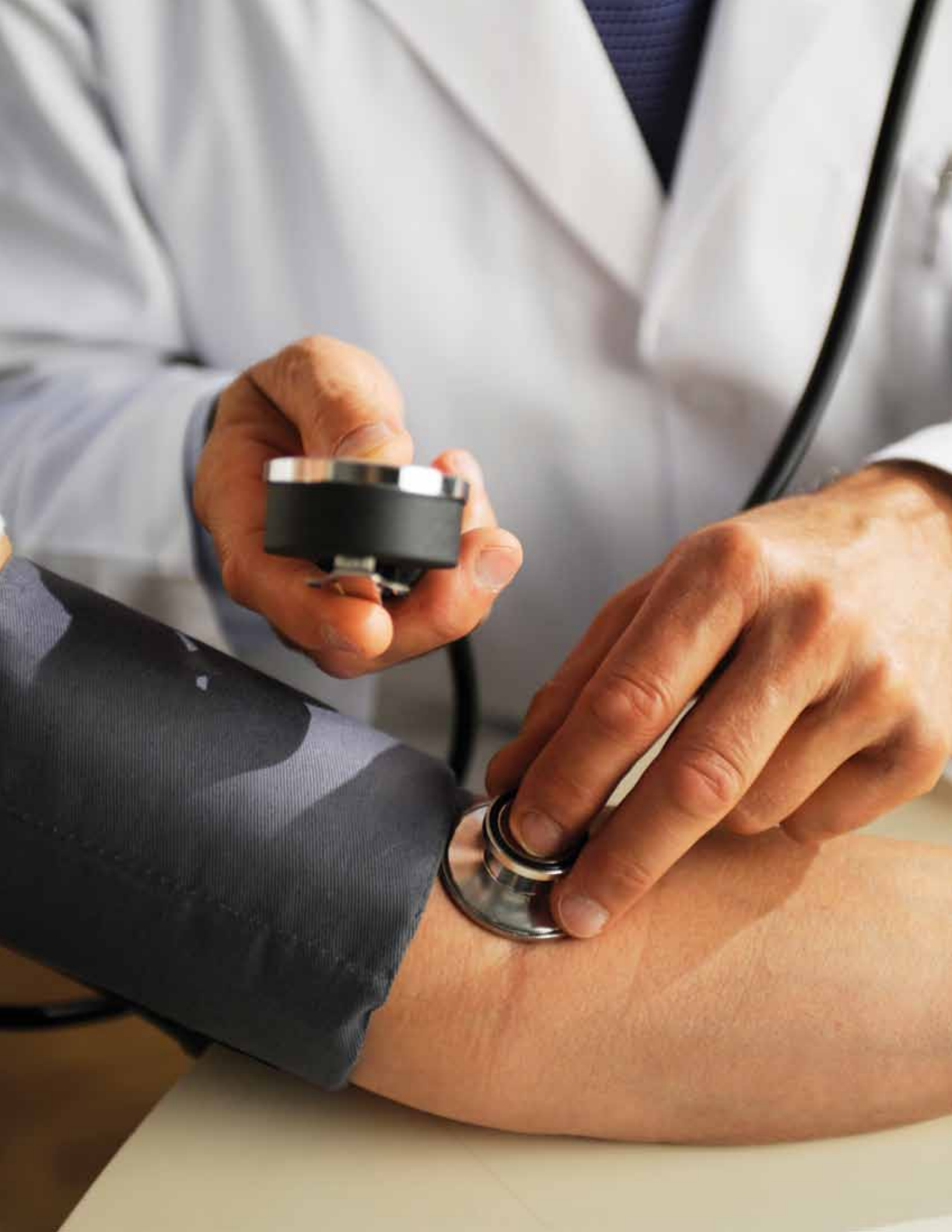
EMBED QUALITY IMPROVEMENT IN EVERY HEALTH REFORM

The strategies discussed throughout this paper should be seen as tools for improving health care quality. Each tool can be used to address a problem or multiple problems — but combining them with other reforms may be more effective in achieving the goals of improved quality and reduced health care cost growth. For example, the tools discussed in this chapter (measuring and reporting quality, leveraging purchasing power, and adopting HIT) combined with strategies discussed in the other chapters (prevention and primary care, care coordination and disease management, and payment reform) have the potential to achieve better integration of the delivery system and lead to improved patient outcomes and less waste, duplication, and poor quality care. The combination of HIT investments and disease management interventions, in particular, has been shown to significantly improve quality and lower costs.[64]

The evidence related to health care quality in the U.S. shows that while there is tremendous potential for improving outcomes and saving money, these benefits are difficult to achieve in our current system, which is fragmented, uncoordinated, and rewarding of service volume over service value. Incremental reforms may lead to incremental improvements in care, but they are unlikely to lead to the more fundamental changes in delivery that are needed to increase value and address the major gaps in cost and quality that currently exist in the U.S. health care system.

In contrast, systemic initiatives can reorganize the system of care and align incentives to achieve the best possible outcomes at a significantly lower overall cost. A systemic initiative combines multiple strategies—prevention and primary care, care coordination and disease management, payment reforms, and quality improvement initiatives—to reset the basic rules of the system and reward value over cost, quality before quantity, and coordinated rather than fragmented care. Change on this scale is not easy, but it is necessary to achieve the much higher levels of health care quality that we know are possible and that all Americans deserve.

The reforms spelled out in PPACA and other recently enacted federal health care legislation present opportunities to begin or continue making progress toward reorganizing the health care system and improving system performance. States will continue to play a vital role in these areas.



CHAPTER 2

Care Coordination and Disease Management

Debra Lipson and Melanie Au
Mathematica Policy Research, Inc.

Several years ago, David Lawrence, the former chief executive officer of Kaiser Permanente—one of the nation's largest and most respected integrated health care systems—wrote about the care his 88-year-old mother received in the regular Medicare system after she fell.[65] Following an emergency room visit and three days in the hospital, she spent a few months rehabilitating in a skilled nursing facility. In the first month alone, she was cared for by 10 physicians, at least 50 nurses, 10 physical and occupational therapists, and a host of nurse aides.

> "At times, Mom's care seemed like a pick-up soccer game in which the participants were playing together for the first time, didn't know each other's names, and wore earmuffs so they couldn't hear one another. Her care seemed like an 'ad-hoc-racy' that involved well-trained and well-intentioned people, state-of-the-art facilities, and remarkable technologies—but was not joined into a coherent whole for the benefit of her or her family. My mother ricocheted from place to place like a pinball. Each contact brought another bill, different advice, and increased risk that something could go wrong."

Her experience is commonplace. The U.S. health care delivery system is characterized by fragmented, uncoordinated care resulting in high costs and poor health outcomes. The consequences are especially dismal for the estimated 130 million Americans—almost half the population—with at least one chronic disease, such as congestive heart failure, diabetes, mental illness, and asthma. Those with one or more chronic conditions are heavier users of health care. When their care is not coordinated across their many providers, they are more likely to get duplicate tests, are at greater risk of conflicting treatments and medications, experience higher rates of avoidable hospitalization, and receive less preventive care than is recommended—all of which contribute to higher costs.[66]

Care coordination and disease management have emerged in recent years as promising strategies to reduce fragmented care, improve health care quality, and reduce costs. While called by different names, most of these programs share some common elements: mechanisms to coordinate care across multiple providers and care settings, greater communication among providers and patients, and support for patients and their caregivers to manage their conditions. But programs often differ in the emphasis placed on each of these features and in the populations targeted.

Governors and policymakers in many states have begun to craft health delivery reforms to promote coordinated care and manage chronic disease in the hope of improving health status and reducing costs. In some states, these efforts are pursued independently by the state Medicaid agency, private health plans, large employers, and professional associations. But most experts believe that disjointed efforts are not effective in changing provider behavior. True coordination can take place only by harmonizing strategies among all providers to synchronize care and motivate individuals to better manage their chronic diseases. However, it can be difficult to forge a coherent strategy that all key stakeholders agree on, particularly if the reforms challenge the interests of strong provider groups. Gaining consensus is critical to driving broader changes in the health care system.

State policymakers have many levers to move all key players toward greater care coordination—through their role as a large purchaser of care for Medicaid enrollees and state employees; by joining initiatives that align private and public payment incentives; and by developing public education campaigns that stress the health and financial gains to individuals, families, and taxpayers.

This chapter reviews the levers and options available to states to reform health care delivery by promoting more coordinated, effective care that reduces the use of expensive health services and results in better health. It begins by summarizing the evidence on the effectiveness of care coordination and disease management programs in the private sector, in state programs, and in other countries, highlighting factors that have helped improve health and lower costs. It then discusses challenges and considerations state policymakers face in developing a strategy that will work best in each state. Next, it reviews how state programs have applied lessons from evidence and experience. The chapter concludes with principles that can help policymakers in every state make progress, regardless of their starting point.

The bottom line from the evidence and experience to date is that some care coordination and disease management programs can save money or reduce costs if they have the right tools and use incentives to lower the use of expensive health services. They can also improve health status for many individuals with chronic diseases and conditions. State policymakers in search of the greatest gains must ensure that such programs have the following components:

- **Target high-risk patients.** Effective programs target services to those who are at greatest risk of hospitalization, have more serious illness, and have multiple chronic conditions or accompanying functional disabilities.
- **Tailor services to meet individual patient needs.** Effective programs take the time to assess each patient's needs, create individualized care plans reflecting patient goals, and vary the intensity of intervention based on patient risk. They also help patients manage their own health care, teach them how to take their medications properly, and arrange for social services for patients needing help with daily living activities, transportation, or overcoming isolation.
- **Provide sufficient in-person contact.** The most successful programs average nearly one in-person contact per month to provide education, support, and transitional care. Frequent in-person contact helps patients and caregivers develop trust in care coordinators. It also explains why self-management programs often involve peer leaders who can more easily engender trust. Hence, programs must have sufficient resources to provide intensive contact and support to patients who could benefit the most.
- **Foster regular communication between care coordinators and primary care physicians.** Close ties between care coordinators and physicians are critical to program effectiveness because regular communication improves chances to develop tailored interventions for patients. In addition, streamlined communication can more quickly identify problems that require immediate physician response to avoid acute episodes or speed recovery.
- **Provide timely information to providers on hospital and ER admissions.** Learning about acute care episodes soon after they occur is critical so that interventions can be initiated at that point. To prevent readmissions, programs must provide support to patients and their families to ensure successful transitions between health care settings. Unless hospitals are offered incentives to cooperate, they may resist such efforts, as they can threaten their financial status.

HOW EFFECTIVE ARE CARE COORDINATION AND DISEASE MANAGEMENT?

Research and evaluations on the effectiveness of disease management and care coordination programs can inform state policymakers about the elements that contribute to better health outcomes and cost savings. The evidence comes from a variety of models, emphasizing different strategies and target populations, tested in private programs and health plans, in federal Medicare demonstration programs, with state Medicaid enrollees, and in other countries. Sufficient evidence exist that care coordination and disease management can be important tools for achieving better health care quality. Although the results from the earlier studies are mixed for cost savings, states can apply the critical lessons learned to build successful programs going forward.

Early Disease Management Programs

Disease management programs introduced in the mid- to late 1980s focused on single conditions such as congestive heart

failure (CHF) and diabetes. Several of these programs produced both cost savings and better clinical outcomes.[68] But studies of these early disease management programs also showed that cost savings were not guaranteed. Those that achieved savings did so by reducing hospitalization rates.[69]

Spurred by initially positive results, an entire industry emerged to provide disease management programs to large employers, health insurance plans, and provider practices. By 2006, most large health insurance plans offered them—about one-quarter of employers offering health benefits included at least one disease management program in their largest health plan and more than half of firms with 200-plus workers did so.[70] But few of the programs produced the same level of cost savings or clinical improvements as those in the early studies. In part, this was because the early programs were conducted in academic medical centers or integrated health care delivery settings, with small numbers of patients and controlled circumstances that were difficult to replicate in real-world settings.[71]

Studies of early disease management programs also offered lessons about what not to do. For example, because they focused on single disease conditions, many of the early programs were ineffective for people with multiple chronic conditions.[72] In addition, stand-alone disease management programs that integrate their activities with physicians will have a greater impact than programs that do not. Integration between disease management firms and physicians promotes better and faster exchange of information about changes in patient conditions that can be addressed through timely adjustments in medications or treatment plans.[73]

Evaluations of Private-sector and Medicare Programs

In the late 1990s, disease management programs spread, serving larger numbers of patients in the private sector and the Medicare program. They began to target a wider array of diseases, experimented with new interventions, and served people whose diseases were more complex or severe. The programs examined here tend to fall into one of three categories: self-management efforts, transition of care programs, and care coordination.

- **Self-management.** Interventions that engage patients in treating and managing their conditions have also been shown to reduce hospitalizations and costs. One of the most effective programs of this type is the Chronic Disease Self-Management Program (CDSMP) developed at Stanford University. Through patient workshops, this program builds patients' confidence about their ability to change their health behaviors.[74] Nurses and peer leaders educate patients on how to manage their symptoms, talk to providers about treatment choices, and encourage patients to participate in activities that maintain function. One study found that the program decreased hospital day visits over a six-month period.[75] Another study found that just a similar four-week self-management program reduced the number of hospitalizations and hospital days, saving roughly $1,800 per person per year.[76]

- **Transitional care programs.** These programs, which coordinate and manage care after hospital discharges or other critical transitions between health care settings, provide strong evidence of their effectiveness in reducing overall hospital costs, largely because they help to reduce hospital readmissions.[77] Most transitional care programs use the same approach: advance practice nurses provide education and "coaching" to patients to teach them how to manage their care and medications after discharge, follow up with patients to help them keep physician appointments, and make sure patients know what to do if they experience problems. A study of one of the best-known programs, proved it could lower total hospital costs by about $850 per patient by reducing readmission rates.[78] Another program showed that its participants had 40 percent lower total annual health costs compared to nonparticipants.[79] A similar Kaiser Permanente-sponsored program lowered the need for subsequent emergency room visits and reduced hospital costs, producing estimated annual savings of $5,276 per person.[80]

- **Care coordination programs.** These programs have had mixed results and there are fewer examples of success, in part because some effective practices were diluted or not done as well when the programs were scaled up. These programs have also been subject to more rigorous evaluation than most disease management programs. For example, the Medicare Coordinated Care Demonstration (MCCD) evaluation found that only two of the 15 sites reduced the rate of hospitalization among program participants and none generated net savings.[81] Across the 15 sites, costs actually increased on average by 11 percent, because the cost of delivering care coordination services outweighed any savings.

States can use these experiences to achieve better results. Based on these evaluations, state programs should carefully scale up to larger populations and adhere as closely as possible to the original program models. Evaluators also concluded that to improve quality of care and be at least cost-neutral, programs must have substantial in-person contact with patients with moderate to severe risk and should include strong transitional care components.[82, 83]

These lessons are being used to develop the "next generation" of care coordination models, known as patient-centered medical homes (PCMHs), which try to integrate disease management, transitional care, and care coordination into the primary care physician practice. For example, the Guided Care program developed at Johns Hopkins University relies on specially trained nurses based in primary care offices to provide comprehensive care coordination to high-risk patients with multiple chronic conditions or complex health care needs. In addition to improving quality of care and reducing caregiver strain, a recent study showed the program may have reduced the use of expensive medical care and saved about $1,360 per patient per year.[84]

Medicaid Program Evidence and Experience

As with private-sector and Medicare programs, state Medicaid agencies have adopted various approaches to care coordination and disease management, depending on the delivery models each state uses. An evaluation of a Medicaid disease management program in **Indiana** showed that it flattened the rate of cost growth for program enrollees and even for low-risk patients. The study found that the larger-than-expected savings were attributable in part to the provision of low-cost telephone support to enrollees.[85]

State experience suggests that, to be effective, Medicaid disease management and care coordination programs must be adapted to meet the needs of different population groups and have flexibility to evolve. For example, **Washington** State's disease management program, begun in 2002, tried to manage each chronic condition separately and did not produce expected cost savings, in part because it did not address the needs of those at highest risk—individuals with multiple chronic conditions.[86] Accordingly, the state shifted its focus to high-risk enrollees and created two new programs—one for individuals with mental health and substance abuse problems and another for people with chronic conditions who were at highest risk of using expensive care. The first program coordinated mental health, substance abuse, and long-term care services along with primary care and disease management. By the end of 2007, it had slowed the rate of growth in inpatient admissions and lengths of stay in state mental hospital facilities and lowered wait times for routine appointments.[87] The second program provided intensive nurse case management to high-risk clients. Although this program has not yet led to significant savings because of relatively high program costs, it has successfully controlled spending growth.

Washington State's experience reflects a broader trend among most state Medicaid agencies to target disease management, care coordination, and case management programs to beneficiaries with multiple and complex chronic conditions. Medicaid officials are also tying a portion of provider payment to improved outcomes, reporting providers' performance and quality indicators, and using other strategies to give providers greater incentives to improve care.[88] Although rigorous evaluations have not yet been conducted on these programs yet, their potential to reduce total costs and improve health outcomes looks more promising than the first-generation disease management programs.

International Lessons

Health systems in other developed countries have similarly experimented with different approaches to care coordination and disease management. Evidence indicates that some programs can improve health outcomes, although, like many U.S. programs, it is not yet clear that they reduce costs. Their experience provides lessons to U.S. policymakers on the challenges of scaling up programs more broadly.

In Germany, as in the U.S., a wide variety of care management models have been introduced over the last two decades. Like the U.S., Germany is a federal republic made up of states with their own constitutions. But regulation of the provision and financing of health care services is predominantly at the federal level. In 2000, the German legislature enacted a set of reforms in response to a growing trend by "sickness funds" –the German phrase for health insurance—to avoid enrolling chronically ill people. The reforms promoted care coordination, strengthened primary care gatekeeping, established registries to track patients with chronic conditions, and adjusted payments to sickness funds to better reflect enrollees' health risk.[89]

To qualify for extra risk-adjusted payments, sickness funds must offer disease management programs (DMPs) with certain features. They must follow evidence-based guidelines, provide training and information for care providers and patients, maintain electronic records of diagnoses and treatments, and evaluate clinical outcomes and costs. Participation is voluntary, but there are incentives both for patients and for providers. The blend of risk-adjusted payments and new funding for DMPs helped to greatly expand care coordination. By 2008, more than 5.2 million patients were enrolled in DMPs, almost half of whom were in diabetes management programs.

Evaluations of the program have demonstrated its success in improving care processes, clinical outcomes, quality of life, and patient experience with care. For example, compared to non-enrollees with similar health status, program enrollees with diabetes had fewer emergency hospital admissions and higher self-reported health status. They perceived their care to be better coordinated and were better able to manage their condition.[90] Although physicians initially opposed the extra documentation requirements and saw the treatment guidelines as intrusions on their professional judgment, acceptance has increased over time, suggesting that implementation must involve concerted efforts to secure physician cooperation.

The British National Health Service (NHS) is a much more centralized health care financing and delivery system than in the U.S. or Germany, but its experience with care coordination and disease management is also instructive. In 2004, the NHS Improvement Plan gave priority to addressing the needs of people with chronic illness by shifting the focus from strictly treatment to prevention, seeking better coordination between community physicians and hospitals, and providing support to patients to manage their conditions. The NHS then created the Long-Term Conditions Model, which establishes three levels of support: self-management, in which paraprofessionals provide education and support to people with various conditions; disease management for people whose conditions can be controlled through regular primary care visits, with extra pay for practices that achieve performance targets; and case management pilot programs provided by advance practice nurses, for older adults with more complex conditions at greatest risk of hospital admission.[91]

Assessments of the programs are mixed. Self-management programs expanded but serve far fewer people than could benefit from them. The disease management program has improved patient outcomes but at a high cost. And, the case management pilots have not reduced hospital admissions, though they may have reduced lengths of stay. The lesson, according to one expert, is that actions on several fronts are needed and must be integrated so that providers have clearer incentives and strong rewards for lowering health care use overall.[92]

QUESTIONS TO ADDRESS IN DESIGNING AN EFFECTIVE STRATEGY IN EACH STATE

Understanding the lessons and elements that have contributed to success is clearly important in the design of effective programs. But state policymakers need to adapt these lessons to fit the circumstances in their state and build broad-based support for these efforts. The effectiveness of an overall strategy depends on making the best decisions in the context of each state. Among the most important design decisions, are:

- How to target investments to achieve maximum savings and health benefit;
- Whether to have state staff perform key functions or contract with private vendors;
- How to overcome provider resistance and align payment incentives across public and private payers;

- How to adapt programs to account for variation in state health delivery systems; and
- How to maximize benefits and overcome challenges in federal collaboration.

Targeting to Maximize Savings and Health Benefit

Deciding which populations should receive extra or enhanced care coordination is a key design issue. The evidence suggests that the greatest savings come from intensive interventions targeted to the highest-risk patients.[93] Such interventions may be more expensive to implement, but tend to be more cost-effective, because the savings from lower health care use more than offsets the operating costs. In contrast, programs that target patients with a single chronic illness or those with milder risk may not cost much to operate but are less likely to generate savings in the short or long run. Regardless of which populations are targeted, state leaders need to be reasonably sure of the long-run savings to justify up-front investment. Because it can be difficult to determine savings, states need to set aside some funds to conduct thorough evaluations to justify program continuation.

Because the population with chronic conditions or disability is diverse, the most appropriate care coordination model for each type of patient—and the costs and benefits of each model—may differ.[94] People with a single, relatively mild chronic illness, such as asthma or hypertension, who are otherwise in good health and not functionally impaired, may benefit from a moderate level of disease management. People with multiple chronic conditions or severe functional limitations may need more intensive interventions such as case management and transitional care, which coordinate care among health and social service providers, ensure support for daily activities, and make smooth transitions. States may need to design enhanced care coordination programs that are customized to meet the needs of vulnerable populations, such as those who need help applying for disability benefits; have limited English proficiency; or lack affordable, accessible housing.[95]

Make or Buy

When designing care coordination/disease management programs for state-financed populations such as Medicaid participants and state employees, policymakers need to decide which functions can be performed more cost-effectively by states and which by private vendors. The core functions of such programs are: data analysis to identify patients who need different types of care coordination, telephone and/or in-person contact with patients to coordinate care and provide education on self-care, support for and collaboration with physicians and other care providers, and regular monitoring of care patterns and feedback to physicians. The design of complementary provider payment policies may also be a critical function to enhance program effectiveness.

The choice of who should perform these functions will differ in each state depending on the skills and experience of state staff, the availability of qualified outside vendors, and the sustainability of either arrangement over time.[96] For example, states may already have or can readily hire qualified clinical staff. If state hiring limits or salary levels make it difficult to recruit and retain people with these skills, states can contract with outside vendors as long as they devote some resources to selecting and overseeing qualified contractors. To be sustainable, it is also important to consider whether the vendors will be available over time.

If state agencies have qualified data analysts, they can identify patients in greatest need of coordinated care or disease management and then generate provider profiles or performance measures. These tasks can also be contracted to vendors if the state is short on skilled and experienced staff. Either way, comprehensive, real-time data are critical to the success of care coordination programs, because they provide essential information needed for clinicians to manage patient care and for states to monitor program effectiveness and savings. In general, it is best for agency staff to develop and manage payment policies though consultants who specialize in this area and can be helpful in the design.

Overcoming Provider Resistance and Aligning Payment Policies

One of the major contributors to the current uncoordinated system is fee-for-service payment, which rewards health care providers for volume rather than value. Payment policy represents one of the most important levers available to promote health system delivery changes and give providers greater incentives to coordinate care and manage chronic illness. But if coordinated care and disease management are effective in lowering use of costly health services, revenues will decrease for some providers—particularly hospitals and specialists.

Policymakers must therefore devise strategies for enlisting provider support for these initiatives. Primary care physicians are generally supportive of such programs, be-

cause most primary care medical home models pay doctors a fee to coordinate care on top of their other responsibilities. Public and private payers expect that the lower use of expensive health care will offset the added cost of these fees. Some hospitals may also support care coordination and transition programs if they can shorten length of stay, help to reduce admissions that are not profitable under current payment policies, and improve patient satisfaction with discharges—one of the biggest consumer complaints about hospital care.

If each state insurance plan, large employer, and commercial insurer develops its own payment policies, providers will face a confusing and potentially conflicting set of policies that make it difficult to adopt a consistent approach to care coordination. State involvement in public-private payer initiatives to develop common reimbursement policies is therefore an important avenue for overcoming provider reluctance, or outright resistance.

Getting public and private payers to agree on common payment principles is not easy or quick, but it can be done. For example, in 2009, the **Massachusetts** Special Commission on the Health Care Payment System recommended the adoption of global payment models, which pay providers in advance for all or most of the care that patients need. The commission viewed global payments—already used for 20 percent of commercial physician payments—as providing strong incentives to improve care quality and promote coordinated care and recommended their adoption by all public and private payers over the next five years.[97] Private health plans in the state are now increasing their use of this payment model, and the state Medicaid agency has been authorized to run a pilot program to test it.

Adaptations to Account for Variation in State Health Delivery Systems

In designing a state strategy to promote care coordination and patient self-care, policymakers need to consider the characteristics of their state's health care delivery system. States vary in the mix of physician practice types (for example, large or small group practices and solo practitioners), the number of physicians and nurses, the number of private insurers and market concentration, strengths and functionality of local public health agencies, the availability of provider costs quality data, and the health care needs and service patterns of vulnerable populations.

For example, states with a high proportion of small physician practices, or a low percentage of people enrolled in managed care plans are better suited to care coordination or disease management programs operated by specialized commercial firms, as long as they are specifically designed to

support physicians.[98] That is because solo or two-physician offices are least likely to use the most effective care management tools—nurse managers, non-physician educators, and group visits.[99] By contrast, states with a greater concentration of large group practices and staff model health maintenance organizations (HMOs) are more likely to use these management tools and lend themselves to models that put the onus on the practices.

Although there is great variation across and within states in hospital market concentration, having fewer hospitals in a state or region can make it easier to coordinate information about people among hospitals and community-based providers. Similarly, if there are fewer private insurers and health plans in a state or a handful of plans that dominate the commercial market, it may be easier to develop a common approach and set of principles regarding care coordination for providers than in states with multiple plans.

Care coordination and disease management can be bolstered by involving state or local public health systems and community health centers. Public health agencies can perform a variety of roles: maintaining registries of people with chronic diseases, making nurses available to help conduct outreach to vulnerable populations, and aggregating data on provider performance from public and private payers. Community health clinics can also help reach vulnerable, at-risk populations with education, support, and services. This outreach is especially important for groups with special needs, such as those living in rural and frontier areas, people with limited English proficiency, and Native Americans who are not regular patients at Indian Health Service sites. Deciding whether and how to involve state and local public health agencies and community clinics is therefore important. Because these agencies are often underfunded, they may need new resources to carry out these tasks.

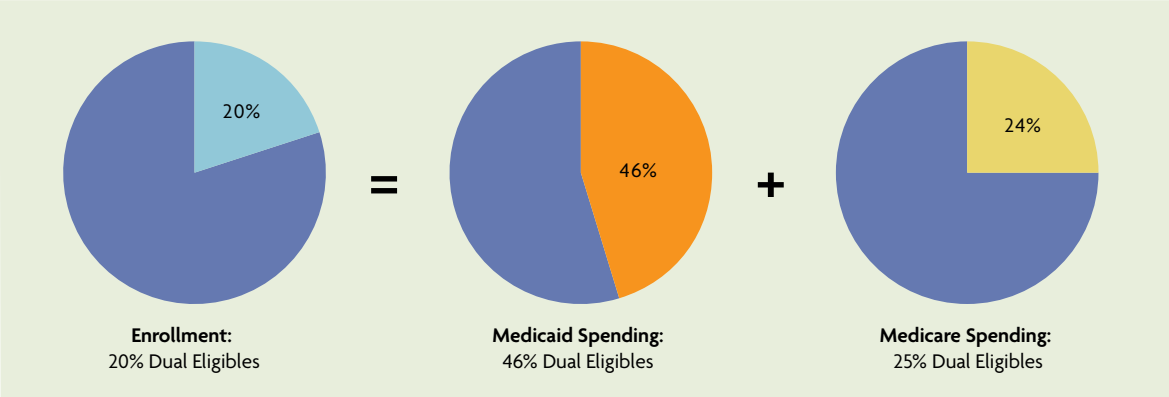
How to Collaborate Effectively with Federal Policy

State policymakers have several options for collaborating with the federal government to promote coordinated care. For example, the federal and state governments jointly finance care for 8.8 million dual eligibles—those enrolled in both Medicare and Medicaid. They accounted for about 46 percent of total Medicaid spending and a quarter of total Medicare spending in 2005, despite comprising less than one-fifth of enrollees in either program (Figure 7).[100]

As some of the most chronically ill patients, these patients are a key group to target for care coordination. Yet federal initiatives designed to promote integrated care for dual eligibles, such as Medicare Advantage Special Needs Plans (SNP), have largely failed to improve care or lower costs. Only a handful of states have been able to develop SNPs that fully integrate financing and services across the two programs because of barriers such as federal officials' reluctance to share savings with states and few incentives for consumers to enroll.

The situation is changing, however, as several state-led initiatives to integrate care for dual eligibles have been authorized recently through Medicaid Section 1115 demonstrations and included in new shared-savings approaches. For example, **North Carolina** recently received federal approval to test a shared-savings approach to manage care for dual eligibles. The federal government will allow the state to retain a portion of federal Medicare savings that results from

FIGURE 7: Percentage Spent on Medicaid and Medicare Dual Eligibles



SOURCE: A Databook: Healthcare Spending and the Medicare Program, MedPac, June 2009, "Dual Eligibles: Medicaid Enrollment and Spending for Medicare Beneficiaries in 2005." Kaiser Commission on Medicaid and the Uninsured, February 2009.

providing coordinated care to dual eligibles through the North Carolina Community Care Network, which serves other Medicaid beneficiaries.[101]

The U.S. tax code is a potential source of federal assistance to promote greater care coordination and disease management, but some of its provisions can present barriers. The Internal Revenue Service (IRS) allows taxpayers to make tax-favored contributions to health savings accounts (HSAs), which can be used to pay for out-of-pocket health costs as long as they have a high-deductible health plan (HDHP).[102] Because the federal tax code allows, but does not require, HDHPs to exempt preventive services from counting toward the annual deductible, some argue that it acts as a disincentive to maintain health.[103] In addition, the federal tax code does not define preventive services as including services or medications to treat existing illnesses or conditions.[104] If, as a result, patients with these plans have to pay out-of-pocket for essential medications and preventive and primary care, they may avoid getting recommended care.[105] To remedy this problem, provider groups want to expand the tax code's definition of preventive services and require HDHPs to exempt preventive services from the deductible.

LESSONS ON CARE COORDINATION AND DISEASE MANAGEMENT IN STATE PROGRAMS

States have applied lessons learned about promoting and using greater care coordination and disease management as purchasers of care, as partners in public-private payer initiatives, in the public health protection and promotion role, and in the use of federal resources and programs. The following examples illustrate how states have put into effect these lessons in Medicaid programs, state employee and retiree health plans, public health programs, and public-private initiatives to align provider payment policy. States at the forefront of these initiatives demonstrate the importance of piloting programs to show success before expanding them on a statewide basis and creating capacity needed to build partnerships with the private sector and the federal government.

Medicaid

Attempts by state Medicaid agencies to apply the evidence on effective care coordination and disease management programs reflect a shift away from single-focus disease management programs toward care coordination and case management programs that target high-risk or aged and disabled beneficiaries—the individuals who incur the greatest expenses and offer the best opportunity for improving quality and reducing costs.[106] Some single-focus disease management programs that serve people with one or another chronic disease still operate with a combination of in-house and out-sourcing designs.[107] But based on studies showing that such programs do not substantially improve health or save costs, many states have dropped them.

Instead, many states are moving toward a model in which primary care providers are responsible for care coordination with the support of care managers. **New Hampshire** and **Vermont** recently decided to shift funds from third-party disease management programs to support primary care practices that meet the criteria of a medical home. Several state Medicaid primary care case management programs similarly decided to step up their support for physicians to coordinate care.[108] The activities performed by care coordinators vary in intensity, from intensive case management and home visits by nurses to call center-based outreach via telephone, to giving physicians monthly lists of enrollees due for well-care visits.

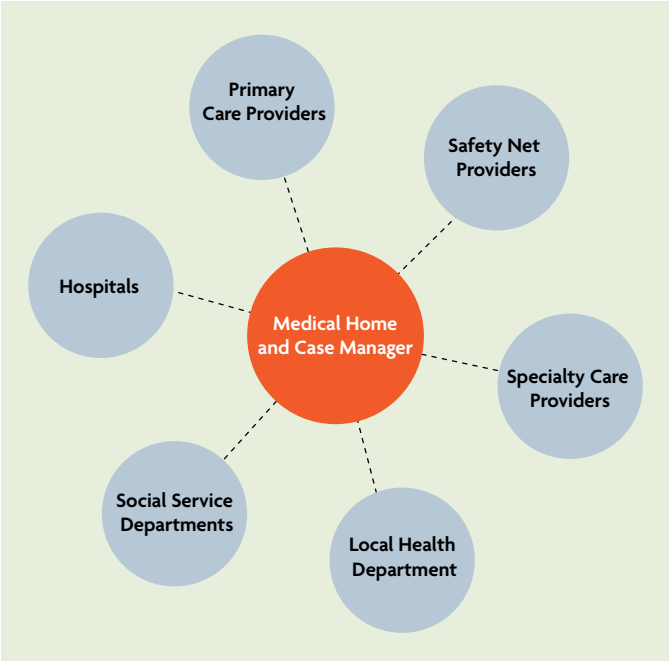
State Medicaid agencies have also set aside funds to reward managed care plans, primary care providers, and disease management vendors that demonstrate improved care outcomes or lower use of costly care. For example, **Indiana** contracts with two care management organizations and withholds 20 percent of the payment contingent on their performance on quality-related measures, such as avoidable hospitalizations, breast cancer screening, and antidepressant management.[109] To meet state performance standards, managed care organizations are using similar approaches to reward providers in their networks for maintaining disease registries or delivering clinical care that follows evidence-based guidelines. One study of these policies showed that larger payouts were correlated with improvements in process of care quality measures, although few health plans showed large gains among enrollees, highlighting the challenge associated with increasing preventive care use among the Medicaid population (Figure 8).[110]

Medicaid agencies have also become more sophisticated in their use of available data to target the intensity of care coordination to beneficiaries' health and functional status to maximize potential savings. Many Medicaid agencies search claims data to identify beneficiaries based on aid category, type of disability, service use, and spending patterns, or a combination of these factors. Because claims data do not nec-

NORTH CAROLINA'S CASE MANAGEMENT AND CARE COORDINATION INITIATIVE

One of the best-known programs of this type is Community Care of North Carolina (CCNC), which saved the Medicaid program an estimated $200 million to $300 million in 2005-2006 compared to what it would have spent. CCNC complements the state's primary care case management program, called Carolina ACCESS, by supporting 14 regional networks comprising primary care providers, safety net and specialty care providers, local health and social service departments, and hospitals. Medicaid pays each CCNC network sponsor a monthly fee to hire case managers, care coordinators, and a medical director who works with and supports community physicians. At the state level, CCNC developed a Web-based case management information system that gives providers and care managers access to diagnostic and service use data for their patients. The system can track all contacts with patients, determine whether providers' treatment plans follow evidence-based guidelines, and produce reports on clinical outcomes and changes in utilization patterns. One study estimated the program saved $200 to $300 million in one year, but it was not a rigorous analysis so real savings remain unclear.

FIGURE 8. What Care Coordination Should Look Like



essarily contain reliable information on diagnoses and co-occurring illnesses, some states also use predictive modeling (PM) techniques to identify those at greater risk for high service use or spending in the future. For example, **New York**'s chronic illness demonstration uses a predictive algorithm to identify patients at highest risk for medical, substance abuse, or psychiatric hospitalization in the next year. Experts caution, however, that a risk score produced by such tools must be only one of several criteria for targeting care coordination, including health status, gaps in care, functional status, social context, and health behaviors and attitudes.

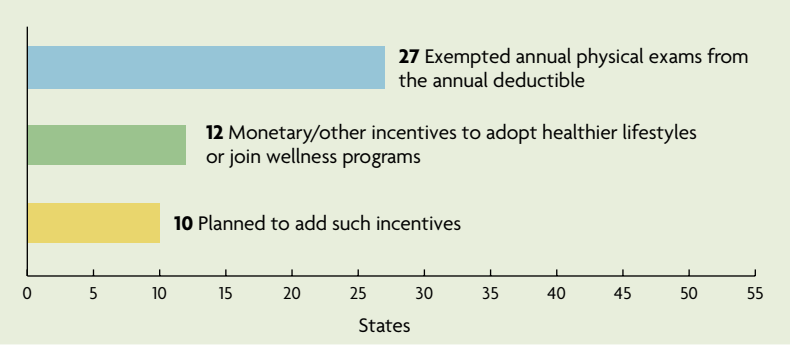
State Employee, High-Risk Pools, and Other State Programs

Other state agencies that purchase health care for enrollees have also taken steps to incorporate principles of effective care coordination and disease management programs. State retiree health plans report that disease management was the most common cost containment strategy, and many have recently added incentives for preventive care and wellness.[113] For example, in 2008, 27 state retiree health plans exempted annual physical exams from the annual deductible, 12 offered monetary or other incentives to enrollees to adopt healthier lifestyles or participate in wellness programs, and 10 states planned to add such incentives (Figure 9).

State employee health plans also are experimenting with new ways to contain costs, such as pairing health promotion with disease management and supporting PCMHs. For instance, the **Oklahoma** Employee Benefits Council conducted a program that uses health educators to coach employees in lifestyle changes. It also offers financial incentives for attaining health goals. After three years, the program reported that participants had 21 percent fewer medical claims, 9 percent fewer hospitalizations, and 34 percent fewer clinic visits compared to nonparticipants. **Delaware** launched a new state employee comprehensive wellness program in 2007, which it says has already helped hold the line on health care premium increases. The **Oregon** state employee health plan recently decided to add support for PCMHs to its criteria for contracting with managed care plans serving state workers.

Most state high-risk pools, currently operating in 34 states, also offer care coordination and disease management

FIGURE 9. Options for Care Coordination and Disease Management for State Retirees (free physicals, wellness programs and future planning)



SOURCE: D.M. Daley and J.D. Coggburn. (2008, December). "Retiree Health Care in the American States." Center for State and Local Government Excellence. Available at http://www.slge.org.

programs to enrollees who have pre-existing medical conditions that disqualify them from individual health insurance or make the premiums prohibitively expensive.[114] Although most state high-risk pools make it voluntary to participate in disease management programs, **South Dakota** penalizes those who refuse to do so.

State Standards and Licensing

States that contract with vendors to deliver care coordination or disease management services are increasingly basing their purchasing decisions on whether the vendors meet national standards or are accredited by national organizations such as the NCQA. Such standards help purchasers, including Medicaid agencies, state employers, large private employers and health plans, use a common set of standards for rewarding physician practices that follow methods shown to be effective in coordinating care or improving quality of care.

NCQA runs a disease management accreditation program and has national standards for recognizing PCMHs. In 2009, the disease management program added standards regarding the structure and processes used to coordinate care, integrate data, improve quality, and assure transparency in reporting. Organizations wishing to meet the new care coordination standards must give patients information about their progress toward treatment goals, give practitioners information about the condition and progress of their patients, coordinate referrals, and provide relevant information to case management programs.[115]

Although NCQA's standards for recognizing PCMHs are quite comprehensive, they may not be appropriate for all providers in all states. For example, the standards have been criticized by some as putting too much emphasis on technology like electronic medical records (EMRs), compared to standards that emphasize access, communication, comprehensiveness, and care coordination.[116] Consequently, although nationally endorsed recognition standards and accreditation programs are an important starting point, there remains an important role for state leaders to adapt the standards to meet state circumstances or respond to stakeholder concerns. Some states allow PCMHs flexibilities in the definition and standards, while others are considering additional requirements.

Engaging Patients in Self-Care

Because providing support to people to manage their health is such a prominent feature of care coordination and disease management programs, states have devised various strategies for strengthening this component. **Rhode Island** Medicaid's primary care case management program for elderly and disabled adults, for example, links patients to local Chronic Disease Self-Management Programs (CDSMP), which have been replicated in communities throughout the country. States have also applied for funds available through the American Reinvestment and Recovery Act (ARRA), which authorized $650-million in federal grants to support the CDSMP and other evidence-based clinical and community-based prevention and wellness strategies. Another $27-million was allocated for state grants to expand these programs for older adults with chronic conditions.

State programs are also adding monetary incentives to encourage people to seek necessary care and increase participation in self-care activities. The incentives include discounts on premium rates, exemption from copayments, cash payments, and gift cards or movie tickets. For example, a **New Hampshire** law adopted in 2003 permits health policies sold to small groups and individuals to discount the premium for benefit plans that include significant financial incentives for policyholders to participate in wellness or disease management programs.

Policymakers must be careful to craft such incentives to ensure that they comply with federal laws. For example, state employee health plans, self-insured employers, and health insurers are subject to a new federal law, the 2009 Genetic Information Discrimination Act (GINA), which restricts employers' ability to ask workers about their genetic background

or family health histories and prohibits the use of genetic information in deciding whether to approve insurance applications or to set premium rates. Hence, wellness programs that give incentives to individuals for completing a health assessment containing questions about family health history could violate the law. Even if family health history is not examined, people covered by small group and individual policies who disclose a chronic disease could be regarded as having a preexisting condition that would increase their insurance premiums or risk having coverage denied.

In addition, states must consider potential risks associated with monetary incentives for Medicaid enrollees. Because cash payments may be counted as income, they could disqualify someone from the Medicaid program if it pushes family income over the eligibility level.[117] Similarly, if a state wants to increase co-pays for brand-name or generic prescription drugs, it would be penny-wise but pound-foolish to apply such raises to medications needed to control chronic conditions.

State policymakers have taken other steps to give consumers the tools and information they need to take an active role in managing their own health. The **Minnesota** Legislature asked the state health department to propose strategies to engage consumers in becoming advocates for higher-value health care.[118] The resulting work demonstrated that consumers want coordinated care and expect it from their primary care physicians, but need education about what a medical home should be and how to better communicate with physicians. It also endorsed public policies to align incentives that reward consumers for taking action.

State and Local Public Health Agencies

State public health agencies have also become more involved in preventing and controlling chronic diseases on a population level. They have planned and implemented public education campaigns to reduce the risk factors, like smoking, physical inactivity, and poor diets, that cause chronic disease. They have helped local communities, schools, employers, and providers develop effective programs like the Chronic Disease Self-Management Program, discussed earlier. And they have adopted integrated approaches to chronic disease control and prevention, involving epidemiological surveillance, partnerships with local health departments and private entities, promotion of evidence-based interventions, and regular monitoring and evaluation.

State and local public health agencies have particular strengths in collecting, analyzing, and presenting data on chronic illness for use in program planning, development, and evaluation. For example, drawing on information from population health surveys, hospital discharge data, disease registries, and all-payer databases, epidemiologists have identified regional variations or racial and ethnic disparities that help to target programs to high-risk groups. State data initiatives have also provided indicators of the performance of specific providers in care coordination. **Florida**, for example, was the first state to publicly report 15- and 30-day potentially preventable readmission rates by hospital.

State Synergies: Public-Private and Multi-Payer Collaborations

State governments can make a difference by using their purchasing power to reform care delivery for people covered by Medicaid and state health benefit plans and to develop public health promotion campaigns. But state government agencies acting alone do not have enough market leverage to drive broader changes in the health care system. Consum-

ers likewise, often lack the power to transform health care systems on their own.

Consequently, public-private collaboration is essential for expanding the use of care coordination to the broader population. Public and private payers acting in concert can give providers stronger incentives to encourage and reward care that is more coordinated and improves outcomes for people with chronic disease. Public-private collaborations in more than 30 states have been formed to jointly promote PCMHs or other models for delivering coordinated, comprehensive care. Although the goal in many states is to reform health care delivery system for all state residents, many start with Medicaid enrollees or include them as one of the target populations in a statewide plan. Based on a study of leading states, the National Academy for State Health Policy identified five strategies that help to speed the adoption of PCMHs.[119] These principles can also be used to promote other care coordination models:

- Partner with key players (including patients, providers, and private sector payers) whose practices the state seeks to change;
- Clearly define the criteria that providers are expected to adopt or follow;
- Align payment policies to support and reward practices that meet performance expectations;

EXAMPLES OF PUBLIC-PRIVATE AND MULTI-PAYER COLLABORATIONS

Pennsylvania's Chronic Care Initiative

This initiative, which began in 2008, rewards primary care physicians for keeping patients with chronic conditions as healthy as possible. The state and private insurers contributed funds to develop an electronic patient registry for doctors to track patient health status, generate reminders about needed check-ups, and communicate with patients via e-mail. The health plans pay physicians higher rates for adding health educators, nutritionists, and nurse practitioners to their staff to support patient self-management, and for following evidence-based practice guidelines. The program began in 2008 with 200,000 people in 32 physician practices in the Philadelphia area; by June 2009, the program expanded to other regions and involved more than 750,000 patients.

Rhode Island's Chronic Care Sustainability Initiative

This initiative, led by the state's insurance commissioner, brought together Medicaid and commercial insurance plans, employers, and providers to promote medical homes. Insurance department leadership gave the effort credibility with private health plans and allayed concerns about potential violation of anti-trust laws governing the health insurance industry. All payers agreed to reimburse medical home practices a monthly care coordination fee and to contribute to the cost of hiring on-site nurse care managers. The state's Medicaid Connect Care Choice program already paid participating physician practices about $30 per person per month to hire and pay nurses to provide case management services to people with moderate to high risk. The state is testing its approach with 25,000 patients in five medical practices that meet NCQA PCMH standards or are federally qualified health centers. It plans to expand to more practices in the future.

Vermont's Blueprint for Health

This blueprint, a comprehensive state plan to improve the health of the overall population and reduce the burden of chronic illness and promote health, was adopted by the state Legislature in 2006. It established local multidisciplinary care teams in three communities to develop community-wide health promotion programs and support people with chronic disease. In 2007, the state began working with private payers to align incentives for medical practices to become PCMHs and support patient self-management. Called the Advance Primary Care Practice (APCP) model, physicians can receive extra payment for attaining national quality standards, coordinating care across a multidisciplinary team, and monitoring patients' care outside the physician's office or hospital using HIT. Legislation adopted in 2008 will raise new funds for HIT investments that will help providers track their patients' care and progress, quickly access information on evidence-based care, and identify at-risk patients. Legislation enacted in 2010 codifies a phased expansion of the program with APCP sites in 14 communities by July 2011, and statewide by October 2013.

- Provide information and other support to physicians and health care practices to deliver patient-centered, coordinated care; and
- Measure results to determine to what degree the initiatives contain costs and improve quality and patient experience.

The multi-payer medical home initiatives of three states—**Pennsylvania, Rhode Island,** and **Vermont** (see box) —are promising, but have not been in operation long enough to demonstrate compelling evidence of success in reducing overall health care costs or improving population health measures. They do, however, illustrate how some states were able to bring together all key stakeholders to develop a comprehensive and integrated strategy that reflects state health system features and policy goals.

Although payment reforms supported by multiple payers are likely to have the greatest impact, public and private payers in some states may be hesitant about aligning their payment policies. In such cases, other types of public-private collaboration can help move physicians and health care providers to deliver care that is evidence-based or more coordinated. For example, in 2008, Blue Cross and Blue Shield of **North Carolina,** the state employee health plan, and Medicaid agreed to standardize the way they monitor care for five of the most common and costly chronic conditions. The three payers are submitting data to a centralized data repository, which will generate performance reports for participating physicians on 20 clinical measures to help them identify where they need to improve.

Until recently, the federal Medicare program was missing from state multi-payer initiatives. Given Medicare's dominance in the health care market, its absence limited states' ability to share costs for practice transformation across all payers and reduced provider interest in participation. In September 2009, the U.S. Department of Health and Human Services announced that it would allow Medicare to join state-based efforts to encourage PCMHs. The design of the demonstration had not been finalized when this report was written. However, the federal government had signaled its willingness to let states administer Medicare payments to providers and support organizations, as well as to allow CMS to participate as a payer for Medicare beneficiaries, contribute to multi-payer data systems, and independently monitor and evaluate its impact on the Medicare program.

OPPORTUNITIES AND CHALLENGES IN FEDERAL HEALTH CARE REFORM LEGISLATION

Many provisions in the federal health care reform act—the Patient Protection and Affordable Care Act (P.L. 111-148) signed into law on March 23, 2010—are designed to expand the use of care coordination and disease management in Medicaid and Medicare, through insurance plans offered through health insurance exchanges, and in community-based prevention programs. The provisions (and corresponding section numbers in H.R. 3590) are most relevant to state officials:

Medical homes and chronic disease management and prevention for Medicaid beneficiaries. The law establishes four new initiatives to promote medical homes or chronic disease management for Medicaid beneficiaries:

- Beginning January 2011, states will have a new state option for enrolling Medicaid beneficiaries with chronic conditions into "health homes," defined as teams of health professionals that provide enhanced primary care, comprehensive care management, care coordination, transitional care, referral to community support services, and other services. States choosing this option do not have to offer it statewide and are eligible for an enhanced federal matching payment of 90 percent for medical home service costs during the first two years of the program. States that adopt this option are required to track avoidable hospital readmissions and calculate savings. States are also eligible for grants totaling up to $25 million to develop new medical home amendments to their Medicaid state plans (§ 2703).
- A grant program will be created for states, state-designated entities and tribal organizations, to support the development of patient-centered medical homes, comprised of community health teams that can provide enhanced primary care, care coordination, and chronic disease management (§ 3502).
- A demonstration project will be established and operated in as many as eight states, starting in January 2012, to test the use of bundled payments for hospital and physicians services for Medicaid beneficiaries. Hospitals in the program must institute discharge planning processes that ensure that beneficiaries have access to appropriate post-acute care services. (§ 2704).

- States will be eligible for grants to test new approaches for encouraging Medicaid beneficiaries to participate in activities that prevent chronic diseases, starting in January 2011 (§ 4108).

Improving Care Coordination for Dual Beneficiaries

The new law establishes a Federal Coordinated Health Care Office within CMS to improve coordination between the Medicare and Medicaid programs on behalf of dual eligibles (§ 2602). The goals for the office include improving the quality of care, care continuity and transitions across care settings for dual eligibles. The new Office will be a resource to state officials for help in aligning benefits between the two programs; coordinating acute, primary, and long-term care services; and contracting with providers, health plans, and Medicare Advantage plans on behalf of Medicaid beneficiaries (§ 2602).

In addition, the law authorizes Medicaid waivers for coordinating care for dual-eligible beneficiaries for up to five years (§ 2601). By the end of December 2012, all of the more than 300 Medicare Advantage Special Needs plans now specializing in serving dual beneficiaries must have contracts with state Medicaid agencies (§ 3205). The new Federal Coordinated Health Care Office is expected to provide states help and support in arranging these contracts.

Medicare Payment Reforms to Promote Care Coordination

Although not specifically designed for states, the new law authorizes several Medicare payment reforms designed to give hospitals, physicians and other health care organizations financial incentives to reduce potentially preventable hospital readmissions and improve care coordination (§ 3021-3024). Because Medicare is a dominant payer in most health care markets, providers subject to these reforms may also alter delivery patterns for other covered populations. For example:

- By January 2013, Medicare will reduce payments for acute care hospitals with high readmission rates relative to the expected readmission rate for selected conditions. Similar policies will be applied to post-acute care providers starting in 2015 (§ 3025);
- Building on existing demonstration programs, Medicare will initiate pilot programs designed to create "accountable care organizations" and medical homes for Medicare beneficiaries with chronic illness. If evaluations show that these care models can provide more coordinated care for no greater costs, CMS can make the programs permanent without further congressional action (§ 3021);

- Medicare will design a demonstration program to support transitional care for beneficiaries admitted to hospitals for up to three months after discharge to prevent unnecessary readmissions. Eligible entities include collaborations of community-based organizations and hospitals that have high readmission rates. The program is expected to last five years, starting as early as January 2011 (§ 3026).
- Medicare Advantage plans are also eligible for care coordination bonuses [(§. 3201 (n)].

Care Coordination Benefits in Other Public Health Insurance Plans

Although most care coordination or disease management provisions in the federal health reform law are targeted to Medicare or Medicaid beneficiaries, efforts to manage and reduce chronic disease are prevalent throughout the legislation. For example, individuals and small businesses that purchase health coverage through state-administered health insurance exchanges starting in 2014 will gain access to health plans that cover chronic disease management (§ 1302). State Basic Health Plans, which states have the option of offering to low-income individuals not eligible for Medicaid, are expected to negotiate contracts with health plans that include care coordination and care management

for enrollees with chronic health conditions as part of the benefits covered in standard plans (§ 1331). State high-risk pools are also encouraged to structure payments to health insurers in a manner that promotes the use of care coordination and care management programs for high-risk conditions (§ 1341).

Chronic Disease Prevention

In addition, state grants to support community-based prevention programs that reduce the rate of chronic diseases were authorized to begin in 2010 (§ 4201). Health workforce training and development programs designed to expand the supply and skills of primary care practitioners will include funds to train them in chronic disease management (Sec 5509). The act also calls for the development of a National Strategy for Quality Improvement in Health Care, which will include (among other things,) strategies for improving health care provided to patients with high-cost chronic diseases (§ 3011).

These proposals, if adopted into federal legislation, represent new opportunities for state policymakers to bring the federal government into an integrated strategy. But they are not without some risks and unresolved questions for states:

- The federal government would likely retain discretion to choose which states or provider sites are allowed to participate in any pilots, and the federal government's participation in a state initiative could depend on whether, and to what extent it generates savings for the Medicare trust funds and the federal government overall.
- The emphasis of reforms like these on primary care physicians raises a number of concerns: Will enough primary care physicians be available to participate? Would specialists be allowed to qualify as PCMHs if the patient prefers it and the practice meets all other requirements?
- How would the federal and state governments share in the costs of developing PCMHs, such as technical assistance to help practices transform the way care is delivered, HIT, extra staffing, and any incentive payments?

CONCLUSION

Regardless of whether or not new federal options are available, each state has to determine how to unite multiple programs and funding streams at the federal, state, and local levels to support an integrated state strategy. As this chapter discussed, state governments have many levers to promote greater care coordination and chronic disease management. Flexibility to design Medicaid and state employee or retiree health benefits, state interagency partnerships, strategic investments in HIT, and public-private payer collaboration are some of the most important tools for pursuing this goal. In designing programs, state policymakers should apply the following lessons from effective programs in the private sector, Medicare, Medicaid, and those in other countries:

- Target programs to high-risk populations to achieve maximum cost savings and health care outcomes;
- Tailor and customize services to meet needs of different populations—those with single conditions or diseases that can be managed with minimal support versus those with multiple conditions or severe chronic illness who need more intensive support;
- Develop complementary policies to enhance program effectiveness, such as provider payment reforms, benefit design changes, and use of information technology to measure performance and share information across providers in a timely fashion; and
- Support and empower consumers and family caregivers to manage chronic health conditions to the best of their ability and improve transitions between health care settings.

Each state's strategy will vary not only in content but in the timing, sequence, and scope of reforms. Some states have already made substantial progress in creating programs to coordinate care and mange chronic diseases for state Medicaid beneficiaries and state employees; others are just beginning to make such changes. Even states that have had success with Medicaid and state employee populations can only go so far in the absence of system-wide efforts. To undertake systemic reform, governors and state policymakers must consider such factors as major health plans' willingness to collaborate with state government in adopting common standards for disease management and coordinated care, providers' ability to take advantage of HIT that will help them adopt such standards in their everyday practice, and health care consumers' commitment to taking responsibility for their health.

As with every important policy goal, state policymakers must engage key stakeholders to find areas of agreement, develop common goals, and establish a plan and timetable for

achieving them. Among those who should be consulted are state legislative leaders, Medicaid programs and state employee health plans, as well as state and local health departments; representatives of physicians, nurses, and other providers; private payers such as insurance plans and large employers; consumer advocacy groups; and organizations that focus on specific diseases like the American Cancer Society. Depending on the specific initiatives chosen, others may need to be involved, such as those managing state health information exchange efforts. State policymakers must also consider how to address the concerns of those who might lose financially if these programs are effective, such as hospitals whose admissions and revenues could decline.

Designing a strategy is just the first step. Putting it into effect can take many years. States that are well along the path of implementing comprehensive strategies to promote coordinated care and disease management have come to realize that continued progress depends on strong and sustained leadership and adequate state infrastructure to manage and oversee initiatives. Their experience also suggests that it is sometimes necessary to start small and demonstrate success at a local level before trying to scale the program statewide. As programs take hold and expand in scope, states must have program champions to win over those who resist change. And over time, flexibility is essential for taking advantage of new evidence, new federal policies and programs, and new opportunities. A long-term commitment to this challenge will help ensure that health services and support for self-care are woven together into a coherent whole, helping to improve health and slow the growth of health care costs for people like David Lawrence's mother and the millions of Americans with chronic diseases.

CHAPTER 3

The Role of Primary Care and Public Health in Improving Care Delivery

Sharon Moffatt and Pellavi Sharma
Association of State and Territorial Health Officials
Jason Hsieh
National Governors Association Center for Best Bractices

Both primary care and public health efforts offer opportunities to improve care delivery and health outcomes, and to drive down health care costs. Each field brings different skills and approaches to promoting health. The primary care arena has regular, direct contact with individuals, and studies have indicated the patient's often change their health behaviors on the advice of their doctor. Primary care provides tailored services, and ensures coordination of care. Patients who have a long term relationship with a doctor typically have lower hospital admissions and total costs of care. Such patients also are more likely to receive preventive services. Reliable primary care also is critical to disease management for those with chronic diseases.[120]

Public health also has much to offer to health care system reforms. Given that most people spend just a few hours a year in a doctor's office, community-based supports, healthy environments and other public health programs are critical to making sure individuals can follow through on clinical advice. Public health can provide data, conduct community-based programs, and support and echo disease management and prevention messages.

The primary care system faces several challenges to addressing patient health needs. Current incentives and payment systems do not necessarily correlate with better health outcomes. The financial incentives and payment systems favor specialty care over primary care. In addition, some state laws make it difficult to allow non-physicians (such as nurse practitioners) to be reimbursed for providing routine chronic disease care. [121, 122]

Many efforts are underway to ensure high-quality primary care, but there is a shortage of primary care providers, particularly in light of the coming expansions under federal health reform. About 65 million Americans live in a health professional shortage area.[123] Primary care providers are paid much less than specialists, which has led to shortages in this field. To improve care coordination and reduce the need for more expensive services, states must find ways to address shortages in the primary care workforce and improve primary care delivery.

The goal of public health, like primary care, seeks to prevent and control disease, prolong life through organized efforts and informed choices of society, public and private organizations, communities, and individuals. While primary care addresses an individual's needs, public health efforts are targeted toward population health improvements and health system changes, including education and self-management and creating communities and environments that support healthy lifestyles. State and local health departments and broader community-based public health efforts will be critical in ensuring the success of health system reforms, as they can ensure that individuals have the tools they need to stay healthy. But like primary care, public health has been consistently underfunded, and often lacks consistent and strategic investment and program design.

To successfully achieve health improvements and control costs, system reform efforts must include goals for primary care quality and prevention of diseases. Because of their mutual ability to drive down the need for high-cost ser-

vices, system improvement efforts should be echoed in public health investments and programs. Additional efforts should bring these two fields together for enhanced impact. The three actions that states can take to improve the interaction of primary care and public health with delivery systems reform are:

- Enhancing primary care access through payment reform and workforce development;
- Supporting public health programs that improve care outcomes; and
- Integrating primary care with public health through community health teams, self-management training, coalition building, and health information technology.

ENHANCING PRIMARY CARE ACCESS AND QUALITY

Since the primary care system provides the entry point for most patients into the health care system, ensuring quality and access are critical. While other chapters in this report focus on quality and payment efforts that may impact primary care, this section will highlight how to address access and quality as it specifically pertains to primary care structures and the health care workforce. A number of opportunities exist for improving primary care through these channels. These include:

- Payment reform as a driver for quality;
- Expanding the primary care workforce to ensure access; and
- Expanding primary care provider capabilities in ways that support access and efficiency.

Payment reform

Paying for the desired results is the foundation of the efforts at payment reform in primary care. Among other goals, payment reform seeks to improve access to care and early diagnosis of illnesses, as well as lower unnecessary testing and hospitalizations. These reforms can include paying for services delivered outside the clinical setting, such as phone calls and emails with patients, thus reducing unnecessary office visits. It can also create financial incentives for providers to report on quality measures such as a diabetic's blood sugar levels.

Another model, typically referred to as global payment, is often more suited to large physician groups or health systems. This model consists of paying a practice a monthly amount to cover all patient services, including hospitalizations. Ideally, this creates an incentive to reduce unnecessary hospitalizations, given the high cost associated with such care. The chapter on payment initiatives goes into considerable detail on options for remaking the payment structures to better support primary care delivery and related supports.

Payment reform is just the first step to improving the delivery of primary care. States will need to consider ways to aid primary care practices in improving workflows, creating efficiencies, and using quality data. Over 80 percent of primary care practices have fewer than two doctors.[124] Small practices may have difficulty affording expanded care coordination and offering more hours or other aids to access. Solutions to this challenge include working through practice associations or physician-hospital organizations that bring small practices together to efficiently provide services. Health IT efforts in the states also will be working to aid in workflow redesign, and may be an important asset for this effort.

Expanding the primary care workforce

Despite the overall growth in primary care providers, the Health Resources and Services Administration (HRSA) states that there are 6,204 Primary Care Health Professional Shortage Areas (HPSAs) with 65 million people living in them. It is estimated it would take 16,643 practitioners to meet their need for primary care providers (a population to practitioner ratio of 2,000:1).[125]

Medical school students entering the primary care workforce have not kept up with those becoming specialists. Between 1965 and 1992, the primary care physician-to-population ratio grew by about 14 percent. However, this number was far surpassed with the specialist-to-population ratio growing at 120 percent in the same time frame. Some research also suggests only seven percent of fourth year students at medical schools plan on entering primary care.[126]

States can help build the primary care workforce through a variety of efforts, including loan repayment programs (SLRP) that supplement federal loan programs. Often administered by the state health agency, these programs repay a portion of student loans while the primary care provider serves in a designated underserved community. Initially offered to physicians, many states now include nurses, physician assistants, and nurse practitioners. **Colorado** supplements their loan repayment programs with private donations, demonstrating state innovation in coordinating public and private efforts despite tight state budgets.

State loan repayment programs, scholarships, and loan forgiveness programs offer critical support to increase the number of primary care and public health providers in the health workforce. In addition, primary care providers are likely to stay in a primary care setting after the loan repayment program has ended. Yet pressures on state budgets may greatly limit the implementation or expansion of this strategy. Some states successfully add to state loan programs through partnerships with business and foundations.

Virginia addresses its recruitment and retention of primary care providers through a number of measures, including a loan repayment program. The program awards $50,000 to primary care physicians, general dentists, mental health providers, physician assistants, and nurse practitioners in return for a two year commitment. Providers can reapply for a third or fourth year, and receive loan repayment amounts of $35,000 per year. Money is awarded to providers who serve in the highest need areas of the state.[127]

Some states create and run stakeholder coalitions to address health care workforce shortages by convening all relevant entities in collaborative, strategic efforts. These coalitions were created through executive orders or through state leadership's call to action. Workforce coalitions are effective in working with multiple partners from the public and private sector to implement a strategic approach in the state health shortages. The coalition provides a shared direction and offers opportunities to look for other resources beyond state funds to support health care providers in education and practice within a state. To sustain the ongoing efforts of these workforce coalitions, many states codify into law the representation and responsibilities of these coalitions. **West Virginia, Iowa, Louisiana, Massachusetts** and **New Mexico** all address the primary care workforce shortage by establishing coalitions.

Federally Qualified Health Centers (FQHC) are the primary source of care and preventive services for Medicaid enrollees and uninsured populations. Given recent increases in federal funding for FQHCs, they will serve an increasingly vital role in ensuring access to primary care for low-income populations. Although the state has only limited ability to direct FQHC activities, it is important that the state's primary care strategies and stakeholder efforts include these health centers and their coordinating association.

Expanding primary care provider capabilities

In addition to expanding the number of primary care physicians, states can promote efforts that allow alternative professionals to deliver services. This can include allowing nurse practitioners (NPs) and physician assistants (PAs) to provide health care services to extend the reach of physicians. The challenge here is that states have different laws as to the scope of practice. In some states, these allied health professionals can practice on their own, which should increase access. In other cases, they must be tied in with a physician's office. For routine chronic disease care and management, when getting care from a physician, NP, or PA, quality of care is maintained as these health professionals follow established guidelines. Given the higher costs associated with physicians, utilizing NPs or PAs for routine care may contain costs. Physicians can then be freed up to focus on other patient issues needing their higher levels of training.

The number of nurse practitioners has increased to meet the growing demand in a variety of healthcare settings. There are currently 139,000 nurse practitioners, a 63 percent increase from 2000.[128] Factors that have contributed to this rapid growth include high patient satisfaction, demonstrated quality care, and changes in federal, state, and private reimbursement policies. Eleven states allow nurse practitioners to practice independently within their scope of practice. Given their competency and high quality of care, nurse prac-

titioners and physician assistants can play a major role in bridging the gap of health care needs in our states.

SUPPORTING PUBLIC HEALTH PROGRAMS THAT IMPROVE CARE OUTCOMES

Public health services are especially critical to controlling costs and improving health care given that a majority of what impacts health is attributable to behavioral and social circumstances (Figure 10). Without addressing these lifestyle issues, an opportunity is lost to impact health outcomes. In addition, one of the best ways to deal with the current challenges in the primary care system is to reduce the need for expensive chronic care treatment. With its focus on preventive strategies, public health departments can help achieve this goal. While health departments address a myriad of diseases, several issues should be considered priorities in the system reform environment given the toll they take on health, health care costs, and productivity. A number of critical opportunities exist for driving system improvements through public health programs. These include:

- Tobacco use cessation;
- Cancer screenings; and
- Obesity reduction through provider incentives and coalitions.

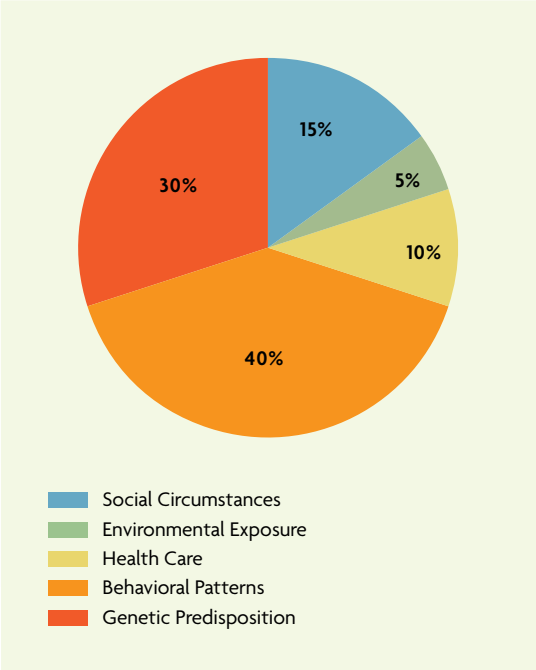
State-based system reform efforts should include assessments of their existing public health infrastructure, and investment and expansion of public health programs targeted to the system outcomes goals determined by the state. The following section describes some of the most likely efforts, but state goals should drive this process. For example, if the state is focusing system reform efforts on chronic disease management, other public health programs may be more relevant for inclusion and support.

Tobacco use cessation

Tobacco use is the leading cause of preventable disease, disability, and death in the United States, accounting for 443,000 deaths and $193 billion in health care spending per year.[129] State strategies to address tobacco use include:

- Requiring insurers to pay providers for tobacco counseling and to cover cessation therapies;
- Ensuring that state Medicaid covers tobacco cessation options;

FIGURE 10: Proportional Contribution to Premature Death



SOURCE: Schroeder SA. We Can Do Better: Improving the Health of the American People. New England Journal of Medicine, 2007.

- Ensuring that citizens are informed and have access to state and national quit lines; and
- Offering clear guidance from medical care providers to help patients stop smoking.

Lessons in tobacco prevention and cessation already point to the critical importance of a comprehensive approach. Increases in cigarette prices, media campaigns, nicotine replacement therapy, and smoking bans in public places have all contributed to reduced smoking rates over time. State telephone quit lines also prove to be highly effective smoking cessation interventions. Many states link quit line services to the health care system by educating providers about the services offered, as well as instituting physician referral systems.[130]

The **Wyoming** Quit Tobacco Program is an example of a highly successful quit line. The Wyoming Department of Health administers the quit line through contractors and with the Wyoming Survey and Analysis Center for evaluation and data collection services. Wyoming residents may enroll either by calling 1-800-QUITNOW or at www.wy.quitnet.com. Participants ages 12 and over can receive counseling services while tobacco cessation medications and NRT are available to those ages 18 and older. Wyoming offers targeted counsel-

ing and media for specific populations, such as pregnant women, youth between ages 12–17, smokeless tobacco users, and Spanish-speakers.[131]

Cancer screenings

Early detection of cancer through screening saves lives and can also significantly reduce the cost of treatment and productivity loss. Reduction or elimination of co-pays and deductibles for these services can also promote utilization. To ensure that cancer screenings occur routinely, the U.S. Taskforce on Community Preventive Services recommends including provider reminders and recall programs that inform healthcare providers it is time for a client's cancer screening test. The recommendation is based on evidence of the program's effectiveness in increasing breast cancer screening, cervical cancer screening, and colorectal cancer screening. [132]

To ensure that cancer screenings occur routinely, The U.S. Taskforce on Community Preventive Services recommends including provider reminders and recall programs that inform healthcare providers it is time for a client's cancer screening test. The recommendation is based on evidence of the program's effectiveness in increasing breast cancer screening, cervical cancer screening, and colorectal cancer screening.[133]

Georgia enacted colorectal screening legislation requiring individual and group insurers to provide coverage for colorectal cancer screening consistent with American Cancer Society (ACS) guidelines and deemed appropriate by the attending physician. To prevent screenings from becoming cost-prohibitive for beneficiaries, the statute states that these benefits must be subject to the same deductibles or co-insurance that covers all other benefits.[134]

Obesity reduction through provider incentives and coalitions

With 16 percent of U.S. children and more than 30 percent of adults identified as obese, states are facing increased budget burdens. Obese individuals utilize more health services than their healthy-weight counterparts, and are at much higher risk for many chronic diseases.[135] State budgets also face increased financial burdens due to obesity. Obesity costs state Medicaid programs approximately $23 million to $3.5 billion per year.[136] Addressing the challenges of the national epidemic of obesity will take comprehensive strategies and multiple stakeholders. The focus of the following strategies

is on prevention and early identification of obesity.

As prevention programs highlight the risks of being overweight, children and families become aware of the need to seek professional medical help. Medical professionals are developing new standards of care for the management of childhood overweight and obesity, but clinicians are insufficiently supported in these efforts. An increasing number of providers conduct Body Mass Index (BMI) assessments, explain the risks, and counsel patients on healthy weight. However, providers now need a system of information assessment and sharing, as well as standardized and routinely available referral services. Research from the U.S. Preventive Services Task Force supports primary care providers in referring obese patients or patients at risk for obesity to intensive behavioral counseling.[137]

Delaware and **Virginia** illustrate that physician reimbursement for time spent on counseling is the next step in supporting primary care providers. One option is to require state Medicaid programs to provide support and resources to increasingly effective clinical management strategies. **Michigan** and **California** provide reimbursement for management of childhood obesity and for referral to a nutritionist.

Several states convene stakeholder groups to promote promising practices and award successes in obesity. The state health agency serves as a neutral convener bringing together primary care providers from around the state to

identify established measures for practitioners to reduce childhood obesity. These measures include conducting BMI assessments, healthy lifestyle counseling, and promoting positive health outcomes. **Virginia** and **Delaware** note that providers are incentivized by sharing their expertise with each other, working to solving the complexities of obesity, and listening to outside experts. In addition, providers who participate in this program can receive continuing medical education credits. The state health agency can use the feedback gained from these meetings with health care providers to revise their obesity-focused tools and collect data from providers to track progress of this initiative.

INTEGRATING PRIMARY CARE WITH PUBLIC HEALTH

Chronic disease management and the consistent delivery of preventive services should be the goals of collaborative efforts between primary care and public health. In addition to the chronic disease burden described earlier, a failure to consistently deliver preventive services has led to many of the quality problems we face today. Currently 46% of adults do not get such recommended preventive care. This gap, along with the lack of integration between prevention and primary care, accounts for 101,000 preventable deaths per year.[138]

Often, the challenge of bridging public health and clinical care can be different terminologies and cultures. Many health departments, especially at the local level, only have resources for immunization and regulatory issues. Similarly, clinicians are paid to perform tests and deliver care. Bringing these groups together to set goals and work collaboratively requires leadership commitment and sustainable cooperation, but can be highly beneficial to health outcomes. Working together across these fields could lead to accelerated progress in these goals. There are a number of existing opportunities to integrate primary care with public health. These include:

- Using community health teams;
- Building coalitions;
- Promoting self management programs; and
- Using health information technology to accelerate linkages.

The lack of integration between prevention and primary care accounts for 101,000 preventable deaths per year.

Using community health teams

A community health team (CHT) can be a part of the solution in bridging this divide. Such teams consist of a group of multi-disciplinary professionals helping a patient population engage with preventive health practices and improve health outcomes. The teams include nurses, social workers, behavioral health counselors, nutrition specialists, and public health specialists. The rationale for a multi-disciplinary CHT supporting a group of medical homes is based on the variable health outcomes that exist in a real world healthcare setting, and the complex set of factors that influences those outcomes (e.g. social, economic, cultural, behavioral, and biological). This infrastructure provides local access to skilled personnel, coordinated referrals across independent organizations, support for improved self management, and the intensity of follow up that increases the likelihood that families and patients will engage with management plans and preventive behaviors.

Community Care of **North Carolina** (CCNC) uses a CHT to link with the 3,000 primary care providers who treat the state's 510,000 Medicaid patients.[139] The program incorporates the concepts of case and disease management and patient follow-up to reduce emergency department visits of asthmatic and diabetic patients. The CCNC's goal is to target high cost and high risk patients, establish medical homes, and improve quality of care. As a result of the asthma management component, the state saved $3.5 million between 2000 and 2002 due to lower inpatient admissions and emergency department visits. By incorporating case management and follow up of patients who did visit the emergency department, North Carolina saw a 13 percent reduction in emergency department visits between 2001 and 2002.[140]

The success of states such as **North Carolina, Vermont, Maine,** and **Massachusetts** in working with private insurers and Medicaid will be further enhanced by Medicare participation. In a recent announcement, the Centers for Medicare and Medicaid Services launched a medical homes grant program that will provide Medicare support and financial participation in state efforts through an Advanced Primary Care (APC) Demonstration project. With these grant funds, states

can broaden their efforts, including greater support for community care teams.[141]

Building coalitions

Reducing the gap between recommended care and what is delivered is critical to health outcomes, and such reduction will require leadership and commitment. Coalitions can come together to address critical health needs of a community or state. Governors can bring stakeholders to the table to set goals, contribute assets, and reward success, particularly when those stakeholders include the business and provider communities, as well as state and local policymakers.

In 2009, the **Ohio** state health department, led by Governor Ted Strickland, partnered with health care, faith based organizations, businesses, and advocacy groups to establish the Ohio Infant Mortality Task Force. Data from the health department showed that despite investments of federal and state funds, Ohio's infant mortality remained at 7.8 per 1,000 live births—12th highest in the country—with large disparities between African-American and white infants. The task force provided 10 recommendations to the governor's office including providing comprehensive reproductive health services for all women and children before, during, and post pregnancy; and prioritizing and aligning program investments based on documented outcomes and cost effectiveness.

Promoting self management programs

People need support in making informed health choices beyond the short period of time they spend with their health care provider. Self-management programs provide patients with tools to handle emotional stress and communicate with family members about problems. Other components include techniques for dealing with health complications, appropriate use of medications, and nutrition. This additional support allows individuals to successfully manage their chronic disease. These programs can result in fewer emergency room visits and improved health outcomes, resulting in a cost savings of about four dollars for every one dollar spent. Evidence also suggests that programs teaching self-management skills are more effective than information-only patient education in improving clinical outcomes.[143, 144, 145]

State government can play a key leadership role in the implementation and sustainment of self-management programs. State health agencies lead the organization, training, and development of community-wide, self-management

programs. Through the state agency on aging, regional and statewide organizations supporting older persons can be instrumental in implementing and supporting these programs. State insurance commissions, state employee benefit programs and Medicaid can also be key contributors to support self-management programs through requirements of insurers and offered benefits in state programs.

Vermont has implemented Stanford University's Chronic Disease Self Management Program (CDSMP). While funding of the CDSMP varies by state and community, program costs are estimated to be about $200 per participant. In Vermont, self management is funded through state general funds with work underway to sustain funding through public and private insurance.

Using health information technology to accelerate linkages

Integrating health information technology (HIT) will be critical to improving quality and costs. In the primary care setting, it has the potential to revolutionize practice. Physicians can monitor when patients get certain preventive tests and are alerted when a patient sees another provider. They can receive reminders, check drug refills and regimen adherence, and even interact with patients outside of office visits.

With public health contributions, HIT benefits are even greater. With the bi-directional flow of information between health departments and providers, disease prevention and management is accelerated. Sharing information on infectious diseases, immunizations, and patient education and wellness opportunities available in the community, the primary care quality goes up greatly, and the public health department's functions in disease surveillance are enhanced.

Immunizations are a vital public health prevention strategy and an essential element in protecting the nation's health. Immunizations successfully reduce the incidence of many preventable diseases, including eliminating polio from the Americas and eradicating smallpox from the world.

Vaccine-preventable diseases continue to be major causes of death and add significantly to health costs. Twenty-five percent of American children have not received all recommended childhood immunizations.[146] Failure to immunize can lead to new outbreaks of disease. Between 1989 and 1991, a measles epidemic in multiple states resulted in over 55,000 reported cases, 11,000 hospitalizations, and more than 120 deaths, with most deaths in children under 5 years of age.[147]

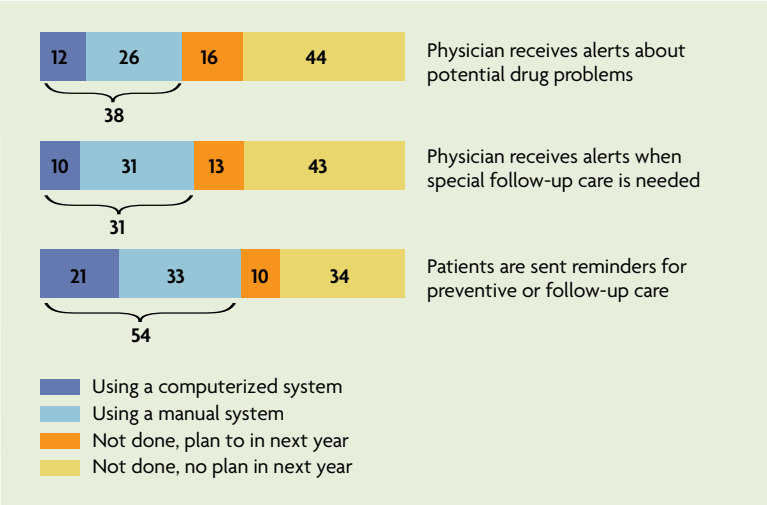
Electronic immunizations registries can provide an 8:1 return on investment over five years. Without proper tracking, one in five U.S. children receives at least one unnecessary dose of vaccine by the age of two, wasting $15 million in vaccine cost each year. The average cost to manually retrieve, review, and update a child's immunization record is $14.50, more than three times that of an immunization registry.[148]

More than 25 percent of **Utah's** young children are not fully protected against dangerous vaccine-preventable diseases. In response, the Utah Department of Health developed a comprehensive immunization registry to improve immunization coverage of its citizens and make information readily available to health care providers. The Utah Statewide Immunization Information System (USIIS) contains immunization histories for Utah residents of all ages and from all providers. This system allows the state to track which children have received immunizations, if they received them on time, and alleviates parental burden of keeping immunization records. USIIS also integrates the public health and primary care systems through this data exchange.[149]

Following Hurricane Katrina, the **Louisiana** Immunization Information System connected to local health departments in other states to ensure that displaced children could receive mandatory vaccinations needed to enter new schools. School nurses and public health staff checked the system to make sure that students did not receive duplicative vaccine. It was estimated that the Harris County local health department in Houston, Texas, saved about $3 million in vaccine and administrative costs because of this interoperability.[150]

The opportunities to enhance both public health functionality and primary care performance through HIT are recognized, but not easily realized. Since a majority of providers still do not use HIT to interact with patients (Figure 11)[151], there will need to be considerable investment in IT systems on both ends of the transaction, and workflow reengineering to ensure availability and use of data by agencies and practices alike. This effort should be echoed in public health efforts to support bi-directional health information exchange. The funding for HIT under ARRA is an important investment, as are existing state and private-sector dollars, but work must continue to ensure that HIT efforts are implemented strategically to best benefit these efforts and link primary care and public health in important ways.

FIGURE 11: Current or Planned Use of Alerts and Reminders in Office Prectice: Percentage of Physicians Surveyed, 2003



DATA: Audet, A. J. et al. 2005. *Physicians' views on quality of care: Findings from the Commonwealth Fund National Survey of Physicians and Quality of Care.* Percentages may not add to 100 because of rounding and unknown responses.
SOURCE: McCarthy and Leatherman: Performance Snapshots, 2006. www.cmwf.org/snapshots

HEALTH REFORM AND PRIMARY CARE AND PUBLIC HEALTH

The Patient Protection and Affordability Care Act (PPACA) includes many provisions that impact primary care quality and access, the health care workforce, and community resources to promote healthier lifestyles. These measures will enable states to further implement many of the initiatives and action steps highlighted in this chapter.

Payment Reform and Quality Measures

PPACA includes payment reform and quality measures that may impact states. In some cases, these measures are grant programs states are eligible to apply for; in other cases, Medicaid agencies and state hospitals will be involved in these provisions. These programs will test quality reporting measures, bundling payments, and pay for performance.

MEDICAID GLOBAL PAYMENT SYSTEM DEMONSTRATION PROJECT

The Secretary will coordinate with the Centers for Medicare and Medicaid Services for a demonstration project in which states adjust payments to safety net hospitals and networks from fee-for-service to a capitated payment model. Five states will be chosen to participate in the demonstration project, which authorizes funding as may be necessary for fiscal years 2010 through 2012 (§ 2705).

HOSPITAL VALUE BASED PURCHASING PROGRAM

The Secretary will establish a program for value-based incentive payments for hospitals that meet performance standards. Performance measures will include acute myocardial infarction, heart failure, pneumonia, surgeries, and health care associated infections. State hospitals may be exempt if they submit a letter to the Secretary demonstrating performance measures exceeding those in this national program. The Secretary will designate a certain value-based percentage payment for a hospital for a fiscal year. The program begins in FY 2013 (§ 3001).

NATIONAL STRATEGY FOR QUALITY IMPROVEMENT IN HEALTH CARE

By January 1, 2011, the Secretary will establish a national strategy to improve the delivery of health care services, patient health outcomes, and population health. The Secretary will work with state agencies that administer Medicaid and CHIP in developing and disseminating strategies and goals consistent with national priorities.

These strategies will:

- Improve health outcomes, efficiency, and patient-centeredness of health care for all populations;
- Identify ways to improve patient care quality and efficiency;
- Address gaps in quality, efficiency, comparative effectiveness information, and health outcomes measures and data aggregation techniques;
- Improve federal payment policy to emphasize quality and efficiency;
- Enhance the use of health care data to improve quality, efficiency, transparency, and outcomes;
- Address the health care provided to patients with high-cost chronic diseases;
- Improve research and dissemination of strategies and best practices to improve patient safety and reduce medical errors, preventable admissions and readmissions, and health care-associated infections;
- Reduce health disparities across health disparity populations and geographic areas; and
- Address other areas as determined appropriate by the Secretary (§ 3011).

NATIONAL PILOT PROGRAM ON PAYMENT BUNDLING

The Secretary will establish a program for integrated care during care episodes of hospitalizations to improve coordination, quality, and efficiency. The applicable conditions under this program include chronic and acute conditions. This program will begin no later than January 1, 2013, and will be conducted for five years. The exact funding amounts are not known at the date of this publication (§ 3023).

COMMUNITY HEALTH TEAMS TO SUPPORT PATIENT-CENTERED MEDICAL HOMES

The Secretary will establish a program that will promote community-based interdisciplinary teams which support primary care practices and provide capitated payments to providers. States or their designated entity will be eligible to apply for funds. States will need to have plans that incorporate prevention initiatives with health care delivery and community-based prevention resources and ensure that health teams include nurses, physician assistants, dietitians, and other medical specialists. This program will be established through either contractual agreements or grants (§ 3502).

Health Care Workforce Measures

PPACA includes several provisions to promote the health care and public health workforce. These include grants, loan repayment programs, and fellowships:

PUBLIC HEALTH WORKFORCE LOAN REPAYMENT PROGRAM

Public health professionals who commit to working for three years in a state or local agency will be eligible for the loan repayment program. Annual loan repayments consist of $35,000 or 1/3 of total debt. The program is authorized at $195 million for fiscal year 2010 (§ 776).

STATE WORKFORCE DEVELOPMENT GRANTS

Health care workforce development planning and implementation grant programs will enable states to develop strategies at the state and local level.

Planning grants will be available staring fiscal year 2010, with grants awarded for activities for up to one year. Planning grants will require a 15 percent match (in cash or in kind). Implementation grants may be used for up to two years and will require a 25 percent match (in cash or in kind).

The grants are authorized for $8 million for fiscal 2010 and such sums as necessary thereafter, with up to $150,000 per state partnership (§ 5102).

PUBLIC HEALTH TRAINING FOR MID-CAREER PROFESSIONALS

This program awards educational entities for training mid-career professionals in public health and allied health. It is authorized at such sums as may be necessary for fiscal years 2011–2015 (§ 5206).

GRANTS TO PROMOTE THE COMMUNITY HEALTH WORKFORCE

The Centers for Disease Control and Prevention will award grants to states and eligible state agencies to use community health workers to promote positive health behaviors and outcomes in medically underserved communities. Funding is authorized for such sums as may be necessary for fiscal years 2010–2019 (§ 5313).

FELLOWSHIP TRAINING IN PUBLIC HEALTH

The Secretary may carry out activities to address documented workforce shortages in state and local health departments in the critical areas of applied public health epidemiology, public health laboratory science, and informatics and may expand the Epidemic Intelligence Service. The fellowship training is authorized at $39.5 million for each of fiscal years 2010 through 2013 (§ 5314).

Preventive Services Measures

ESSENTIAL HEALTH BENEFITS PACKAGE

New health plans in the individual and small group markets and all health plans participating in the new insurance exchanges are required to cover preventive and wellness services, maternity and newborn care, mental health and substance use disorder services, pediatric services, and chronic disease management. Cost-sharing for these services must be limited (§ 1302).

ELIMINATION OF EXCLUSION OF COVERAGE OF CERTAIN DRUGS IN MEDICAID

Starting January 1, 2014, Medicaid cannot exclude coverage of drugs that promote smoking cessation, including ones approved by the FDA for over-the-counter use (§ 2502).

MEDICAID HEALTH HOME FOR ENROLLEES WITH CHRONIC CONDITIONS: PLANNING GRANT

Beginning January 1, 2011, state Medicaid programs will have the option to provide coordinated care to enrollees with chronic conditions. HHS will establish minimum standards for health homes and will award planning grants to states

to develop a state plan amendment. States will receive a 90 percent FMAP for such health home services during the first eight fiscal year quarters that the state plan amendment is in effect. A state contribution is required in order to receive a planning grant. This amount is not known at the time of this publication. A $25 million maximum planning grant will be awarded per state. The total amount for planning grants is not known at the date of this publication (§ 2703).

HEALTH PLAN COVERAGE OF PREVENTIVE HEALTH SERVICES

Beginning September 23, 2010, new group or individual coverage must cover and have no cost sharing for preventive services recommended by various federal guidelines (§ 2713).

MEDICAID PREVENTIVE SERVICES

State Medicaid agencies that eliminate cost-sharing requirements for clinical preventive services and adult vaccination will be eligible to receive FMAP incentive payments. The percentage point increase is ONLY for the cost of providing these preventive services and vaccines, and not an across-the-board FMAP increase. This enhanced match will be available beginning January 1, 2013 (§ 4106).

MEDICAID COVERAGE OF TOBACCO CESSATION SERVICES FOR PREGNANT WOMEN

Effective October 2010, states will be required to provide Medicaid coverage for tobacco cessation counseling and drug therapy for pregnant women without cost-sharing. Funding amounts are not known at this time (§ 4107).

MEDICAID CHRONIC DISEASE INCENTIVE PAYMENT PROGRAM

The Secretary will award grants to states to test approaches that may encourage behavior modification for healthy lifestyles among Medicaid enrollees and to determine scalable solutions. HHS will develop program criteria and will conduct an education/outreach campaign to promote states' awareness of the grant program. There is appropriated $100 million for a five-year period beginning January 1, 2011 (§ 4108).

COMMUNITY TRANSFORMATION GRANTS

The CDC is authorized to start a program for states and local governmental agencies and community-based organizations to promote evidence-based community preventive health activities intended to reduce chronic disease rates, and address health disparities. Activities may include actions that promote healthier school environments, active living and access to healthy foods, smoking cessation, and worksite wellness. Funds are authorized for such sums as may be necessary for fiscal years 2010 through 2014 (§ 4201).

HEALTHY AGING, LIVING WELL PUBLIC HEALTH GRANT PROGRAM

The CDC will award grants to states or local health departments and Indian tribes for pilot programs to provide public health community interventions, referrals, and screenings for heart disease, stroke, and diabetes for individuals between ages 55 and 64. Funds are authorized for such sums as may be necessary for fiscal years 2010 through 2014 (§ 4202).

IMMUNIZATION COVERAGE IMPROVEMENT PROGRAM

The CDC will award demonstration grants to states to improve immunization coverage for children, adolescents, and adults. The program is authorized for funding at such sums as necessary for fiscal years 2010 through 2014 (§ 4204).

EPIDEMIOLOGY LABORATORY CAPACITY GRANTS

The CDC will award grants to state and local health departments to develop and information exchange and improve surveillance and response to infectious diseases. The grants are authorized at $190 million for each of fiscal years 2010 through 2013 (§ 4304).

STATE AUTHORITY TO PURCHASE RECOMMENDED VACCINES FOR ADULTS PROGRAM

The Secretary may negotiate and enter into contracts with manufacturers of vaccines for the purchase and delivery of vaccines for adults. States may obtain adult vaccines through manufacturers at the applicable price negotiated by the Secretary (§ 4204).

CHIP OBESITY DEMONSTRATION PROGRAM

This program has received an extension of funding for the childhood obesity demonstration program established under CHIPRA (P.L. 111-3). It provides an appropriation totaling $25 million for fiscal years 2010 through 2014 (§ 4306).

INCREASED FUNDING TO FEDERALLY QUALIFIED HEALTH CENTERS

This section creates a new Community Health Centers Trust Fund for the purpose of expanding FQHCs' operational capacity and promoting greater access to primary care (§ 5306).

CONCLUSION

Although every state will have different priorities and political realities, state leadership can bolster primary care and public health systems as part of their system improvement strategies. To advance these efforts, states can take the following next steps:

- Convene stakeholders to address quality, access, prevention, and health IT usage;
- Assess barriers that hinder the growth of the primary care workforce; and
- Invest in critical public health issues to reduce demand for primary care.

Ensuring that individuals have access to quality primary care is essential to sustaining a well-functioning health care system. Primary care must serve as the foundation for reliable preventive services, and the hub for care coordination. State health departments are uniquely able to monitor and contain disease outbreaks and promote healthy life choices. Health departments can educate people about health issues, and help support healthier living environments, in which it is easier to follow a doctor's prescription to consume a healthier diet, exercise more, and stop smoking. As new populations gain coverage under health reforms, our health care system is at risk of being overwhelmed if these populations are not healthier. By investing in these critical tasks of health departments, state leadership can reduce the demand using the health care system and improve health status.

CHAPTER 4

Reforming Health Care Payment Systems

Harold Miller
Center for Healthcare Quality and Payment Reform

A major cause of the high cost of health care in America and of many of the quality problems in health care is the way providers are paid. Under most current payment systems, physicians, hospitals, and other providers are paid primarily based on how many services they deliver, not on the quality of those services or their effectiveness in improving a patient's health.[152] Research has shown that more services and higher spending may not result in better outcomes; indeed, it is often the opposite.

Current payment systems reward quantity over quality, with volume of services delivered as the key economic driver in health care. Furthermore, payment is balanced against primary care and preventive services, and toward high-cost care. Reimbursement methods also fragment the payments across multiple providers, even for the same service or episode. Payment reform efforts should emphasize highly-effective care that keeps people healthy, encourages care management and prevention, and drives efficiency in the system.

Payment reform initiatives can be categorized into two major approaches: those seeking to promote efficient, high-quality care in acute settings and episodes, and those that drive more consistent, long-term primary care that promotes disease prevention and chronic disease management. These methods can be combined in global payment schemes that seek the best in both settings and service types.

Although many people have looked to the federal government and the Medicare program to take a lead role in correcting these payment problems, state governments also have significant potential to influence the way health care is paid for. In most states, more individuals are enrolled in Medicaid and CHIP programs than in Medicare. About 20 percent of the U.S. population is enrolled in Medicaid.[153] A number of states have state-funded health insurance programs that cover additional individuals.

State governments also employ more than 5 million workers nationally; and in some communities, such as state capitals, state employees can represent 10 percent to 25 percent or more of the employed workforce.[154] Retirees for whom the state provides insurance expand the pool of individuals further. A number of states have statewide health insurance purchasing pools for local government employees as well.

Through these programs, states can work to implement new payment schemes and leverage contracts for services in ways that correct the inherent problems and disincentives. There are a number of different strategies that build on existing payment methods, as well as emerging ideas for new ways to pay for care. These options and the states' roles in promoting efforts to improve care through payment reforms are essential aspects of system reforms and improvements.

THE GOALS OF PAYMENT REFORM

Payment reform efforts must be designed to overcome or counteract the many disincentives for high-quality, low-cost care that exist today. Currently, providers are paid for value. This payment methodology means health care providers may actually be financially penalized for providing better-quality services. Reducing errors and complications can result in lower revenue in some cases by lowering the number of procedures and medications needed.[155]

Under most payment systems, health care providers make less money if a patient stays healthy. In addition, many valuable preventive care and care coordination services are not paid for adequately (or at all)[156]. This discourages physicians from entering primary care, contributing to shortages of primary care physicians in many areas.

The fragmentation of payment offers another challenge to payment reform. Each physician, laboratory, hospital, and other health care provider involved in a patient's care gets paid separately. This can result in paying for duplicative tests and services for the same patient,[157] and it provides no incentive for separate providers to coordinate their services.

The challenges created by these payment features have led to a growing recognition of the need for payment reform. Reform proposals seek to achieve several goals:

- Holding a health care provider more accountable for the quality of services used to treat a patient's conditions;
- Holding a health care provider more accountable for the cost of services used to treat a patient's conditions;
- Giving a health care provider greater flexibility to provide the right services to patients in the right way at the right time;
- Paying a health care provider adequately (but not excessively) for delivering necessary, high-value services, and enabling that provider to remain profitable if their patients stay healthy;
- Paying a health care provider more for sicker patients who need more services, unless the patient's condition was caused by the provider itself (e.g., through a hospital-acquired infection or an error in treatment), and enabling the provider to remain profitable if they care for patients who have more health problems or more serious problems; and
- Enabling and encouraging independent providers to coordinate patient care.

The Role of Benefit Design

Even if the payment system gives physicians the resources and incentives to improve, their accountability for cost and quality can only go so far. This is because so many primary care outcomes depend as much on what patients do—whether they used prescribed medications, accessed a primary care practice as their medical home, and avoided unnecessary services—as what doctors do. Moreover, the designs of insurance benefit plans can have a major impact on consumers' ability to select high-value providers, use cost-effective services, and adhere to treatment plans that improve outcomes. In particular:

- High patient cost-sharing requirements in health insurance plans (e.g., copayments, co-insurance, and deductibles) for physician visits, purchase of medications, and use of preventive services can deter or prevent patients from seeking care early or taking necessary medications, and can potentially result in high costs of remedial care that more than offset any revenues generated through the cost-sharing contributions.[158]
- Flat copayments and small co-insurance requirements for expensive services give consumers little incentive to use lower-cost providers and services.
- It is difficult for a primary care practice to help a patient manage his or her health and reduce unnecessary health care services if the patient's health plan allows the patient to switch practices frequently or to directly seek out specialty services without advice from the primary care practice.[159]

Health plan benefit structures that encourage and enable patients to improve their health and use higher-value health care services are known as "value-based benefit designs." For example, a growing number of employers are using value-based benefit designs that reduce or eliminate copayments for chronic disease maintenance medications to encourage patients to use the medications more reliably and avoid expensive emergency room visits and hospitalizations.

STATE ROLES IN PAYMENT REFORM

As a result of health reform, state governments may have new opportunities and increased leverage to influence the way providers are paid for delivering health care to many of their patients. Medicaid and state employee programs continue to be critical opportunities for implementing these types of changes. Furthermore, if states opt to implement insurance exchanges, up to 24 million more individuals will be included under the purview of state oversight.

In addition to their leverage as purchasers of health care services or insurance for many state residents, states can influence the way private funds are used to pay for health care services in two ways: regulating the way that health insur-

ance plans pay for services, or regulating the way that health care providers deliver or charge for their services.

Because of the tremendous diversity of health care markets across the country, there is unlikely to be a single, one-size-fits-all national approach to payment reform that will work equally well in all parts of the country or address all of the issues of concern. Consequently, it is not surprising that much of the leadership for health care payment and delivery reform to date has come from states, rather than the federal government.

Two major types of payment reforms states may consider include:

- Payment reforms targeted at hospital care and other types of major acute care services that take place over a relatively short periods of time to address a specific condition, such as treating a serious injury, replacing an arthritic hip or knee, facilitating childbirth, responding to a heart attack, or treating a curable cancer.
- Payment reforms targeted at primary care, including preventive care; treatment of minor acute conditions (injuries); diagnosis of more serious conditions, which may then lead to hospital care to address those conditions; and management of chronic diseases.

Many individuals will need a mix of both primary care and hospital services. For example, a patient with a chronic disease will need help from a primary care practice and specialists to successfully manage their disease. From time to time, the patient may have an acute episode that requires a hospitalization. Good primary care can prevent such episodes and reduce the need for hospital care. Payment systems called "global payment" or "comprehensive care payment" or "capitation" are designed to pay a single provider to manage both primary care and hospital care to prevent unnecessary use of hospital care and other acute care services.

Finally, it is important to keep in mind that although payment reforms are necessary to effectively address the cost and quality crisis facing American health care, they are not sufficient. Health care providers will need to change their internal processes, methods of coordination, and even organizational structures to actually deliver better care. Some of the kinds of structural and process changes that hospitals, specialists, and primary care practices need to make to accept new payment systems and to successfully use them are also described in the following sections.

BETTER WAYS TO PAY FOR HOSPITAL CARE

Goals of Payment Reform for Hospital Care

Many studies show that hospital care,[1] which represents about 40 percent of total health care spending in the U.S., leads to significant inefficiencies and quality problems. The goals of payment reform for hospital care are to enable and encourage hospitals and specialists to take advantage of opportunities to reduce costs and improve quality by:

- **Improving efficiency and coordination of patient care.** Hospitals that have utilized industrial techniques have been able to significantly reduce waste and improve efficiency.[161] Various projects have found that surgery costs can be reduced by 10 percent to 40 percent through improved cooperation between hospitals and surgeons to achieve greater overall efficiency, using methods such as more efficient scheduling and more efficient purchasing of medical devices.[162]
- **Using lower-cost treatment options.** In a number of cases, there are two or more options for treating a patient's condition that achieve similar outcomes but have very different costs. For example, there are a number of ways to reduce the costs of labor and delivery for uncomplicated pregnancies and improve outcomes for both mothers and babies.[163]
- **Reducing adverse events.** A significant number of patients still experience preventable health care acquired complications, infections, and other adverse events. Work pioneered by the Pittsburgh Regional Health Initiative, which has been replicated in other parts of the country, proves that such events can be dramatically reduced or even eliminated through low-cost techniques.[164]
- **Reducing preventable readmissions.** Some hospital-acquired infections and adverse events manifest themselves after discharge and result in preventable readmissions to the hospital; these can be reduced through the same techniques described above. In addition, several studies have shown that readmission rates can be reduced for a broad range of patients by improving the patient's transition to home or another setting following discharge.[165]

1. For simplicity, the discussion in this section will refer to "hospital care," but the same payment models are applicable to other settings for delivering major acute care, such as ambulatory surgery centers.

Approaches to Payment Reform for Hospital Care

States have a range of possible levers in driving hospital payment schemes toward quality. This section will describe payment reforms for hospital care, including:

- Improving the transparency of price and quality;
- Paying for performance based outcomes;
- Tiering provider networks;
- Refusing payment for adverse events; and
- Bundling services and offering warranties.

IMPROVING TRANSPARENCY OF PRICE AND QUALITY

It is virtually impossible today for a patient or even a physician to determine which hospitals, outpatient surgery centers, and other health care outlets deliver the highest-quality, lowest-cost care. Consequently, although it does not technically change the payment system itself, one important type of reform is cost and quality "transparency," making information about the quality and cost of hospital care available to the public, to encourage consumers to use the highest-quality, most efficient hospitals and physicians. Moreover, cost and quality measurement is a key component of other payment reforms described later in this section.

The quality of hospital care can be measured in three ways:

- Whether appropriate processes were delivered (e.g., were the right medications given in a timely fashion);
- Whether good outcomes were achieved (e.g., did the patient die, get an infection); and
- Whether patients were satisfied with the care they received.

Measurement of outcomes is more challenging than measuring processes, since many outcomes occur well after the actual care is delivered. However, process is not always a good proxy for outcomes.

Measuring of the cost of hospital care is also challenging. The hospital and each of the physicians involved in a patient's care are paid separately for the services they deliver. For example, when a patient has surgery, the surgeon is paid for performing the surgery, but the hospital is paid separately for the surgical suite, the nursing care, and any drugs or medical devices the patient receives. The anesthesiologist is paid separately for his or her services, and if other physicians are asked to provide services, they are also paid separately. Because of the methodological challenges involved in tallying up episode costs—which requires identifying and adding up the costs of all services provided in a single "episode of care," and then comparing these costs for different patients and different hospitals—public reporting of this data is quite rare.

Moreover, public disclosure of the amounts that providers charge for their services is generally of limited value. For most patients, the amounts that health insurance plans actually pay are typically far lower than these published "charges." Although these discounts are typically confidential, efforts to publish the average amounts of the payments that hospitals and physicians actually receive for services are growing, which would enable more accurate comparisons of price and cost.

There is some evidence that public reporting on quality measures results in modest improvements in performance.[169] It appears that this is often due more to hospitals' desire to avoid having low rankings than because patients have migrated away from poor-performing hospitals.

Programs that report on the costs of hospital care are much more limited. A number of state and regional programs report the amounts that individual hospitals charge for major procedures; however, as noted earlier, these charg-

In practice, the federal government, through the Hospital Compare program,[166] several state agencies, and a number of Regional Health Improvement Collaboratives[167] and state hospital associations collect data and produce public reports on the quality of care delivered by hospitals. In most cases, the measures are limited to a small number of common conditions or procedures, such as cardiac surgery, heart attacks, heart failure, and pneumonia. Moreover, the majority of measures relate to whether specific *processes* were delivered, rather than whether good *outcomes* were achieved. Some states and collaboratives are collecting and publishing additional measures of outcomes, such as the rates of infection and the rates of readmission to the hospital for preventable conditions.[168] The ability to obtain data on processes and outcomes will likely be enhanced as more hospitals, physicians, and other providers use electronic health records.

es often bear little relationship to the actual amounts that hospitals are paid by commercial health plans, Medicaid, or Medicare. Only a small number of programs report the actual amounts that hospitals are paid for procedures. For example, **New Hampshire** introduced a price transparency program in 2007 that reports the bundled cost, including both physician and facility payments, of about 30 common health care services.[170] A 2009 study of the program found that, to date, making this information public had little impact on prices, partly because of limited choices available to consumers and partly because insurance benefit designs provided little incentive for consumers to use lower-cost providers.[171] The modest impact of measurement and reporting initiatives is not surprising, since these initiatives do little to change the powerful incentives and disincentives that exist in the payment system.

PAYING FOR PERFORMANCE

The approach most commonly used in recent years to change the way providers are paid for hospital care is "pay for performance" or P4P, which pays hospitals and/or physicians more or less based on the quality of care they deliver. Pay for performance programs are based on the same kinds of quality and cost measures that are used in the public reporting programs.

The following key issues are involved in structuring P4P systems:

- The size of P4P payments. The larger the payment, the greater the financial incentive to improve performance (and maintain good performance).
- Whether the P4P payments will represent net new money to acute care providers, or whether other payments will be reduced to offset the money allocated to P4P.
- What threshold of performance a provider must meet to receive a bonus. Alternative approaches include absolute standards of performance (e.g., 100 percent compliance with a process measure), relative standards of performance (e.g., a compliance rate at the 90th percentile relative to peers), and minimum levels of improvement in performance (e.g., 50 percent better performance than the prior year).

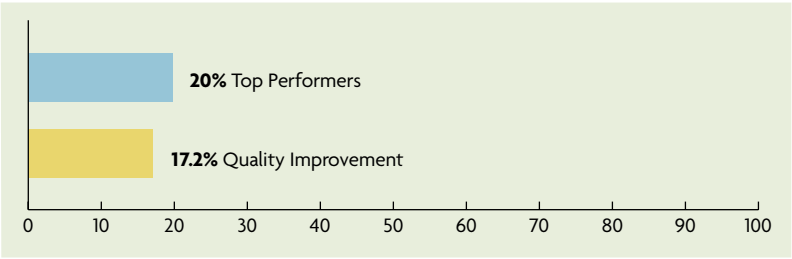
The best-known hospital pay-for-performance program has been the Premier Hospital Quality Incentive Demonstration. Under this program, Medicare paid 230 hospitals additional money beyond its standard payment amounts if the hospital's performance on various quality measures was in the top 20 percent among hospitals nationally. An evaluation showed that the program raised the overall quality of care by an average of 17.2 percent over four years in five clinical areas (Figure 15).[172] Based on the experience with this program, CMS proposed implementing a pay-for-performance program—dubbed the Hospital Value-Based Purchasing Program—for all hospitals. The federal health law, the Patient Protection and Affordable Care Act of 2010, requires implementation of this program beginning in 2013.[173]

A weakness with P4P systems is that they can only reward what can be measured; consequently, they can implicitly create an incentive for providers to focus only on areas that are measured and let performance slip in areas that are not.

TIERING PROVIDER NETWORKS

Some self-insured purchasers and health insurance plans assign hospitals to tiers based on either quality or cost or both and give patients incentives to use hospitals in different tiers. For example, the State Employees Health Commission in **Maine** assigns hospitals to "preferred" and "nonpreferred" tiers based on the quality ratings assigned by the Maine Health Management Coalition.[174] The **New Hampshire** Insurance Department assigns hospitals to two cost tiers based on the payment reporting system in the state. The state's HealthFirst plan, offered by several health insurance companies, establishes a lower deductible for patients using hospitals in the lower-cost tier.[175]

FIGURE 15. P4P Medicare Data on the Top 20 Percent Performers—top 20% performers bar—to 17.2% quality improvement



SOURCE: K. Kuhmerker and T. Hartman. (2007, April). "Pay-for-Performance in State Medicaid Programs: A Survey of State Medicaid Directors and Programs." Commonwealth Fund, 55.

There is only limited evidence about the effectiveness of this approach, but both anecdotal evidence and a few studies indicate that the approach can cause patients to change providers and can encourage providers to improve their quality or lower their cost to move into preferred tiers. However, in some markets, large providers have refused to contract with health plans that use tiered structures, which has limited the use of this approach.

REFUSING PAYMENT FOR ADVERSE EVENTS

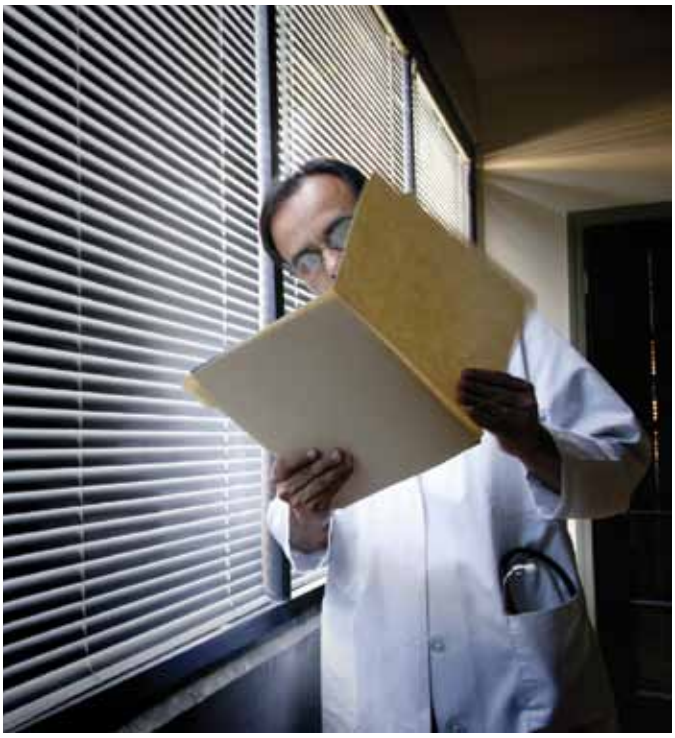
Under most current payment systems, both hospitals and physicians are paid extra to deal with complications they themselves cause. For example, if a patient receiving hip replacement surgery develops a surgical-site infection that leads to additional complications, the hospital and the doctors involved will all be paid more than if the infection had not occurred. Preventing the infection would reduce their revenues and potentially reduce their profits.

One way to solve this is to reduce or prohibit additional payment for preventable errors or infections that occur during a hospital stay. However, this approach only denies payment for treatment of the error or infection itself, not for any additional complications which may be caused by the error or infection, and result in far greater costs. Moreover, there is debate about which infections, complications, and other side effects are fully preventable.

An alternative approach is to reduce payment if the hospital or physician has an unusually high rate of such adverse events, but not to deny payment for treating the problems for any individual patient.

Medicare, as well as some Medicaid programs and commercial insurers, have begun to implement policies denying payment for "never events," or services rendered in error.[176] This approach, however, has been limited to events or conditions that can be viewed as completely preventable, and does not preclude payment for secondary complications that may result.[177] **Maryland** is avoiding this limitation by adjusting the payment based on the *rate* of complications at a particular hospital relative to other hospitals.[178] Additionally, the federal health reform law requires that payments to hospitals be adjusted based on the rate of potentially preventable readmissions beginning in October 2012.

Similarly, there is currently considerable interest by some states in reducing or denying payment to hospitals for readmissions that are related to a patient's initial stay and viewed as "preventable." Although many readmissions are related



to complications that develop while the patient is in the hospital, others occur simply because a patient experiences repeated exacerbations of a chronic disease. This may be better addressed through the kinds of primary care payment reforms described later in this chapter rather than by reducing or eliminating payments to hospitals.

BUNDLING SERVICES AND PROVIDING WARRANTIES

Paying hospitals and physicians separately for each service they provide during an episode of care not only makes it hard for consumers and payers to determine the true cost of care, but it also provides little incentive for those providers to work together to find the most efficient and effective way to deliver services. As a result, there has been growing interest in taking payments that are currently separate and "bundling" them into a single, combined payment.

The concept of combining separate payments into a single payment is not new. Nearly 30 years ago, Medicare changed from paying a hospital for each individual service to a single "diagnosis related group," or DRG, payment for all services related to a specific diagnosis or procedure. Moreover, surgeons and obstetricians are typically paid a single amount for all of their services associated with a surgery or delivery, rather than separate fees for each individual service.

What is not routinely done today is to combine payments for two separate providers. The simplest combination of this type is to bundle payments made to hospitals and doctors so that there is a single payment for all of the services they pro-

vide during a patient's inpatient stay, including surgery, anesthesiology, and hospital stay (Figure 16). A health insurance plan or Medicaid program would make a single "bundled" payment for all of these services, and it would be up to the hospital, surgeon, anesthesiologist, or other staff member to determine how to divide the payment among themselves. Under bundled payment, the surgeon has an incentive to help the hospital lower its costs, because the surgeon has the ability to share in the savings.

"Bundles" can be defined more broadly than just combining hospital and physician payments for inpatient stays. There is growing interest in also combining post-acute care services (e.g., home health care, rehabilitation services) with inpatient care to discourage overuse of such services. Bundled payment systems facilitate the transparency programs described earlier, since a single price can be more easily reported and compared across providers. However, since not all patients need post-acute care, it is more challenging to define a single price than with inpatient bundles, where every patient receives services from both the hospital and the principal physician.

Medicare experimented with bundling payments in the 1990s when the Participating Heart Bypass Center Demonstration program, which selected four hospitals in different states to receive a single payment covering hospital and physician services for coronary surgery. No outlier payments were permitted, and the amount of the combined payment was negotiated to be an average of 10 percent below current payment levels. The hospital and physicians were free to divide the combined payment however they chose.

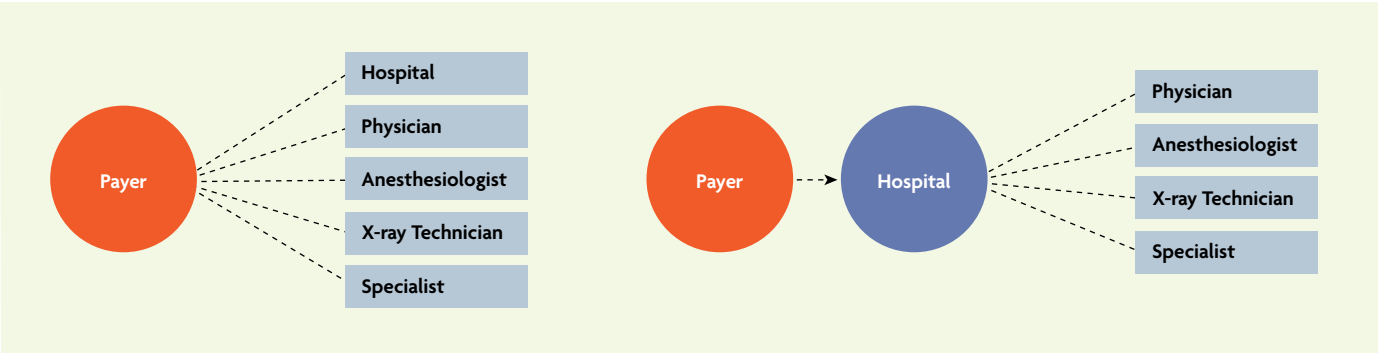
An evaluation of this demonstration showed that all parties benefitted: physicians identified ways to reduce length of stay and unnecessary hospital costs; costs decreased by 2 percent to 23 percent in three of four hospitals (with greater reductions compared to what inflation would have caused); and patients preferred the single copay.[179] Medicare is testing bundled payment on a broader range of conditions in its Acute Care Episode Demonstration that started in 2009.

To date, the use of bundled payments in the U.S. has been limited to a relatively small number of diagnoses or procedures, leaving the majority of patients to be paid under traditional payment systems. A much more extensive implementation of bundled episode payments exists in the Netherlands, where hospitals have been paid under the DBC (*Diagnose Behandelings Combinaties,* or Diagnosis Treatment Combinations) system since 2006. Under the DBC system, a single payment is defined for both the hospital costs and physician costs associated with a particular combination of patient condition and treatment. With more than 30,000 different DBC categories in use today, some feel the system is too complex. (By comparison, there are about 700 categories in Medicare's DRG payment system used to pay hospitals in the U.S., and more than 8,000 fee codes in payment systems used to pay doctors).

This illustrates a key challenge in episode-based payments: balancing the trade-off between having enough categories to ensure that payments fairly reflect differences in patient needs and having a system that is simple to understand and administer.

Another approach is for health care providers to offer a "limited warranty" for their care. The hospitals commit that they will not charge more for addressing certain complications or readmissions that are related to the patient's initial services. The advantage of this approach is that it enables providers to compete on the breadth of their warranties, rather than forcing payers to define a uniform set of

FIGURE 13. Pre and Post-Bundling Payments to Multiple Entities versus Simplified Combined Payments



circumstances where payment will not be made. The disadvantage is that differences in the definitions of warranties make comparisons among providers more difficult (although this is no different than for products and services in other industries).

An early example of warranties began in 1987 when an orthopedic surgeon and hospital in Lansing, **Michigan** offered a fixed total price for surgical services for shoulder and knee problems. The fixed price included a warranty for any subsequent services needed for a two-year period, including repeat visits, imaging, re-hospitalization, and additional surgery. A study found that the payer paid 40 percent less and the surgeon received more revenue by reducing unnecessary services, such as radiography and physical therapy, and minimizing complications and readmissions.[180]

The Geisinger Health System in **Pennsylvania,** through its ProvenCare[SM] system, provides a "warranty" that covers any follow-up care needed for avoidable complications within 90 days at no additional charge. The system was used first for coronary artery bypass graft surgery, but has now been expanded to hip replacement, cataract surgery, angioplasty, bariatrics, low back pain, perinatal care, and other areas.[181] Offering the warranty led to significant changes in the processes used to deliver care. As a result, Geisinger has reported dramatic improvements on quality measures and outcomes.[182]

Capabilities Needed to Manage New Methods of Hospital Payment

To succeed under payment systems that reward quality and efficiency, many hospitals and other acute care providers will need to significantly re-engineer their processes to eliminate unnecessary costs and address quality problems. A number of leading health care systems have demonstrated that significant improvements in the way they deliver care are possible,[183] and a growing number of training and coaching programs are available to help health care providers implement these changes.[184] Among the critical capabilities, the most essential is bundling payments.

METHODS FOR ALLOCATING BUNDLED PAYMENTS AMONG PROVIDER

Bundling the services of hospitals, physicians, and post-acute care providers into a single payment requires a mechanism and arrangements for dividing the payment among the individual providers in a manner acceptable to those providers. There are three basic approaches that can be used:

- If the care is provided by an integrated health care delivery system that employs physicians and operates both hospitals and post-acute care services, there is a ready-made organizational mechanism for accepting a bundled payment and allocating the revenue among the individual providers.
- Outside of integrated delivery systems, special organizational mechanisms can be created to receive and allocate the bundled payment. Under this arrangement, the parties have a pre-set agreement and mutually create a 3rd-party entity to receive and distribute the payment. For example, in its Acute Care Episode (ACE) Demonstration, the Centers for Medicare & Medicaid Services (CMS) is requiring that physician-hospital organizations (PHOs) receive the bundled payments.[185]
- A health insurance plan can treat the payment amount as a budget, and allocate the budget among the participating providers according to a pre-defined formula. Under this "virtual bundling" approach, no provider controls

PROMETHEUS Payment, Inc., a national nonprofit, is currently pilot-testing an episode-of-care payment system called Evidence-Informed Case Rates (ECRs) that will cover all services from all providers during the full episode of care for a variety of conditions. The amount of the payment is based on a combination of historical actual costs, the estimated cost of delivering evidence-based care, and the actual payment amount to a provider adjusted based on quality performance. If there is no single organization that can accept the single payment, the payment is divided by the health plan among the participating providers using a formula based on the proportion of services they delivered during the episode. More information on PROMETHEUS is available at http://www.prometheuspayment.org/.

the money that is owed to other providers, and no new organizational structures are needed.

Federal laws and laws in some states that are designed to protect patients against inappropriate financial relationships between hospitals and physicians have created significant legal barriers to bundled payments. Medicare has only been able to implement bundled payments as part of demonstration projects where Congress waived the rules against them. Consequently, changes in federal and state laws will be needed to allow appropriate gain-sharing relationships between hospitals and physicians under bundled payments while maintaining protections against inappropriate relationships.[186]

BETTER WAYS TO PAY FOR PRIMARY CARE

There is growing recognition of and evidence for the need to strengthen the primary care system's ability to prevent expensive hospitalizations by helping people remain healthy and more effectively managing chronic conditions. The payment reforms for hospital care described in the previous section can improve the efficiency and quality of care during acute care episodes. However, such reforms may not do anything to support or encourage efforts to prevent an episode from occurring in the first place (e.g., keeping an individual from having a heart attack).[187]

The goals of payment reforms for primary care are to enable and encourage primary care practices[2] to take advantage of opportunities to improve quality and reduce costs by:

- **Improving access to care.** The use of physician extenders (e.g., nurse practitioners and physician assistants), e-mail and phone calls, same-day scheduling, group visits, school clinics, urgent care centers, and other techniques can reduce costs and improve patients' access to effective primary care.[188]
- **Improving prevention and early diagnosis.** Many illnesses can be prevented through interventions such as immunizations, weight management, and improved diet, and the severity of other illnesses can be reduced through regular screenings (e.g., for cancer or heart disease) that lead to early diagnosis and prompt less costly treatment.
- **Reducing unnecessary testing, referrals, and medications.** The use of evidence-based treatment guidelines and shared decision-making tools can reduce unnecessary or even potentially harmful tests, interventions, and medications.[189]
- **Using lower-cost treatment options.** For example, the use of generic drugs or lower-cost alternatives where available and appropriate can reduce expenditures on pharmaceuticals and increase patient adherence to treatment regimens that prevent the need for more expensive services.[190]
- **Reducing preventable emergency room visits and hospitalizations.** Studies have shown that rates of emergency room visits and hospitalizations for many patients with chronic disease and other ambulatory-sensitive conditions can be reduced by 20 percent to 40 percent or more through improved patient education, self-management support, and access to primary care.[191]

In addition, many believe that changes in payment systems are essential to attract more individuals to become primary care physicians, to retain existing primary care physicians, and to encourage primary care physicians to practice in underserved areas.

Approaches to Primary Care Payment Reform

Primary care-based reforms are more complicated than hospital-based efforts, and can create ripple effects that must be monitored. Each different type addresses a different gap in primary care identified above, including improving access to high-value services, ensuring high-quality primary care, and avoiding gaming of payment efforts. These different types of efforts can be done in conjunction, which can help with gaming, but also create provider confusion. States should determine the most important goals of their payment efforts and select from among these options.

IMPROVING ACCESS TO HIGH-VALUE PRIMARY CARE SERVICES

There are a number of services that are underutilized in primary care. Although these have been proven to improve patients' health and reduce the need for other, more expensive

2. For simplicity, the term "primary care practice" will be used in this section to refer to any health care provider that delivers primary care services to patients. In addition to a primary care physician or physician group, this can include a multi-specialty group that includes primary care physicians, a hospital or health system that employs or contracts with primary care physicians to provide services to patients, or even a specialty physician group that provides the equivalent of primary care services to patients with chronic diseases.

care, the payment methods leave these unreimbursed, or do not allow for their delivery by paraprofessionals. Examples include counseling on tobacco use and nutrition and spending sufficient time with individuals with chronic conditions. The principal approaches in this group of reforms include:

- Incorporating new/higher fees;
- Instituting care management payments; and
- Implementing Comprehensive Primary Care Payments

New fees. Some important primary care services that have the potential to help patients stay healthy and avoid the need for expensive hospital care are not paid for at all by most health insurance plans. For example, physicians are typically paid only for face-to-face visits with patients, not for phone calls or emails with patients. Health plans do not typically reimburse for patient education and assistance delivered by nurses or other non-physician care managers in primary care practices. One simple payment reform is to pay for these types of services.

In some other instances, a service may currently be paid for, but at an amount too low to enable delivery of high-quality care. For example, even though physicians are paid for office visits, they may not be paid enough to justify the time needed to do a careful diagnosis—particularly where a patient has multiple conditions—or to ensure that all preventive measures have been taken. Here the solution is to pay more for these types of services.

The weakness of simply adding new fees or increasing fees is that it may result in physician practices delivering these services to patients who do not really need them simply to generate more revenues.

Instituting care management payments. An alternative to creating more fee codes or increasing fee amounts is to pay a physician practice a monthly "care management payment" in addition to the existing fees it is paid for individual services to individual patients. The amount of the care management payment would be based on the number of patients the practice has and, ideally, on how sick the patients are (e.g., higher payments would be made to a practice that has more patients with chronic disease). The amount would not, however, depend on how many services the practice delivers, nor would the practice be required to deliver additional or different services to every patient in return for the payment.

This type of payment gives the practice the resources to add new services or staff, such as a care manager, and the

flexibility to target those services to patients who need them the most. Many "medical home" practices are required to meet standards, such as implementation of electronic health records or the hiring of a care manager, to be eligible to receive a care management payment.

Implementing comprehensive primary care payments. A third alternative is to reduce or eliminate fees-based reimbursement by paying the primary care practice a monthly "comprehensive primary care payment" to cover all of its services to all of its patients.[192] This is similar to the bundled payment concept discussed in the hospital care section. At a minimum, the comprehensive primary care payment should be based on the number of patients the practice has. Ideally, it should also be based on patient aspects, such as how many patients have chronic conditions, so that the practice is not penalized for having sicker patients.

This type of payment gives the practice complete flexibility about what services to offer and how to target them to the patients who need them the most, without being constrained by individual fee codes and amounts. However, this approach can also diminish the practice's incentive to deliver services or spend sufficient time with patients, since the

practice is paid regardless of how many services its patients receive. (This can be addressed through performance incentives, described in the next section.)

Creating Incentives for Primary Care Quality

Rewarding primary care practices for effectively delivering care can help reduce the total cost of care needed by a group of patients. These are similar to the hospital-based efforts to measure quality and drive consumer and provider behaviors. The challenge is that many of the outcomes in primary care are based on patient behavior and choices as well as provider actions, so all efforts around quality should target those things within the provider control as much as is feasible.

INCREASING MEASUREMENT AND REPORTING

As with hospital care, one approach to improving quality in primary care is to make information about the quality of services delivered by primary care physicians "transparent," i.e., publicly available. In a perfect system, measures of quality would be based on outcomes, but this is challenging for primary care to do, partly because many outcomes are long-term in nature. Poor quality care for diabetes patients, for instance, can result in amputations, but these usually occur years after the initial poor primary care occurred.

Consequently, most quality measures currently used for primary care are "process-oriented," measuring whether the practice delivered a service deemed desirable, such as checking the blood sugar levels of a diabetic patient. Since there is no guarantee that performing processes appropriately will result in better outcomes, a middle ground is to use "intermediate outcome" measures; for example, assessing whether a diabetic's blood sugar levels are being maintained at an appropriate level over time. These measures, however, require use of difficult-to-access clinical information.

Measuring and reporting on cost in primary care is also challenging. In contrast to acute care, the amount that primary care physicians charge for their own services is less relevant than the rate at which their patients use other expensive services, from diagnostic testing to hospitalization. This has led to efforts to compare physicians and physician groups on the total costs of services associated with their patients through what are known as "resource use" or "efficiency" measures. However, such measures can be controversial, particularly for patients with insurance plans that enable them to see any provider they wish, because the primary care physician may not have had any opportunity to influence all of the services that the patient received. In addition, the costs associated with lack of preventive services will occur in the future; higher spending in the short run may be needed to reduce costs in the long run.

In practice, to measure the quality and resource use of individual physicians and small physician groups in a statistically valid way, it is necessary to collect information on as many patients as possible.[193] Moreover, because of weaknesses in the data systems commonly used to develop the measures, it is also essential that physicians be actively involved in reviewing the measures before they are published. A number of states and regions have formed multi-stakeholder Regional Health Improvement Collaboratives to collect, validate, and publish quality measures for all of the patients seen by a primary care practice—regardless of which health plan they use—with active involvement by the physicians themselves in defining the measures and verifying the accuracy of the information.[194]

Reporting on resource use and efficiency is also being done, albeit less widely, in the absence of broad agreement on what types of measures are appropriate.[195] Obtaining the data needed for both quality measures and for appropriate efficiency measures will be easier as more health care providers use electronic health record systems, but these data systems alone will not solve all of the problems.

Early research on measurement and reporting systems found that consumers rarely sought out cost and quality data and often did not understand it. As a result, cost and quality data had only a modest impact on consumer decision making. Many measurement and reporting programs have been working to increase consumers' awareness of the importance and availability of this information and to make the information more user-friendly. And a growing number of health plans are giving consumers incentives for using higher-quality, lower-cost providers.

Even if consumers do not use the information extensively, there is a general belief that merely publishing cost and quality measures encourages physicians to improve their rankings.

TIERING PROVIDER NETWORKS

As with hospitals, an alternative way of using measures of physician quality and resource use is to give patients incentives to use physician practices that perform better on these measures. This is generally accomplished by assigning physicians or physician groups to two or more performance "tiers" and requiring lower cost-sharing for patients who use physicians in higher-performance tiers, or even refusing to pay for care from physicians in the lowest-performance tiers. This approach can be very controversial because it requires assigning a physician to a specific tier even though the measure used is imprecise and subject to error, particularly for small physician practices.

PAYING-FOR-PERFORMANCE (P4P)

As with acute care services, P4P systems can be established to give primary care practices financial incentives to improve their performance on quality measures and/or resource use measures. The same types of issues regarding P4P systems for hospitals arise in defining P4P systems for primary care providers, such as the diversion of resources and attention away from those areas of care that are not being measured or rewarded.

Examples of P4P for physicians exist among most commercial insurance plans in the U.S. and most state Medicaid programs. Medicare has been the major exception, but under the 2009 federal HITECH Act and starting in 2011, Medicare will be implementing payment incentives for physicians based on "meaningful use" of electronic health record systems.[196] Most programs base P4P rewards solely or primarily on how physicians perform on quality measures, but many P4P programs are beginning to incorporate measures of resource use or "efficiency" as well. Moreover, most pay-for-performance systems provide bonuses over and above existing fee-for-service payments, rather than issuing penalties for poor performance, which can result in higher health care costs in the short run.

Evaluations of pay-for-performance programs have found that providing financial incentives results in larger improvements in performance than public reporting alone. However, the improvements in physician performance attributed to P4P programs have been relatively modest.[197] This is generally explained by the fact that the size of the awards available in most U.S. P4P programs is small relative to the total revenue received by a physician practice, and because most P4P programs do not remove the counterproductive incentives that continue to exist in the underlying fee-for-service system.

In 2004, the United Kingdom implemented a pay-for-performance system for primary care called the Quality and Outcomes Framework that has much larger rewards for physicians than U.S. P4P programs. An evaluation indicated that the program resulted in significant improvements in quality for some types of health conditions, but not others. Although the improvements that occurred were greater than had been expected, this also led to higher bonus payments, which increased primary care expenditures well beyond the amount that had been budgeted.[198]

IMPLEMENTING SHARED SAVINGS PROGRAMS

"Shared savings" payment models are a variation of P4P, but with rewards based on whether patients' total use of health care resources decreases. Under a shared savings model, if the actual costs of all care received by the patients in a primary care practice is lower than what would have been expected based on typical utilization rates and trends, the primary care practice receives a portion of the difference between the actual and expected costs. This gives the primary care practice an incentive to focus on ways to reduce hospitalizations, emergency room visits, diagnostic testing, and other costly services.

For example, the **Alabama** Medicaid Program implemented a shared savings program in 2007 as part of its Patient 1st primary care case management program. The program gives primary care practices in the state 50 percent of the savings the state receives when patients use generic medications more frequently and use emergency rooms less often. $4.7 million in shared savings was distributed to physicians in 2009 based on 2008 results.[199]

A demonstration and evaluation of the shared savings concept was undertaken by Medicare as part of the Physician Group Practice Demonstration. The program was implemented in 10 large physician group practices across the country beginning in 2005 and was extended to run for a total of five years. As of the third year of the program, all 10 of the physician groups achieved high-quality performance on the majority of quality measures, and five generated sufficient savings to qualify for shared savings payments.[200]

A challenge with the shared savings approach is that practices whose patients have high levels of resource use have greater opportunities to achieve savings than already high-performing practices. This leads to the perverse effect that the smallest rewards are available for the practices that were performing the best prior to the creation of the shared savings program.[201]

INSTITUTING CARE MANAGEMENT PROGRAMS

The majority of state Medicaid programs pay at least some of their primary care practices a primary care case management payment, in addition to fees for service, to enable and encourage the primary care practice to improve the quality and reduce the cost of care to Medicaid beneficiaries. A number of state Medicaid programs are also now instituting programs that provide additional payments to primary care practices that qualify as "patient-centered medical homes." [202]

Most commercial health plans also pay for programs to improve coordination of patients' care and provide support to patients who manage their conditions, but these programs are typically operated directly by the health plan or by an independent disease management company, not by primary care practices. Recent research has suggested that such programs are not as effective as having the care management function either provided by the patient's primary care practice or integrated with the practice's services.[203] Consequently, a number of health plans have begun making payments to primary care practices in addition to providing service-specific fees; these payments are commonly being made as part of initiatives to help primary care practices serve as patient-centered medical homes. In many cases, however, these payments are very small because of the fear that they will increase short-run health care expenditures.

The **Massachusetts** Coalition for Primary Care Reform is testing a comprehensive primary care payment model under which primary care practices receive a risk-adjusted comprehensive payment plus a risk-adjusted bonus for implementing medical home services and achieving desired outcomes.[204] The model is being implemented over a two-year period in nine small-to-medium sized primary care practices in eastern **Massachusetts** and Albany, **New York.**

Although most medical home programs and other initiatives to increase payments to primary care are so new that there is limited information available about their effectiveness, the evaluations that have been done indicate that when adequate investments in primary care are made to enable significant changes in processes, sufficient savings can be generated to not only offset the cost of the increased investment but to reduce the total cost of care for patients.[205]

BUILDING IN FLEXIBILITY AND ACCOUNTABILITY

Some of the reforms described above can create incentives for outcomes that are not desired, including an increase in unnecessary services or other adverse outcomes. Consequently, a third group of payment reforms combines elements of both the first and second groups in order to provide primary care practices with both upfront resources and a strong financial incentive to improve quality and reduce costs. The principal alternatives are:

Flexible Payment Methods

Primary care practices can be given additional or more flexible payments along with some form of pay for performance or shared savings, to encourage them to use the more flexible payments to achieve better outcomes. For example, a primary care practice could be given a monthly care management payment sufficient to enable it to hire a nurse care manager, but also be required to participate in a P4P or shared savings program that rewards or penalizes it based on how successful the nurse care manager is in reducing preventable hospitalizations for chronic disease patients.

Another approach is to pay a primary care practice a monthly amount to cover not only the services it directly provides to patients, but also the costs of services provided by specialists and all diagnostic testing. (Hospital costs would still be paid for separately.) This is generally referred to as "partial global payment" or "professional services capitation." This gives the practice a financial incentive to reduce unnecessary use of specialists and testing, similar to the incentives of a shared savings program, and provides the flexibility to use the payments to deliver whatever combination of services will best help the patients (similar to

the comprehensive primary care payment previously described). A global payment should be adjusted based on the types of conditions the patient has, so that the primary care practice is not penalized for taking on sicker patients.

COMPREHENSIVE CARE OR GLOBAL PAYMENT

The most comprehensive reform is to pay the primary care practice a monthly amount to cover *all* services that a patient needs, including hospitalizations. This is generally referred to as "global payment," "comprehensive care payment," or "condition-adjusted capitation."[206] This provides an even greater financial incentive to reduce unnecessary hospitalizations, but because hospital costs can be so large, this approach can cause significant cash flow problems and financial risk for small providers, even if the payment is managed as a budget and is adjusted based on how many conditions the patient has. Consequently, this payment model is generally limited to large physician groups or health systems that include both hospitals and physicians, or it is accompanied by limits on the extent to which physician groups are at risk when they have unusually expensive patients.

Although global payment systems may sound like a radical change, similar payment systems called capitation were widespread in the 1990s. A number of primary care practices across the U.S. are still paid today under capitation contracts, particularly in **California**. Capitation payment fell into disfavor in many parts of the country because physicians were paid the same amount even if they had patients with more health problems, which created a disincentive to take on sicker patients. Because there were not good ways of measuring the quality of care, it was difficult to ensure that physician practices were not withholding needed care to save money. However, there is evidence that patients receive better quality care at lower cost under capitation systems than under fee-for-service systems.[207]

There are several examples of global payment systems that correct the weaknesses of capitation to make it more attractive to both physicians and patients, while retaining its strengths. But, most are so recent that there have been no evaluations of their effectiveness. Here are some examples:

- The Patient Choice payment system in **Minnesota,** which was developed in the 1990s under the auspices of the Buyers Health Care Action Group (BHCAG). Evaluations have shown that the system encourages patients to select more cost-effective providers and encourages providers to reduce their costs while maintaining or improving quality.[208]

- The Alternative Quality Contract, implemented by Blue Cross Blue Shield of **Massachusetts** in 2009, makes a fixed payment to a health care provider for each patient to cover all care services delivered to the patient (including hospital care, physician services, pharmacy costs, etc.), with the payment amount adjusted by the health status of the patients. The provider can earn up to a 10 percent bonus payment for achieving high performance on clinical process, outcome, and patient experience measures. The amount of the payment is based on historical costs and is increased annually based on inflation. Outlier payments are made for patients with unusually high needs and expenses.[209]
- A more limited version of global payment has been developed as part of the PROMETHEUS Payment System. PROMETHEUS has defined a risk-adjusted payment amount to cover all of the care needed by a patient with a chronic disease during the course of the year. The payment is designed to give primary care practices adequate resources to manage the care of the patient in a high-quality way, as well as a financial incentive to reduce preventable hospitalizations and other avoidable complications. This payment model is being tested in several pilot sites.[210]

Using Different Payment Models for Different Types of Patients

It is not necessary and it may not be desirable to use the same payment system for every patient. Any of the payment reform models described in the previous sections can be used for a specific subgroup of patients, while other models can be used for other subgroups of patients.[211]

This can be particularly helpful during the early stages of implementing payment reforms by enabling health care providers to transition slowly. For example, a global payment could be made just for a group of patients with a specific chronic disease of mild to moderate severity, to support efforts to reduce preventable hospitalizations for those patients, while fee-for-service payments continue to go to other patients. Later, the global payment could be extended to patients with additional chronic diseases, while the practice continues to use fees and pay-for-performance for preventive care of relatively healthy patients. Eventually, the global payment system could be extended to all patients.

A global payment or comprehensive care payment system does not preclude the use of the bundled and episode-of-care payment models for hospital care described above; indeed, the two can be complementary. For example, a physician practice might accept a global payment to manage the care of patients with chronic obstructive pulmonary disease (COPD), which would give the practice the ability and incentive to help those patients avoid hospitalizations, but when a hospitalization occurs due an exacerbation of the patient's COPD, the practice could make a single, bundled payment to a hospital and its physicians for the hospitalization. This would encourage all concerned to deliver the most efficient, effective care for the patient during the hospitalization.

Capabilities Needed To Manage New Primary Care Payment Models

Each of the payment reform models described in the previous section has the potential to address some problematic aspect of current payment systems that serves as a barrier to higher quality primary care and lower-cost health care. However, changing the payment system is a necessary, but not sufficient step. Primary care physicians must actually make changes to the way they practice, focusing on ways to improve quality and reduce utilization, rather than on ways to increase the volume of services. If primary care practices do not successfully make changes in the way they deliver care, some of the payment reforms described above could lead to increases in health care spending with little or no improvement in quality. Some could even cause primary care practices to suffer financially or go bankrupt, which happened to a number of physician practices during the 1990s under some capitation payment systems.[212]

This creates a dilemma for payers: should payment reforms be implemented for all primary care practices, or only for those practices that demonstrate they have the capability to be successful under the payment reforms? In many states and regions, primary care payment reform initiatives have been limited to practices that are accredited as a "Patient-Centered Medical Home," based on standards established by the National Committee for Quality Assurance (NCQA) or standards established by the state. However, for many of these standards, there is relatively little evidence indicating that meeting the standard is essential to quality care,[213] and experience has shown that some of the standards are very difficult or expensive for primary care providers to meet.[214]

For example, although electronic health records can have significant benefits for physicians and patients, they are very

expensive and challenging to implement and may not have as great a benefit in the short run as other, less expensive changes, such as the hiring of nurse care managers or use of computerized patient registries. Moreover, with more restrictive standards for participating in payment reforms, fewer providers are eligible to participate, which in turn reduces a state or region's ability to impact cost and quality for the majority of patients.

It is unreasonable to expect primary care practices to suddenly change their structure and operations overnight after years of operating under the problematic fee-for-service system. Most primary care practices are very busy, operate under very thin financial margins, and have little time and few resources to make major changes. The best approach may be to provide technical assistance and transitional funding support to primary care practices to help them build the capacity to both manage new payment models successfully and achieve better outcomes. Providing transitional payment models that support the transformation of their care processes over a multi-year period may also help.[215]

An additional challenge is that in the U.S., more than 80 percent of the primary care practices have only one or two doctors. It is difficult for a small practice to afford the care management services, after-hours accessibility, decision support systems, and other services needed to better coordinate care to reduce costs and maintain or improve outcomes, particularly for complex patients.[216] However, small practices can work together to efficiently provide these services through organizational structures such as Independent Practice Associations (IPAs) or a Physician-Hospital Organization (PHO).[217] There are several examples around the country of IPAs contracting with health plans on a full-risk or almost-full-risk basis to manage the care of their patients from both a cost and quality perspective.[218]

Recently, considerable interest has been demonstrated around the idea of creating "accountable care organizations" (ACOs) that can manage shared savings or global payment arrangements based on the total cost of care for a population of patients. Although initial discussions of the ACO concept implied that only integrated delivery systems—of both hospitals and employed physicians could effectively serve as ACOs, there has been growing recognition that the key to the success of an ACO is effective primary care. Consequently, if they receive assistance in developing the necessary organizational structure and management systems, primary care providers can successfully play this role (and as noted above, many already are doing so).

While having a hospital as part of an ACO can be desirable, it is not essential. In other words, rather than viewing medical homes and ACOs as independent concepts, creating successful medical homes can be seen as the core capability of an ACO, which can accept accountability for the costs and quality of care for its patients.[219]

THE IMPACT OF FEDERAL HEALTH REFORM

The 2010 federal health law, the Patient Protection and Affordable Care Act,[220] includes a number of provisions designed to either require or test many of the types of payment reforms described in the previous sections through the Medicare and Medicaid program. Although it is nearly impossible to describe all of the many changes in the law, the following are some of the most significant payment reform efforts.

Hospital Payment Reforms

- Medicare is required to implement a Value-based Purchasing Program for hospitals beginning in October 2012. Hospital payments will be adjusted based on the hospital's performance on a series of quality measures (§ 3001).
- Beginning in FY 2015, Medicare payments to hospitals are to be adjusted based on the relative rate at which their patients have hospital-acquired conditions (§ 3008).

- Beginning in FY 2012, Medicare payments to hospitals are to be adjusted based on the rate of potentially preventable readmissions (§ 3025).

Physician Payment Reforms

- The Physician Quality Reporting Program is continued and strengthened, with payment incentives under Medicare to encourage physicians to report their performance on quality measures (§ 3002).
- The Department of Health and Human Services (HHS) is required to develop a Physician Compare website, reporting physician performance on quality measures (§ 10331).
- HHS is required to give physicians reports on the health care resources used by Medicare patients (§ 3003).
- A Value-based Payment Modifier is to be created so that Medicare payments to physicians will vary based on the relative quality and cost of care (§ 3007).
- Medicare payment levels to physicians will be adjusted to increase payments for services that are currently undervalued and to decrease payments for overvalued services (§ 3134). In addition, payments are to be increased during a five-year period for visits to primary care practices and for surgeons operating in health professional shortage areas (§ 5501).
- Medicare is required to pay for certain preventive services and to reduce patient cost-sharing requirements for preventive services (§§ 4103–4105).

More General Payment Reforms

- A Center for Medicare and Medicaid Innovation is established to enable HHS to test new payment models in Medicare and Medicaid and to implement them more broadly if they control or reduce costs and maintain or improve quality (§ 3021).
- An Independent Payment Advisory Board is established to develop proposals for changes in payment that will reduce Medicare spending (§ 3403).
- Medicare is authorized to designate willing providers as Accountable Care Organizations and to pay them shared savings or to pay them on a partial capitation basis (§ 3022).
- Under Medicaid, pediatric medical providers can be designated as Accountable Care Organizations and receive incentive payments similar to those provided through Medicare (§ 2706), and safety net hospital systems or networks can be paid using a global payment system (§ 2705).
- Medicare is required to test various approaches to "bundled payments" that will encourage coordination of care including hospitalizations (§ 3023). A similar demonstration program is established under Medicaid (§ 2704).
- Medicare is required to test models using home-based primary care teams for chronically-ill beneficiaries (§ 3024).
- Medicare is required to fund a Community Care Transitions Program to provide improved care transition services to high-risk Medicare beneficiaries (§ 3026).

STATE ACTIONS TO ACCELERATE PAYMENT REFORM

There is growing consensus about the need for significant reforms in health care payment systems, and increasing evidence that these payment changes can be effective contributors to efforts to improve quality and

control costs. However, progress in implementing significant reforms has been very slow. Although the federal Patient Protection and Affordable Care Act will encourage and facilitate many types of payment reforms through Medicare, it is unlikely that federal action alone will transform health care payment systems as quickly or as broadly as needed.

Partnerships with a broad range of stakeholders will aid states in accelerating payment reforms. Collaborations among other payers will enable states to increase their leverage with providers to encourage value-based payments, while educating and engaging consumers on the need to change the payment system and demand higher quality care will help in creating support for payment reform initiatives.

Implementing Payment Reforms in State Payment Programs

Obviously, a necessary step to advance payment reforms is convincing health care payers to implement the changes. States can jumpstart this process in at least two ways:

- A state can directly change the way health care providers are paid under the state's Medicaid program, both in fee-for-service arrangements and in managed care.[221] As noted in previous sections, state Medicaid programs have been leaders in implementing a number of reforms for both acute care and primary care.
- A state can also change the way providers are paid through the health care benefits provided to state employees by:
  - Choosing health insurance plans or offering incentives to employees to choose plans that pay providers using value-based methods;
  - Paying providers directly on a self-funded basis using value-based payment methods; or
  - Creating supplemental programs that reward providers for higher-value care beyond what they receive through a health plan's payment programs.

Facilitating Multi-Payer Alignment

Although having one payer or major purchaser implement payment reforms can help to get payment reforms underway, it is difficult for hospitals, physicians, and other health care providers to significantly change the way they deliver care unless a large proportion of their patients are part of a new payment system.[222] Even some changes to the Medicare payment structure will not affect enough patients to enable a provider to change the way it delivers care. Moreover, a private health plan may experience a competitive disadvantage by implementing payment reforms if other health plans do not also implement the reforms.[223] To address this, some states have served as conveners or facilitators of discussions among health plans and other payers in a community to reach agreement on consistent payment reforms. In other cases, states have supported the efforts of multi-stakeholder Regional Health Improvement Collaboratives to facilitate these discussions.[224]

Even if payers are willing to consider aligning their payment systems, fear of antitrust violations can discourage agreement on a common approach. States can protect health care payers and providers under the "state action" doctrine of antitrust law if the state has a clearly articulated state policy supporting the need for common payment approaches and engages in active supervision of the activities that might otherwise cause antitrust concerns.[225] **Washington,** for example, passed legislation in 2009 that specifically authorized discussions among payers and providers about new payment approaches to support primary care medical homes.[226]

Dealing with Monopoloies

Several large health systems in the country are routinely cited as national models of quality and efficiency. However, there are other large systems that are not cited as models for either quality, efficiency, or both. In some cases, a health system's size has been used more as a way of controlling market share and increasing prices rather than reducing costs and improving quality. Studies in **Massachusetts,**[227] **Rhode Island,**[228] and **California**[229] have found that a major contributor to high health care costs is high prices charged by large health systems. Although Medicare has the ability to dictate prices in these large systems, other payers do not.

To counteract the monopoly behavior of large providers, states could take the following actions:

- Encourage alternative providers for a service that is currently delivered only by a monopoly provider. Under current volume-driven payment systems, creating more providers can increase cost. But for many of the payment reforms described here, additional sources for a service could encourage competition and efficiency. States with Certificate of Need programs could expand to assess not only the existing capacity, but also the level of competition available.

- Pursue traditional legal anti-trust actions against a monopoly provider. Increasingly, there is market consolidation in health care. States have a number of traditional legal tools to evaluate and break up monopolies and could utilize those tools in these consolidated markets.
- Create a system for government regulation of prices. For example, **Maryland** has a system for all-payer rate regulation of hospitals.[230] Not only can such a system protect against unreasonable price increases by large or monopoly hospitals, but it can also protect smaller hospitals against severe revenue losses due to reductions in utilization, with no offsetting adjustment in prices.

Encouraging Value-Based Benefit Design

As noted above, the ability to hold health care providers accountable for outcomes and costs under new payment models depends on whether consumers have the ability and incentive to use cost-effective services and adhere to treatment plans. This, in turn, depends on the structure of insurance benefit designs. States have the primary authority to regulate the benefit structures in commercial health insurance plans, which could be used to encourage or require the use of value-based benefit designs, such as affordable copayments for chronic disease maintenance medications.

Encouraging Public Support

Although the issues in designing and implementing payment reforms are understandably focused on providers and payers, the fundamental goal of payment reforms is to improve the quality and affordability of care for consumers and patients. It is conceivable that a new payment and care delivery structure could be developed that is perfectly satisfactory from the perspectives of payers and providers but unacceptable to a significant number of consumers and patients, either because of actual or perceived problems. The history of managed care systems in the U.S. demonstrates that consumer acceptance of payment and care delivery systems can be critically important.[231]

State leaders can help educate consumers about the need for change in both care delivery systems and payment systems. Although there is growing recognition by health care professionals of the payment problems plaguing the health care system, this causal relationship is not widely understood by consumers. Research has demonstrated that consumers continue to believe that the most expensive options are also the highest-quality choice, although that has been demonstrated to often be untrue in health care. In this light, merely producing cost information for consumers is not enough. Truly proactive efforts to ensure that consumers receive and understand the information are critical to success, since greater consumer involvement is essential to many of these strategies.

CHAPTER 5

The Role of Medicaid in Delivery System Reforms

Caryn Marks, Molly Voris and Kathleen Nolan
National Governors Association Center for Best Bractices

Medicaid plays a large role in delivering care to low-income individuals and in influencing the state's health care system. As rising health care costs are echoed in Medicaid, ensuring the sustainability of the program will require states to increase Medicaid's effectiveness and efficiency.

With the passage of federal health care reform, an additional 16 million individuals will enter the program starting in 2014. With such a large increase in enrollment, improvements in the delivery and coordination of care will be crucial to contain program spending and improve health outcomes of beneficiaries.

States can use their existing program tools, and seek additional flexibilities, to enhance the quality and efficiency of Medicaid to decrease programs costs. Governors have many opportunities to enact delivery system reforms through quality improvement initiatives, care coordination programs, primary care and prevention projects, and payment reforms.

THE NEED FOR MEDICAID IMPROVEMENTS

Medicaid serves a large and diverse low-income population. With 60 million individuals currently enrolled in the program, Medicaid provides coverage to children, pregnant women, very low-income parents, the disabled, and dual eligibles—those qualifying for both Medicaid and Medicare. The passage of the health reform law expands the program to cover all citizens below 133 percent of the poverty level.[232]

Medicaid Beneficiaries

Governors have a vested interest in the health of Medicaid beneficiaries, as they account for one-quarter of the state's population and half of all children in the state. While children and pregnant women, a typically healthy cohort, comprise the majority of the population, the health of the Medicaid population is generally worse than the general population. Dual eligibles often have multiple chronic conditions and are in need of a variety of medical services, making them a high cost group. The top 5 percent of high-cost enrollees account for more than 57 percent of Medicaid costs.[233]

Because of its diverse population, the program is responsible for a wide range of services to meet the needs of its beneficiaries. As a general rule, services covered by Medicaid must be offered to all enrollees, making it a robust, yet expensive and difficult, program to manage.

Medicaid Spending

Jointly financed by the states and the federal government, states are responsible for over half of the financing of the Medicaid program. With shared financial responsibility and coverage of nearly one-quarter of the population, Medicaid is often the second largest budget item in a state, surpassed only by education.[234]

State spending on Medicaid continues to rise as enrollment increases, and states continue to grapple with increased unemployment, decreased revenues, and budget shortfalls (Figure 17).[235] Challenges to control Medicaid spending and enrollment growth are further compounded by increasing costs of medical care in all sectors and regions. Further, Medicaid is outpacing the growth of inflation at a higher rate than other medical spending.[236] The program spends more on long-term care services than any other payer, comprising of one-third of total Medicaid

spending. Sixty percent of Medicaid spending is dedicated towards acute care services including payments to managed care plans (30 percent), inpatient hospitalizations (25 percent) and prescription drugs (8 percent).[237]

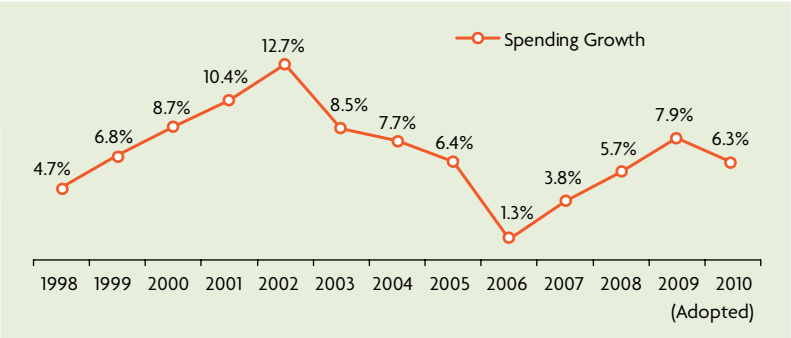
Historically, states have controlled Medicaid spending by making direct cuts to some program elements, most commonly provider payment rates, optional benefits, and coverage. Each of these cuts has had multiple impacts that states have continually attempted to balance as the need to close budget shortfalls competed with providing appropriate access and care to enrollees. More recently, however, it has become clear that states have nearly exhausted these traditional measures and must turn elsewhere to attempt to create savings and close budget gaps in their programs. In an effort to engage in longer-term cost-containment actions, various reforms can be implemented to change the way care is delivered in Medicaid and to make the program more efficient and effective, while improving health outcomes.

ISSUES TO CONSIDER WHEN IMPLEMENTING MEDICAID-BASED SYSTEM REFORMS

Medicaid reforms are critical to state efforts to improve the delivery of care, but there are programmatic challenges and structural barriers that influence the ability of a state to fully realize system reforms through Medicaid. As states design reform efforts, they must work to counteract or alleviate these issues, discussed below.

Medicaid is currently a limited payer in many service areas. To have a market force and sufficient purchasing power, Medicaid will likely need to partner with Medicare, state employee health programs, or other private payers to broadly influence payment policies and enact broad delivery system reforms. While it is a dominant payer in some service arenas (e.g., long term care, pediatrics), its market influence is considerably diluted in other arenas.

FIGURE 14: Medicaid Spending Over Time



SOURCE: KCMU Analysis of CMS Form 64 Data for Historic Medicaid Growth Rates. FY 2009 and FY 2010 data based on KCMU survey of Medicaid officials in 50 states and DC conducted by Health Management Associates, September 2009.

Investment needed to start reforms. Enacting delivery system reforms requires up-front financial investments without immediate savings. Because there is limited state experience with broad scale delivery system reforms in Medicaid, there is also a lack of knowledge on budget estimates and savings accrued from reforms. Given the current state budget crises and administrative staffing cuts, it is difficult to envision broad investments in new Medicaid efforts without substantial support and integration with other initiatives.

Systems infrastructure is lacking. Many Medicaid information systems are out of date, or in the process of major overhauls. There is further question about the capacity of these systems to meet the requirements of the federal health care reform law, such as the requirement that all those coming through the health insurance exchange will have to be screened for Medicaid eligibility. Infrastructure and data are also essential for reforms. Upgrades are expensive and time-consuming, but necessary to improve Medicaid system capabilities for quality measurements and payment reforms.

Tenuous provider relationships. Due to the economic downturn, many states have been forced to make provider payment cuts, affecting Medicaid's relationships with providers. With low payment rates, additional paperwork requirements, and a provider workforce shortage across the country, providers lack incentives to partner with the Medicaid program. However, without buy-in from these stakeholders, it will be difficult to enact the reforms necessary for system improvements. States will need to remain cognizant of the tension between Medicaid programs and providers as they move forward.[238]

Limitations on flexibility. Presently, to make substantial changes in a state's Medicaid program, the state must undergo a time-consuming and sometimes onerous waiver process with the federal government. Approval for changes to the program and negotiations with CMS often take months, if not years, and waivers must be budget neutral for waivers to be allowed. Without flexibility to enact changes in a more expedited fashion, Medicaid programs are at a disadvan-

tage compared to other payers in terms of reforming their delivery systems. The health care reform law has lessened the burden on states in some areas, but obtaining waiver approval for programmatic changes will continue to restrict reform progress.

Managed care limitations. More than 70 percent of Medicaid beneficiaries are enrolled in managed care, with the bulk of this population comprised of healthy children, their parents, and pregnant women.[239] Medicaid has the potential to reduce expenditures for enrollees by incorporating delivery systems initiatives into managed care contracts, but the greatest impact comes from including high cost populations, who have a higher utilization of services, into managed care plans. States will need to better integrate the tools and programs currently available to maximize cost savings from managed care plans.

OPTIONS FOR MEDICAID INVOLVEMENT IN SYSTEMS REFORMS

The previous four chapters of this report laid out extensive opportunities for states to drive delivery reforms and efficiency improvements. Medicaid can contribute to these in the following key ways:

- **Quality improvement initiatives** can draw on available Medicaid data to allow the program to measure and improve upon provider performance and patient satisfaction.
- **Care coordination and disease management programs** in Medicaid can help reduce fragmented care and improve health outcomes of beneficiaries.
- **Primary care and prevention improvements** in Medicaid can aid beneficiaries in obtaining needed, early services from lower cost settings to improve overall health.
- **New payment policies** in Medicaid to pay for quality; coordinated care can increase accountability and add value to the delivery system.

MEDICAID AND QUALITY IMPROVEMENT

As a public program, states have considerable access to data on beneficiaries and the services they receive. Improving the quality of care delivered in Medicaid is important for states as they work to decrease costs and improve health outcomes for enrollees. The Medicaid program also can leverage its financial arrangements with providers and managed care organizations to enhance data collection and quality improvement initiatives. States have the opportunity to collect quality measures and outcome benchmarks to manage and measure outcomes, providers, and service utilization.

Considerations for Quality Improvement Initiatives

Much of states' current data analysis depends on claims data, as opposed to clinical data, which would provide a more comprehensive and accurate assessment of enrollees' health. Data analysis must be improved to effectively use quality improvement initiatives. Furthermore, states will need to continue to find ways to contribute Medicaid data to broader, multi-payer initiatives, such as contributing to current health information technology (HIT) efforts.

Existing Medicaid managed care contracts must also be evaluated for their capacity to contribute to quality efforts, and as Medicaid expansions move forward under the new federal law, these efforts must be incorporated into any new payment and managed care arrangements.

Quality Data Collection in Medicaid

As a first step in quality improvement, states must have information on the quality of services in the Medicaid program. Data collection can be required of Medicaid providers through both the fee-for-service and managed care programs, but states should ensure that these efforts are not excessively burdensome on providers. Using standardized measures and working with other payers to require similar types of reporting will result in greater provider buy-in.

States can utilize data reporting through traditional commercial managed care reporting. Forty-five state Medicaid managed care programs have instituted health care quality measurements, with most using Healthcare Effectiveness Data and Information Set (HEDIS ®) or similar measures in managed care organizations.[240] Thirty-nine states assess consumer experiences and perceptions of quality, and more than half of states have public reporting for health plan performance.[241]

The emerging health information technology efforts will help states develop richer quality data collection efforts at the provider level. Through Medicaid, states will be promoting electronic health record adoption and "meaningful use" of health IT, which will include a number of quality indicators as a requirement for health IT incentive payments. States can consider how to use this new data tool to

collect more comprehensive quality clinical outcome data, rather than depending on claims data.

Quality Improvement Opportunities

Medicaid programs can use data collection to help identify opportunities for more effective and coordinated care and consider unmet beneficiary needs. Medicaid-based analytics and data sharing can indicate gaps in access, ensure appropriate service delivery, and improve quality. Examples of such initiatives are discussed below.

E-prescribing. E-prescribing is the process for electronic transfer and management of prescriptions among providers, pharmacies, and beneficiaries. As a quality tool, e-prescribing can assist Medicaid in supporting medication compliance, identifying provider efficiencies, and avoiding drug-to-drug interactions. E-prescribing is most effective when providers can access beneficiaries' medication history, coverage information, and other relevant data. Thirty states have active Medicaid e-prescribing efforts that aim to improve the safety and efficiency of health care.[242]

All-payer databases. These databases have participation from all the payers in a state—pooling data from commercial, Medicaid, and eventually, Medicare—making it a critical tool for transparency and value of health care services. Being able to compare prices across payers allows Medicaid to be more competitive in its pricing. If quality data is tied to the all-payer database, there is a greater ability to compare quality and pricing data simultaneously. Specifically, using and standardizing information allows for comparisons of price and quality data for particular conditions, provider-level medical errors, and disease-specific outcome measures.

Contracting for quality. Given that nearly three-quarters of Medicaid beneficiaries are enrolled in managed care plans, states can improve the delivery of care by requiring quality measurement and outcome reporting in their managed care contracts. These contracts can be a critical vehicle for enhancing data reporting and driving system improvements. For example, state Medicaid programs can use the contract requirements to ensure that e-prescribing, medical homes initiatives, or other quality improvement efforts are part of the Medicaid contract.

This type of assurance effort is more challenging in the fee-for-service areas of Medicaid, but could be done as "conditions of participation" requirements for providers. For example, states can require hospitals to have quality improvement programs in place to be eligible for Medicaid reimbursement. However, if these conditions are too onerous, provider access challenges can be inflamed for beneficiaries.

MEDICAID AND COORDINATED CARE

Care coordination and disease management programs have the potential to greatly reduce the costs of delivering care as well as improve health outcomes for the Medicaid population by decreasing duplication of services and providing additional support for enrollees. More enrollees in Medicaid have chronic conditions and complex care needs than in the general population, making these initiatives critical for achieving program improvements.

Considerations for Care Coordination Programs

Depending on the specific goals of the initiative, a state should identify the target population, where the reform initiative should take place geographically (for pilot programs), and which patient conditions or diseases within the affected population will be targeted for improvement. For example, a state may want to implement a program for dual eligibles with multiple chronic conditions that provides coordinated care for disease-specific services and create benchmarks for tracking progress in health status.

Medicaid programs should also consider partnering with other stakeholders. Public-private partnerships and multipayer initiatives can further extend their leverage in creating programs, expanding purchasing power, and gaining additional resources and expertise in certain areas. Partnering with other payers may help to broaden the scope of the initiatives and also incentivize—financially and through infrastructure support—providers to participate.

States should also consider the adoption of health information technology as an integral tool to further link medical information for better coordinated care. Health information technology offers a range of options for improving care coordination, from adoption of e-prescribing programs, to improvement of drug regimen compliance, to more broad scale implementation of electronic health records for provider-to-provider information sharing.

Specific Programs for Care Coordination in Medicaid

The health care reform law provides for Medicare- and Medicaid-based coordination efforts through pilot medical homes and dual-eligibles programs to ensure more co-

ordinated care. This includes the formation of a new office at HHS for dual eligibles innovation, which will provide for greater communication and better delivery of care by the two programs.

Medical homes. Medical homes allow patients to receive comprehensive care from multiple providers with a case manager facilitating and coordinating services. More than half of states have implemented medical homes programs in their Medicaid populations.[243] Because of the sizeable portion of high-risk, high-cost beneficiaries, Medicaid serves as a good foundation for medical homes.

Payment. Medical homes programs can involve a managed care network with Medicaid paying providers a capitated payment per member per month, often as a form of primary care case management. Other Medicaid medical homes programs maintain a fee-for-service payment system, with enhanced payments for case management or incorporate bonus payments for reporting data and reaching benchmarks. While these options may cost states more money in the short term, they have the potential to improve the quality and coordination of care for the targeted population, which would likely save money in the long run.

Program Design. States have options when deciding who should participate in medical homes. High-cost individuals whose chronic conditions can be maintained with regular health interventions are ideal candidates for medical homes. Successful examples include designing medical homes programs for individuals with diabetes, asthma, or two or more chronic conditions.[244] Better managing this population may yield greater results in improved health and reduced costs for these populations.

For example, New Hampshire developed a pilot program leading with the private payers, and involving providers and subject experts for medical homes for adults. The medical home model in **New Hampshire** emphasizes care coordination by providing personalized primary, preventive, and chronic condition care, relying on electronic health records to prevent and manage chronic diseases for their targeted population; it includes convenience features such as same-day scheduling and secure e-mail communications.[245]

For healthier Medicaid beneficiaries, mandating medical homes may not be cost-effective due to the limited doctors' visits needed and additional costs associated with paying for case management.

Duals coordination. Another form of care coordination involves integration of care for dual eligibles who receive care from both Medicare and Medicaid. The nearly 9 million dual eligibles represent half of all Medicaid expenditures and a quarter of Medicare spending.[246] Managing the health of this population is extremely important to controlling overall Medicaid spending. As baby boomers age and there is an increase in dual eligibles entering the system, these issues become increasingly critical.

Care for these individuals is split between the two programs, and Medicare and Medicaid operate differently, which often hinders coordination of care for this population. Coordinating these two payers and the services delivered will help to ensure that appropriate, timely and efficient care is delivered. There are some models that have proven successful in managing care for dual eligibles involving Medicaid and Medicare. These programs offer states the opportunity to better manage chronic conditions and the Medicaid costs associated with them. Some of these initiatives are explained in the text box on the following page.

MEDICAID AND PRIMARY CARE AND PREVENTION

Medicaid enrollees are more likely to have chronic conditions and have poorer health outcomes, making them an ideal population for enhanced prevention and primary care services.[247] The new federal health reform law invests heavily in prevention and primary care services through Medicaid coverage of smoking cessation treatments, creation of a new prevention trust fund to finance proven prevention, and wellness and public health activities in communities across the nation.

Considerations in Primary Care and Prevention Improvements

When expanding on primary care and prevention services, it is important for states to consider the unintended consequences of such initiatives. Longer-term savings and improved outcomes need to be weighed against the cost of the programs.

For instance, many new Medicaid beneficiaries previously lacked insurance coverage, made fewer doctors' visits, and had unaddressed chronic health conditions. As a result, upon enrollment in Medicaid, primary care providers are responsible for treating patients that may have accumulated years of pent-up demand for their care.

The Center for Health Care Strategies (CHCS) is a leader in improving health care quality and outcomes for Medicaid's high-cost, high-needs populations. They encourage integrated, cost-effective strategies, and encourage Medicare and Medicaid to work together to reduce duplicative care and inefficiencies.

Through their work with states, CHCS has identified four main approaches for integrating care for dual eligibles, all of which promote greater coordination, sharing of information and integrating funding for this population:

Special Needs Plans (SNPs) and Programs for **All-Inclusive Care for the Elderly** (PACE) programs rely on Medicaid to partner with Medicare to streamline services and funding streams to deliver one set of benefits with one network of providers for beneficiaries. For example, **New Mexico** provides Medicare and Medicaid acute and long-term care benefits statewide in a mandatory program for dual eligibles.

Shared savings models have the potential to eliminate cost shifting between Medicare and Medicaid and allow for both programs to save.

Dual demonstration programs enables Medicaid to further leverage SNP and PACE programs by assuming full risk for delivering Medicare benefits to enrollees, resulting in a complete integration of the two programs' services and funding streams and delivery of coordinated care.

For more information, visit www.chcs.org.

Furthermore, when the Medicaid expansion begins in 2014, new enrollees will gain access to primary care services. However, a primary care provider shortage exists across the country, especially in rural areas.[248] The provider shortage in Medicaid is further exacerbated due to increasing overhead costs and lower Medicaid reimbursement rates. The new health reform law addresses the primary care workforce shortage in part by increasing Medicaid reimbursement rates for primary care and preventive services, but federal support for the additional payments ends after two years.

Additionally, states should consider the implications of churning in Medicaid. Long-term prevention strategies that rely on continued enrollment in the program are inhibited as enrollees cycle in and out of Medicaid coverage due to income fluctuations or other insurance opportunities.

Specific Primary Care and Prevention Opportunities

States have a variety of options for improving primary care and prevention in their Medicaid programs. Reforms can span from broadening the traditional view of who can provide services and where they should be provided, to operating in a proactive environment and investing in consumer engagement.

Expanding the scope of practice. States can expand the scope of practice of Medicaid providers to compensate for workforce shortages. Examples include allowing nurse practitioners to conduct physical examinations or dental technicians to perform basic dental services. Allowing these and other medical professionals that may have less training, but are certified to perform basic tasks (i.e., dental hygienists) to be reimbursed for services, has the potential to greatly expand the workforce of available providers, as well as to lower reimbursement rates.

Expanding delivery options. Many Medicaid patients seek health care services in non-traditional settings. This population tends to rely on clinics, health centers, urgent care centers, and the emergency room for its health care needs.[249] By broadening the delivery setting options, the program can make it easier for targeted populations to receive care in such places as schools and mobile units.

A growing trend to meet the demand for basic primary care services also includes establishing clinics in popular retail locations (i.e. Wal-Mart, CVS).[250] There is the potential for retail clinics to provide an alternative source of primary care that may prevent costly emergency care visits. However, when using retail clinics, it is important to caution that there is not a continuum of care and no follow-up services provided, nor is there access to specialists for more severe illnesses. Medicaid would have to work to ensure the appropriate patient care information can be exchanged with a clinic.

Provider reimbursement rates. Primary care physicians can be incentivized to deliver comprehensive services to the Medicaid population if their reimbursement rates are based on quality and outcomes measures. For example, physicians can be reimbursed for educating their patients about chronic conditions and how to avoid hospitalizations (i.e., proper asthma care), or for conducting preliminary oral screenings

to identify dental caries, both of which save states money in the long run due to early identification of problems.

Prevention programs. The Medicaid population is more likely to have preventable conditions such as obesity, smoking, and asthma, as compared with the non-Medicaid population. Medicaid expenditures attributable to smoking total $22 billion annually and make up 11 percent of all Medicaid costs.[251] States have been trying to address these issues by developing innovative programs and working with providers, public health officials, and beneficiaries to decrease the rates of these conditions and manage the costs of care. For example, a smoking cessation program for Medicaid beneficiaries in **Massachusetts** provided beneficiaries with six months of anti-smoking drugs with low copayments, 16 counseling sessions, and no prior authorization for these services. There was a 10 percent decline in smoking among beneficiaries (with no change among non-Medicaid recipients) and improved health outcomes after two years.[252]

Consumer education. To successfully integrate prevention and primary care initiatives into Medicaid, it will be vital to get enrollee buy-in to using the program and services wisely. This includes providing the proper care and support for specific diseases, such as nurse hotlines and incentives for consumers meeting goals. Because much of the management and prevention of chronic diseases occurs outside of a doctor's office, it is important for Medicaid enrollees to feel invested and engaged in their personal health outcomes.

Provider directories. Another option is to work with beneficiaries to educate them about Medicaid providers. Some states have distributed Medicaid beneficiaries a provider directory of all primary care physicians in their area. Beneficiaries are more likely to rely on these providers than the hospital emergency department to obtain care.

Increasing copayments for non-emergency ER usage. States can discourage ER usage by increasing copayment charges for non-emergent care provided in the emergency department. Research has shown that increased cost sharing leads to decreased utilization of services.[253] Many states have implemented Medicaid co-pays for non-emergency care in an attempt to manage costs in the program.

MEDICAID AND PAYMENT REFORM

After years of paying providers on a fee-for-service basis, states have begun to experiment with alternative models for payment. States have the opportunity to reform the way providers are paid and the quality and effectiveness of services provided. The health reform law includes pilots for alternative payment methods across a variety of options. As the Medicaid expansion begins and an influx of new enrollees enters the program, it will be important for states to adopt innovative payment models to provide more efficient and cost-effective care.

Payment Reform Considerations

Before implementing payment reforms in Medicaid, states need to have discussions with key stakeholders to get their buy-in. State Medicaid programs should work with provider groups, including providers, hospitals, and clinics, from the initial planning stages through implementation to develop and gain support for payment reforms. States must also work throughout the process with the U.S. Department of Health and Human Services to ensure the efforts have their support to ensure Medicaid program changes can be granted.

Additionally, many payment efforts are likely to be more effective when partnering with other health care payers. Payers participating in these efforts will have to agree on a standard set of measures and outcomes for reimbursing providers. A broad range of payers will encourage more providers to join payment reform efforts.

Specific Payment Reform Opportunities

Non-reimbursement for never events. Many Medicaid programs have followed Medicare's lead in reducing or eliminating payment for preventable illnesses or infections occurring in the hospital that were caused by medical errors.[254]

States have been working closely with their state hospital associations to reach agreement on lower or non-payment for preventable occurrences, or "never events."

Pay-for-performance (P4P). P4P initiatives enable states to pay Medicaid providers an incentive bonus for delivering higher quality care defined by specific measures. States can pay bonuses based on setting standards for improvement for a specific period of time, or for payments delivered for specific benchmarks of care, or for some combination of the two. States should determine what their data and evaluation needs are and what additional measures need to be put into place to move toward improving the overall care delivered.

More than three-quarters of states have implemented some form of pay-for-performance in their Medicaid programs.[255] While some states have developed broader all-payer initiatives (i.e., **Oregon**'s Health Care Quality Cooperation), others have focused mainly within Medicaid on their primary care case management programs.[256]

Group purchasing programs. States can create or join a group purchasing program as a means of leveraging purchasing power to contain Medicaid costs. Group purchasing programs enable members to save money by reducing the costs of services bought in bulk amounts, such as prescription drugs or durable medical equipment. States can develop these partnerships with other state Medicaid programs or other state health insurance programs. **Michigan** started the largest Medicaid prescription drug group purchasing program with two other states in 2003, and the program has since expanded to 12 states and resulted in millions of dollars in savings for each state.[257]

Bundled services and payments. Bundling services combines Medicaid payments for all providers for a specific procedure, such as an inpatient hip replacement surgery with rehabilitative outpatient care. Bundling has the ability to improve the transparency of care (because the total price of a service is defined) and to reduce duplication of services. Medicaid can share the savings from bundled payments—the state and the providers split the savings accrued from improved care.

However, bundling payments may prove difficult to implement due to the lack of experience and provider buy-in. In addition, extending bundled payment procedures to the special needs population may be difficult. There are often several additional needs and risks associated with this population that makes it difficult to estimate costs for procedures.

Global payment. Global payments, set on a patient basis, are intended to cover the cost of all care for a beneficiary on a risk-adjusted basis. Global payments for Medicaid have the benefit of coordinating payment of providers and care across acute, long-term care services and other providers. States can set up global payments for all services, or apply global payments to specific services, such as pre-natal care and delivery. Global payments also have the advantage of predictability of costs and better allocation of services delivered, therefore limiting duplication and unnecessary care.

Accountable care organizations (ACOs) can be developed in Medicaid as a global payment arrangement based on the total cost of care for a population of patients. ACOs can be created either within Medicaid or in partnership with other health care payers.

States should consider the capacity and ability of providers—including community health centers—to accept global payments. They should also take into account the services that must be delivered. And because global payment models work most effectively in a managed care setting, it is important to have a large managed care presence in a state for this model to work.

CONCLUSION

As states move forward in enacting delivery system reforms, Medicaid must be a part of the state strategy and contribute to the state's vision—either through a Medicaid-led reform or as a partner in a multi-stakeholder initiative. Given the complexity, expense, and far-reaching impact of Medicaid, it will be vital to reform the way care is delivered in the program to ensure a healthy and sustainable health care system.

Beyond the widespread workforce shortage and rising costs of health care affecting all payers, states should remain cognizant of Medicaid-specific challenges when enacting delivery system reforms, including budgetary constraints, outdated technological capabilities, limited flexibility to change, and tenuous provider relationships.

Despite these challenges, using Medicaid as a lever for enacting delivery system reforms presents states with the opportunity to: improve the quality of care and health outcomes of beneficiaries; eliminate inefficiencies; and decrease the costs of health care services.

Conclusion

Governors are uniquely positioned to shape health care delivery system improvements in their states, particularly alongside implementation of the federal health care reform law. Governors with a vision and clear goals for achieving high-quality, cost-effective health care should use the full array of tools and options available to them to identify and respond to critical opportunities to improve the system.

Moving forward, states will need to think strategically about integrating delivery system changes into their health reform implementation plan. Governors should ensure that delivery systems experts are included in the state health reform leadership team to encourage a coordinated approach to reforms. Private-sector stakeholders will also need to be engaged in planning discussions to ensure that the efforts of payers, providers, and others are synchronized with the overall reform strategy.

As governors consider their options for implementing health reforms, they should utilize their internal expertise and external partnerships to form a more integrated and cost-effective system. States should analyze and assess their current initiatives to see how those can serve as a foundation for reducing excess spending and duplication of personnel. They can also use these assessments to identify funding gaps that may be filled by federal grant opportunities.

Through the implementation of both federally initiated and state-led reforms, governors have the opportunity to lead in the national effort to build a high-performing health care system that improves the quality of life for all Americans.

Notes

1. Centers for Medicare and Medicaid Services, Office of the Actuary, National Health Statistics Group, available here http://www.cms.hhs.gov/NationalHealthExpendData/ (see Historical; NHE summary including share of GDP, CY 1960-2008; file nhegdp08.zip).
2. L.T. Kohn, J.M. Corrigan, and M.S. Donaldson, eds., "To Err Is Human: Building a Safer Health System" (Washington: National Academy Press, 1999).
3. Institute of Medicine, "Crossing the Quality Chasm: A New Health System for the Twenty-first Century" (Washington: National Academies Press, 2001).
4. Kohn et al., 1999.
5. P. Aspden, J. Wolcott, L. Bootman, L. Cronewett, eds., "Preventing Medication Errors: The Quality Chasm Series," Institutes of Medicine Committee on Identifying and Preventing Medication Errors (Washington: National Academies Press, 2007).
6. Institute of Medicine, "Coverage Matters: Insurance and Health Care" (Washington, D.C.: National Academies Press, Oct. 2001).
7. The Commonwealth Fund Commission on High Performance Health System, "Why Not the Best? Results from the National Scorecard on U.S, Health System Performance, 2008," July 17, 2008.
8. Agency for Healthcare Research and Quality, "National Healthcare Quality Report 2008" (AHRQ Publication No. 09-0001, March 2009).
9. E. McGlynn et al., "The quality of health care delivered to adults in the United States," New England Journal of Medicine 348 no. 26 (2003): 2635-2645.
10. R. Mangione-Smith et. al., "The quality of ambulatory care delivered to children in the United States," New England Journal of Medicine 357, no. 15 (2007): 1515-1523. RAND Review, "Localize the Remedy: Community Efforts to Ameliorate Poor Quality Care," accessed online June 2010: http://www.rand.org/publications/randreview/issues/summer2004/remedy2.html
11. Elliott S. Fisher, David E. Wennberg, Therese A. Stukel, et al. "The Implications of Regional Variations in Medicare Spending. Part 1: The Content, Quality, and Accessibility of Care." Annals of InternalMedicine, 138(4): 273–288, 2003. http://www.annals.org/cgi/reprint/138/4/273.pdf
12. J. Wennberg, K. Bronner, J. Skinner, E. Fisher, and D. Goodman, "Inpatient Care Intensity And Patients' Ratings Of Their Hospital Experiences," *Health Affairs,* 28, no. 1 (2009): 103-112.
13. D. Merenstein, G. Daumit, and N. Powe, "Use and costs of nonrecommended tests during routine preventive health exams," American Journal of Preventive Medicine 30(6), (2006) 521-527.
14. A. Gauthier, M. Serber, "A Need to Transform the U.S. Health Care System: Improving Access, Quality, and Efficiency," (New York: The Commonwealth Fund; 2005).
15. C. Schoen, et al, "A Survey of Primary Care Physicians in 11 Countries, 2009: Perspectives on Care, Costs, and Experiences, Health Affairs Web Exclusive, Nov. 5, 2009, w1171–w1183.
16. M. Stewart, J. Brown, A. Donner, I. McWhinney, et al., "The Impact of Patient-Centered Care on Outcomes," Journal of Family Practice (2000).
17. Gauthier and Serber, 2005
18. P. Bach, H. Pham, D. Schraq, R. Tate, J. Hargraves, "Primary care physicians who treat blacks and whites," *New England Journal of Medicine* (August 5, 2004).
19. J. Skinner, et al., "Mortality After Acute Myocardial Infarction in Hospitals That Disproportionately Treat Black Patients," American Heart Association, Inc. (2005).
20. Kohn et al., 1999.
21. Midwest Business Group on Health. (2003). "Reducing the costs of poor quality care through responsible purchasing leadership." Retrieved from http://www.mbgh.org/templates/UserFiles/Files/COPQ/copq%202nd%20printing.pdf

22. National Quality Measures Clearinghouse, "Using measures," accessed online April 2010: http://www.qualitymeasures.ahrq.gov/resources/measure_use.aspx
23. CMS National Health Expenditure Data, 2007: http://www.cms.hhs.gov/NationalHealthExpendData/
24. CMS Hospital Quality Compare: http://www.hospitalcompare.hhs.gov/Hospital/Search/Welcome.asp?version=default&browser=IE%7C8%7CWinNT&language=English&defaultstatus=0&MBPProviderID=&TargetPage=&ComingFromMBP=&CookiesEnabledStatus=&TID=&StateAbbr=&ZIP=&State=&pagelist=Home
25. National Quality Measures Clearinghouse Home Page: http://www.qualitymeasures.ahrq.gov/
26. Agency for Healthcare Research and Quality State Snapshot Web site: http://statesnapshots.ahrq.gov/snaps08/index.jsp
27. IOM 2001.
28. Congressional Budget Office, "Technological change and the growth of health care spending, January 2008: http://www.cbo.gov/ftpdocs/89xx/doc8947/01-31-TechHealth.pdf
29. E.S. Fisher et. al., "The implications of regional variations in Medicare spending," Annals of Internal Medicine 138, no. 4 (2003): 273-287.
30. C. Schoen, et al., 2009.
31. J. Wolff, B. Starfield, and G. Anderson, "Prevalence, expenditure, and complications of multiple chronic conditions in the elderly," Archives of Internal Medicine 162, no. 20 (2002): 2269-2276.
32. The Commonwealth Fund 2009 State Scorecard: http://www.commonwealthfund.org/Maps-and-Data/State-Scorecard-2009.aspx
33. J. Cantor, C. Schoen, D. Belloff, S.K.H. How, & D. McCarthy. (2007). "Aiming higher: results from a state scorecard on health system performance." Commonwealth Fund Report, 61. Retrieved from http://www.commonwealthfund.org/Content/Publications/Fund-Reports/2007/Jun/Aiming-Higher—Results-from-a-State-Scorecard-on-Health-System-Performance.aspx
34. Ibid.
35. Ibid.
36. C. Hess, et al., "State Health Policies Aimed at Promoting Excellent Systems: A Report on States' Roles in Health System Performance," National Academy for State Health Policy (April 2008).
37. Wisconsin Hospital Checkpoint: http://www.wicheckpoint.org/index.aspx; and Wisconsin PricePoint System: http://www.wipricepoint.org/
38. Hess, et al., 2008.
39. Hess, et al., 2008.
40. Centers for Medicare and Medicaid Services, "Sponsors of health care costs: businesses, households, and governments, 1987-2008," accessed online April 2010: http://www.cms.hhs.gov/NationalHealthExpendData/downloads/bhg08.pdf
41. Hess, et al., 2008.
42. A. McKethan, M. Shepard, S. Kocot, N. Brennan, M. Morrison and N. Nguyen, "Improving Quality and Value in the U.S. Health Care System," The Leader's Project (August 2009).
43. L. Duchon and V. Smith, "Quality Performance Measurement in Medicaid and SCHIP: Results of a 2006 National Survey of State Officials," National Association of Children's Hospitals (2006).
44. Patriot-News, "Medicaid Pay for Performance provides savings and quality," (February 5, 2010).
45. Arkansas Medicaid Inpatient Quality Incentive, accessed online April 2010: http://www.afmc.org/HTML/programs/quality_improve/hospital/iqi.aspx
46. Center for Health Care Strategies. "Descriptions of Selected Performance Incentive Programs" (November 2005), accessed online June 2010: http://www.cms.hhs.gov/MedicaidSCHIPQualPrac/Downloads/spic0206.pdf
47. National Quality Forum, "Serious Reportable Events in Healthcare–2006 Update," (March 2007).
48. J. Rosenthal and C. Hanlon, "Nonpayment for Preventable Events and Conditions: Aligning State and Federal Policies To Drive Health System Improvement," National Academy for State Health Policy (December 2009).
49. V. Smith, et al., "The Crunch Continues: Medicaid Spending, Coverage and Policy in the Midst of a Recession," The Kaiser Commission on Medicaid and the Uninsured, (September 2009.).

50. S. Silow-Carroll, G. Moody, D. Rodin, "State Patient Safety Initiatives and Nonpayment for Preventable Events and Conditions," The Commonwealth Fund States In Action Newsletter (January/February 2010).
51. The Maryland Health Services Cost Review Commission, "Maryland Hospital Acquired Conditions," accessed online April 2010: http://www.hscrc.state.md.us/init_qbr_MHAC.cfm
52. The Commonwealth Fund, "States In Action: Public programs are using incentives to promote healthy behavior" (September/October 2007), accessed online June 2010: http://www.commonwealthfund.org/Content/Newsletters/States-in-Action/2007/Oct/September-October-2007.aspx
53. Rosenthal and Hanlon, 2009.
54. Information about the Massachusetts Group Insurance Commission (GIC) is available at http://www.mass.gov/?pageID=afagencylanding&L=4&L0=Home&L1=Insurance+%26+Retirement&L2=Oversight+Agencies&L3=Group+Insurance+Commission&sid=Eoaf
55. Hess, et al., 2008.
56. State Quality Improvement Institute: http://www.academyhealth.org/Programs/ProgramsDetail.cfm?itemnumber=3148
57. McKethan, et al., 2009.
58. Office of the National Coordinator for Health IT, "State Health Information Exchange Cooperative Agreement Program," accessed online April 2010: http://healthit.hhs.gov/portal/server.pt?open=512&objID=1488&parentname=CommunityPage&parentid=58&mode=2&in_hi_userid=11113&cached=true
59. Office of the National Coordinator for Health IT, "Health Information Technology Extension Program," accessed online April 2010: http://healthit.hhs.gov/portal/server.pt?open=512&objID=1495&parentname=CommunityPage&parentid=58&mode=2&in_hi_userid=11113&cached=true
60. Office of the National Coordinator, "Health Information Technology: Initial Set of Standards, Implementation Specifications, and Certification Criteria for Electronic Health Record Technology; Interim Final Rule," Federal Register vol. 75 no. 8 (January 13, 2010) pages 2013-2047.
61. Centers for Medicare and Medicaid Services, State Medicaid Director letter 09-006 (September 1, 2009) accessed online April 2010: http://www.nasmd.org/home/doc/SMD090109_ARRA_HIT.pdf
62. National Governor's Association State Alliance for e-Health: http://www.nga.org/portal/site/nga/menuitem.1f41d49be2d3d33eacdcbeeb501010a0/?vgnextoid=5066b5bd2b991110VgnVCM1000001a01010aRCRD
63. Center for Children and Families, "Child Health Insurance Program Reauthorization Act of 2009: Overview and Summary," The Georgetown University Health Policy Institute (March 2009).
64. McKethan, et al., 2009.
65. David M. Lawrence, "My Mother and the Medical Care Ad-Hoc-Racy," *Health Affairs,* 22, no. 2 (March/April 2003): 238-242.
66. Gerald Anderson, "Chronic Conditions: Making the Case for Ongoing Care," Johns Hopkins University, November 2007. Available at http://www.fightchronicdisease.com/news/pfcd/documents/ChronicCareChartbook_Final.pdf; and Elizabeth McGlynn et al., "The Quality of Health Care Delivered to Adults in the United States," *New England Journal of Medicine* 348 (2003): 2635-2645.
67. Randall Brown, The Promise of Care Coordination: Models that Decrease Hospitalizations and Improve Outcomes for Medicare Beneficiaries with Chronic Illnesses (Princeton, NJ: Mathematica Policy Research, Inc., 2009).
68. Michael Rich et al., "A Multidisciplinary Intervention to Prevent the Readmission of Elderly Patients with Congestive Heart Failure," New England Journal of Medicine 333 (1995): 1190-1195; Robert Mechanic, "Will Care Management Improve the Value of U.S. Health Care," Background Paper for the 11th Annual Princeton Conference (May 2004); and Thomas Bodenheimer et al., "Improving Primary Care for Patients with Chronic Illness," *JAMA* 288 (October 2002): 1775-1779.
69. Henry Dove and Ian Duncan, "Estimating Savings, Utilization Rate Changes, and Return on Investment from Case Management Interventions: Selective Literature Review of Care Management Interventions" (Schaumburg, Ill.: Society of Actuaries, 2005).
70. Kaiser Family Foundation and Health Education and Research Trust (HRET), "Employer Health Benefits: 2006 Annual Survey" (Menlo Park, CA: Henry J. Kaiser Family Foundation, 2006).

71. Congressional Budget Office, *An Analysis of the Literature on Disease Management Programs* (Washington, D.C.: Congressional Budget Office, 2004).
72. Richard Kronick et al., The Faces of Medicaid II: Recognizing the Care Needs of People with Multiple Chronic Conditions (Hamilton, NJ: Center for Health Care Strategies, Inc., 2007); and PBGH.
73. Margo Rosenbach and Cheryl Young, *Care Coordination and Medicaid Managed Care: Emerging Issues* for *States and Managed Care Organizations* (Princeton, NJ: Mathematica Policy Research, Inc., 2000); and Pacific Business Group on Health, *Disease Management Effectiveness Project* (San Francisco, CA: Pacific Business Group on Health, 2002).
74. Stanford Patient Education Research Center, "Chronic Disease Self-Management Program," 2008. Available at http://patienteducation.stanford.edu/programs/cdsmp.html
75. Kate Lorig et al., "Chronic Disease Self-Management Program: 2-Year Health Status and Health Utilization Outcomes," *Medical Care* 39, no. 11 (2001): 1217-1223.
76. John Wheeler, "Can A Disease Self-Management Program Reduce Health Care Costs?: The Case of Older Women with Heart Disease," *Medical Care* 41, no. 6 (2003): 706-715.
77. Mary Naylor et al., "Transitional Care of Older Adults Hospitalized with Heart Failure: A Randomized, Controlled Trial," *Journal of the American Geriatrics Society* 52 (2004): 675-684; Eric Coleman et al., "The Care Transitions Intervention: Results of a Randomized Controlled Trial," *Archives of Internal Medicine* 166 (2006): 1822-1828.
78. Coleman et al.
79. Naylor et al.
80. Jeryl McGaw et al., "A Multidisciplinary Approach to Transition Care: A Patient Safety Innovation Study," *The Permanente Journal* 11, no. 4 (2007): 4-9.
81. Deborah Peikes et al., "Effects of Care Coordination on Hospitalization, Quality of Care, and Health Care Expenditures Among Medicare Beneficiaries: 15 Randomized Trials," *Journal of American Medical Association* 301, no. 6 (2009): 603-618.
82. Bott; McCall.
83. Brown.
84. Chad Boult, Lya Karm, and Carol Groves, "Improving Chronic Care: The 'Guided Care' Model," The Permanente Journal 12, no. 1 (2008): 50-54; and Bruce Leff et al., "Guided Care and Cost of Complex Healthcare: A Preliminary Report," *American Journal of Managed Care* 15, no.8 (2009): 555-559.
85. Barry Katz et al., "The Indiana Chronic Disease Management Program's Impact on Medicaid Claims: A Longitudinal, Statewide Evaluation," *Medical Care* 47, no. 2 (2009): 154-160.
86. Center for Health Care Strategies, Inc., *Washington State Medicaid: An Evolution in Care Delivery* (Hamilton, NJ: Center for Health Care Strategies, Inc, 2008).
87. Center for Health Care Strategies.
88. James Verdier, Vivian Byrd, and Christal Stone, *Enhanced Primary Care Case Management Programs in Medicaid: Issues and Options for States* (Hamilton, NJ: Center for Health Care Strategies, Inc, 2009); and Dianne Hasselman, *Provider Incentive Programs: An Opportunity for Medicaid to Improve Quality at the Point of Care* (Hamilton, NJ: Center for Health Care Strategies, Inc, 2009).
89. Sophia Schlette, Melanie Lisac, and Kerstin Blum, "Integrated Primary Care in Germany: The Road Ahead," *International Journal of Integrated Care* 9, no. 20 (April 2009): 1-11; and Reinhard Busse, "Disease Management Programs in German's Statutory Health Insurance System," *Health Affairs* 23, no. 3 (May/June 2004): 56-67.
90. Joachim Szecsenyi, T. Rosemann, S. Joos F. Peters-Klimm, and A. Miksch, "German diabetes disease management programs are appropriate for restructuring care according to the chronic care model: an evaluation with the patient assessment of chronic illness care instrument." *Diabetes Care* 31, no. 6 (June 2008): 1150-4.
91. Chris Ham, "Chronic Care in the English National Health Service: Progress and Challenges," *Health Affairs* 28, no.1 (January/February 2009): 190-201.
92. Ham.
93. Some individuals have illnesses so far advanced that coordination may not be helpful in limiting hospitalizations or improving health status (Brown 2009); consequently, programs may need to forego intensive intervention for individuals for whom it is likely to be of little or no use.

94. AARP, "Chronic Care: A Call to Action for Health Reform." Washington DC: AARP Public Policy Institute, 2009.
95. Dylan Roby, Gerald Kominski, and Nadereh Pourat, "Assessing the Barriers to Engaging Challenging Populations in Disease Management Programs: The Medicaid Experience," *Disease Management and Health Outcomes* 16 (2008): 421-428.
96. James M. Verdier, Vivian Byrd, and Christal Stone, "Enhanced Primary Care Case Management Programs in Medicaid: Issues and Options for States," Hamilton, N.J.: Center for Health Care Strategies, September 2009.
97. Massachusetts Special Commission on the Health Care Payment System, Recommendations, July 2009. Available at: http://www.mass.gov/Eeohhs2/docs/dhcfp/pc/Final_Report/Final_Report.pdf.
98. An overview can be found in "Current Trends in Disease Management Organizations from Health Industries Research Companies, available at: http://hirc.com/files/public/DM_LeadingDMO_2009.pdf.
99. Emily Carrier and James Reschovsky, "Expectations Outpace Reality: Physicians' Use of Care Management Tools for Patients with Chronic Conditions." *Issue Brief No. 129,* (Washington, D.C.: Center for Studying Health System Change, December 2009).
100. Sara Rosenbaum, Jane Thorpe, and Sara Schroth, *Supporting Alternative Integrated Models for Dual Eligibles: A Legal Analysis of Current and Future Options* (Hamilton, NJ: Center for Health Care Strategies, Inc, 2009).
101. Rosenbaum.
102. U.S. Treasury Notice 2004–23. Internal Revenue Code, Section 223(c)(2). Available at www.ustreas.gov/press/releases/reports/notice200423.pdf.
103. American Academy of Pediatrics, "High-Deductible Health Plans and the New Risks of Consumer-Driven Health Insurance Products," *Pediatrics* 119 (2007): 622-262; and Patient-Centered Primary Care Collaborative, *The Patient Centered Primary Care Collaborative Position on Legislative Changes to Enable the Patient Centered Medical Home Covered in an HDHP* (Draft, PCPCC, April 2009). Available at www.pcpcc.net/files/HDHP%20PCPCC%20position%20draft_0.doc.
104. Patient-Centered Primary Care Collaborative.
105. American Academy of Pediatrics.
106. Melanie Bella, Chad Shearer, Karen Llanos, and Stephen A. Somers. "Purchasing Strategies to Improve Care Management for Complex Populations: A National Scan of State Purchasers." Center for Health Care Strategies, March 2008.
107. Lydia Faulkner, *Disease Management: The New Tool for Cost Containment and Quality Care,* NGA Center for Best Practices Issue Brief, National Governors Association, March 13, 2003. Available at www.nga.org/Files/pdf/031403DISEASEMGMT.pdf.
108. James Verdier, Vivian Byrd, and Christal Stone. "Enhanced Primary Care Case Management Programs in Medicaid: Issues and Options for States," Center for Health Care Strategies, September 2009.
109. Verdier et al.
110. Suzanne Felt-Lisk, Gilbert Gimm, and Stephanie Peterson, "Evaluation of the Local Initiative Rewarding Results Collaborative Demonstrations: Final Report," Mathematica Policy Research, Inc., October 2006.
111. New York State Department of Health, "Health Department Launches New Projects to Improve the Care of Chronically Ill Medicaid Patients," January 5, 2009. Available at http://www.nyhealth.gov/press/releases/2009/2009-01-05_medicaid.htm.
112. Dave Knutson and Melanie Bella, "Predictive Modeling: A Guide for State Medicaid Purchasers," Center for Health Care Strategies, August 2009. Available at http://www.chcs.org/usr_doc/Predictive_Modeling_Guide.pdf
113. Dennis M. Daley and Jerrell D. Coggburn, Retiree Health Care in the American States, Center for State and Local Government Excellence, December 2008. Available at http://www.slge.org.
114. For further information on state high-risk pools, see Tanya Schwartz, "State High-Risk Pools: An Overview," Issue Paper #8041, Kaiser Commission on Medicaid and the Uninsured, January 2010.
115. National Committee for Quality Assurance, 2010 DM Standards and Guidelines. Available at http://www.ncqa.org/tabid/1108/Default.aspx.
116. Ann S. O'Malley, Deborah Peikes, and Paul B. Ginsburg, "Qualifying a Physician Practice as a Medical Home," Policy Perspective No. 1, Center for Studying Health System Change, December 2008.

117. R. Adams Dudley et al., "Consumer Financial Incentives: A Decision Guide for Purchasers." U.S. DHHS, Agency for Healthcare Research and Quality; 2007. AHRQ Publication No. 07(08)0059.
118. Minnesota Department of Health. "Strategies to Engage Consumers about Health Care Cost and Quality: Report to the Minnesota Legislature, January 2010. Available at http://www.health.state.mn.us/healthreform/consumer/ConsumerEngagementReport.pdf.
119. Neva Kaye and Mary Takach, "Building Medical Homes in State Medicaid and CHIP Programs," National Academy for State Health Policy, June 2009.
120. Mark Friedberg, Peter Hussey, Eric Schneider, "Primary Care: a Critical Review of the Evidence on Quality and Costs of Health Care," *Health Affairs* 29, no. 5 (May 2010): 766-772.
121. Thomas Bodenheimer, Hoangmai Pham, "Primary Care: Current Problems and Proposed Solutions," *Health Affairs* 29, no. 5 (May 2010): 799-805.
122. Mary Naylor, Ellen Kurtzman, "The Role of Nurse Practitioners in Reinventing Primary Care," *Health Affairs* 29, no. 5 (May 2010): 893-899.
123. Health Resources and Services Administration, Bureau of Primary Health Care, "Shortage Designation: Health Professional Shortage Areas, Medically Underserved Areas/Populations," Health Resources and Services Administration, http://bhpr.hrsa.gov/shortage/ (accessed May 17, 2010).
124. Thomas Bodenheimer, Hoangmai Pham, (2010).
125. Health Resources and Services Administration, Bureau of Primary Health Care, "Shortage Designation: Health Professional Shortage Areas, Medically Underserved Areas/Populations," Health Resources and Services Administration, http://bhpr.hrsa.gov/shortage/ (accessed May 17, 2010).
126. Thomas Bodenheimer, Hoangmai Pham, (2010).
127. Interview with Kathy Wibberly, Primary Care Office Director, from ASTHO Primary Care Office site visit to Virginia Department of Health, Division of Primary Care and Rural Health August 2009.
128. American Medical Association, *Scope of Practice Data Series: Nurse Practitioners,* (Chicago, IL: American Medical Association, 2009).
129. Centers for Disease Control and Prevention, "Tobacco Use: Targeting the Nation's Killer: At a Glance 2010," Centers for Disease Control and Prevention, http://www.cdc.gov/chronicdisease/resources/publications/AAG/osh.htm (accessed May 17, 2010).
130. Fiore MC, Jaen CR, Baker TB, et al., *Treating Tobacco Use and Dependence: 2008 Update,* (Rockville, MD: U.S. Department of Health and Human Services, Public Health Service, May 2008).
131. State example data come from the North American Quitline Consortium's 2009 seminar: "Innovative Approaches and Proven Strategies for Maximizing Reach."
132. Partnership for Prevention, "Why Invest? Recommendations for Improving Your Prevention Investment, available at: http://www.prevent.org/images/stories/2008/whyinvest%20finaldf.pdf, accessed June 22, 2010.
133. Centers for Disease Control and Prevention, "Community Guide: Cancer Screenings Cancer Prevention & Control: Provider-oriented Screening Interventions," http://www.thecommunityguide.org/cancer/screening/provider-oriented/index.html (accessed May 17, 2010).
134. GA. CODE ANN. § 33-24-56.3 (HB 1100, Act 908)
135. US Department of Health and Human Services, *The Surgeon General's Call to Action to Prevent and Decrease Overweight and Obesity* (Rockville, MD: Office of the Surgeon General, US Department of Health and Human Services, 2001).
136. Centers for Disease Control and Prevention, "Economic Consequences of Obesity," http://www.cdc.gov/obesity/causes/economics.html (accessed May 26, 2010)
137. US Preventive Services Task Force, "Guide to Clinical Preventive Services, 3rd ED," http://www.ncbi.nlm.nih.gov/bookshelf/br.fcgi?book=hscps3edrec andpart=A26803 (accessed May 17, 2010).
138. E Nolte and C.M. McKee, "Measuring the Health of Nations: Updating an Earlier Analysis," *Health Affairs* 27, no. 1 (January/February 2008): 58-71.
139. Community Care of North Carolina, http://www.communitycarenc.com/ (accessed May 17, 2010).
140. Community Care of North Carolina, "At a Glance Fact Sheet" http://www.communitycarenc.com/PDFDocs/CCNC%20AT%20A%20GLANCE.pdf (accessed May 17, 2010).
141. US Department of Health and Human Services, "Medicare to join insurers in support of APC model," http://www.hhs.gov/news/press/2009pres/09/20090916a.html (accessed May 17, 2010).

142. Ohio Infant Mortality Task Force Executive Summary, http://www.odh.ohio.gov/odhPrograms/cfhs/imtf/imtf.aspx (accessed May 17, 2010).
143. Patient Self Management of Chronic Disease in Primary Care. Thomas Bodenheimer, MD; Kate Lorig, RN, DrPH; Halsted Holman, MD; Kevin Grumbach, MD JAMA. 2002;288:2469-2475.
144. Effect of a self-management program on patients with chronic disease, Lorig KR, Sobel DS, Ritter PL, Laurent D, Hobbs M. Effective Clinical Practice. 2001 Nov-Dec;4(6):256-62.
145. Institute of Medicine, Crossing the Quality Chasm A new Health System for the 21st Century, 2001
146. Trust for America's Health: A Shot in the Arm for Childhood Immunization Programs.
147. U.S. Department of Health and Human Services. HHS Fact Sheet: The Childhood Immunization Initiative. July 6, 2000. http://www.hhs.gov/news/press/2000pres/20000706a.html.
148. Association of State and Territorial Health Officials, "Public Health Yields Excellent Return on Investment," Association of State and Territorial Health Officials, http://www.astho.org/Display/AssetDisplay.aspx?id=2819 (accessed May 17, 2010).
149. Utah Department of Health USIIS www.usiss.org (accessed May 17, 2010).
150. Julie Boom, Anna Dragsbaek and Cynthia Nelson, "The Success of an Immunization Information System in the Wake of Hurricane Katrina," *Pediatrics,* 119 (2007): 1213-1217. http://pediatrics.aappublications.org/cgi/content/full/119/6/1213
151. Commonwealth Fund, "Physicians' Use of Information Tools and Performance Data," Commonwealth Fund, http://www.commonwealthfund.org/Content/Performance-Snapshots/Improving-Quality-Using-Systems-Oriented-Strategies/Physicians-Use-of-Information-Tools-and-Performance-Data.aspx (accessed May 17, 2010).
152. Miller, HD. From volume to value: Better ways to pay for health care. Health Aff (Millwood). 2009 Sept-Oct;28(5):1418-28.
153. The Henry J. Kaiser Family Foundation. State Health Facts. Available at http://www.statehealthfacts.org.
154. U.S. Bureau of Labor Statistics, Current Employment Statistics, 2009.
155. Becker C. Profitable complications. Modern Health care, December 17, 2007.
156. For example, a number of projects have shown the value of having a nurse in primary care practices providing patient education and other care management services, but this is not a reimbursable service under Medicare or most health insurance plans.
157. In one survey, 20% of patients reported having received the same test that had been performed previously, much higher than in most other countries. The Commonwealth Fund Commission on a High Performance Health System. Why Not the Best? Results from a National Scorecard on U.S. Health System Performance. July 2008. Available at http://www.commonwealthfund.org.
158. See, for example, Kleinke JD. Access versus excess: Value-based cost sharing for prescription drugs. Health Aff (Millwood). 2004 Jan-Feb;23(1):34-47.
159. It is important to note that a primary care practice does not need to be a "gatekeeper" (where the patient is required to get approval before their insurance will pay for other services) in order to reduce unnecessary utilization by patients; shared decision-making programs provide an opportunity for the primary care physician to help the patient make an informed choice about whether additional care is needed and which care is the most effective.
160. Chernew M, Rosen A, Fendrick AM. Value-based insurance design. Health Aff (Millwood). 2007 Jan;26(2):w195-w203. Fendrick AM, Chernew M, Levi GW. Value-based insurance design: Embracing value over cost alone. Am J Manag Care. 2009; 15:S277-S283.
161. See, for example, Toussaint J. Writing the new playbook for U.S. health care: lessons from Wisconsin. Health Aff (Millwood). 2009 Sept-Oct;28(5):1343-50.
162. Edmonds C, Hallman GL. CardioVascular Care Providers. A pioneer in bundled services, shared risk, and single payment. Tex Heart Inst J. 1995;22(1):72-6; Johnson LL, Becker RL. An alternative health-care reimbursement system--application of arthroscopy and financial warranty: results of a 2-year pilot study. Arthroscopy. 1994 Aug;10(4):462-70; discussion 71-2; and Cromwell J, Dayhoff DA, Thoumaian AH. Cost savings and physician responses to global bundled payments for Medicare heart bypass surgery. Health Care Financ Rev. 1997 Fall;19(1):41-57.

163. See, for example, Sakala C, Corry M. Evidence-Based Maternity Care: What It Is and What It Can Achieve. New York: Milbank Memorial Fund; 2008; Fisch JM, English D, Pedaline S, Brooks K, Simhan HN. Labor induction process improvement: a patient quality-of-care initiative. Obstet Gynecol. 2009 Apr;113(4):797-803; Toussaint, op cit.; and Baicker K, Buckles KS, Chandra A. Geographic variation in the appropriate use of cesarean delivery. Health Aff (Millwood). 2006 Sep-Oct;25(5):w355-67.
164. See, for example, Shannon RP, Patel B, Cummins D, Shannon AH, Ganguli G, Lu Y. Economics of central line--associated bloodstream infections. Am J Med Qual. 2006 Nov-Dec;21(6 Suppl):7S-16S, and Pronovost P. Interventions to decrease catheter-related bloodstream infections in the ICU: the Keystone Intensive Care Unit Project. Am J Infect Control. 2008 Dec;36(10):S171 e1-5.
165. See, for example, Coleman EA, Parry C, Chalmers S, Min SJ. The care transitions intervention: results of a randomized controlled trial. Arch Intern Med. 2006 Sep 25;166(17):1822-8, and Jack BW, Chetty VK, Anthony D, Greenwald JL, Sanchez GM, Johnson AE, et al. A reengineered hospital discharge program to decrease rehospitalization: a randomized trial. Ann Intern Med. 2009 February 3, 2009;150(3):178-87.
166. More information on Hospital Compare is available at http://www.hospitalcompare.hhs.gov.
167. More information on Regional Health Improvement Collaboratives is available from the Network for Regional Health care Improvement at http://www.nrhi.org.
168. For example, the Iowa Health care Collaborative (http://www.ihconline.org) reports publicly on the rates of infections and other patient safety issues in hospitals in Iowa, and the Pennsylvania Health care Cost Containment Council (http://www.phc4.org) issues public reports on the rates of infections in Pennsylvania hospitals.
169. Hibbard JH, Stockard J, Tusler M. Hospital performance reports: impact on quality, market share, and reputation. Health Aff (Millwood). 2005 July/Aug 24(4): 1150-1160.
170. Brannan T. New Hampshire Acute Care Hospital Comparison. New Hampshire Department of Insurance, August 27, 2008. Available at http://www.nh.gov/insurance/consumers/documents/nh_ac_hosp_comp.pdf.
171. Tu H, Lauer J. Impact of health care price transparency on price variation: the New Hampshire experience. Center for Studying Health System Change. November 2009.
172. For more information, see http://www.premierinc.com/quality-safety/tools-services/p4p/hqi/index.jsp.
173. P.L. 111-148.
174. Information on the State Employees Health Commission program is available on the State of Maine website http://www.maine.gov/tools/whatsnew/index.php?topic=oit_msenc&id=59425&v=ViewArticle. Information on the quality rankings from the Maine Health Management Coalition are available at http://www.mhmc.info.
175. More information is available on the New Hampshire Insurance Department website, http://www.nh.gov/insurance/media/NewHampshireHealthFirst.htm.
176. Rosenthal J, Hanlon C. Nonpayment for Preventable Events and Conditions: Aligning State and Federal Policies to Drive Health Systems Improvement. National Academy for State Health Policy, December 2009.
177. For example, under these programs, if a patient gets an infection, and the infection leads to organ or tissue damage that requires surgery, the hospital would likely still be paid extra because of the surgery.
178. Information on the Maryland Hospital Acquired Conditions program is available at http://www.hscrc.state.md.us/init_qi_MHAC.cfm.
179. Cromwell J, Dayhoff DA, Thoumaian AH. Cost savings and physician responses to global bundled payments for Medicare heart bypass surgery. Health Care Financ Rev. 1997 Fall;19(1):41-57.
180. Johnson LL, Becker RL. An alternative health-care reimbursement system—application of arthroscopy and financial warranty: results of a 2-year pilot study. Arthroscopy. 1994 Aug;10(4):462-70; discussion 71-2.
181. For more information, see http://www.geisinger.org/provencare/.
182. Casale AS, Paulus RA, Selna MJ, Doll MC, Bothe AE, Jr., McKinley KE, et al. "ProvenCare℠": a provider-driven pay-for-performance program for acute episodic cardiac surgical care. Ann Surg. 2007 Oct;246(4):613-21; discussion 21-3.
183. See, for example, Toussaint J, *op cit*.; Swensen S, *et al*. Cottage industry to postindustrial care – the revolution in health care delivery. N Engl J Med. 2010 Feb 4;362(5):e12.

184. See, for example, information on the Perfecting Patient Care℠ program developed by the Pittsburgh Regional Health Initiative available at http://www.prhi.org/ppc_what.php.
185. Centers for Medicare and Medicaid Services, "Frequently Asked Questions About the Acute Care Episode (ACE) Demonstration, July 25, 2008 (http://www.cms.hhs.gov/DemoProjectsEvalRpts/downloads/ACEMoreInfo.pdf).
186. Wilensky G, Wolter N, Fischer, M. Gain sharing: a good concept getting a bad name? Health Aff (Millwood). 2007; 26(1):w58-w67.
187. Starfield B, Shi L, Macinko J. Contribution of primary care to health systems and health. Milbank Q. 2005;83(3):457-502.
188. See, for example, Murray M, Berwick DM. Advanced access: reducing waiting and delays in primary care. JAMA. 2003 Feb 26;289(8):1035-40; Wagner EH, Grothaus LC, Sandhu N, Galvin MS, McGregor M, Artz K, et al. Chronic care clinics for diabetes in primary care: a system-wide randomized trial. Diabetes Care. 2001 Apr;24(4):695-700; Wade TJ, Mansour ME, Guo JJ, Huentelman T, Line K, Keller KN. Access and utilization patterns of school-based health centers at urban and rural elementary and middle schools. Public Health Rep. 2008 Nov-Dec;123(6):739-50; and Bennett GG, Herring SJ, Puleo E, Stein EK, Emmons KM, Gillman MW. Web-based weight loss in primary care: a randomized controlled trial. Obesity; 2009.
189. See, for example, O'Connor AM, Llewellyn-Thomas HA, Barry Flood A. Modifying unwarranted variations in health care: shared decision making using patient decision aids. Health Aff (Millwood). 2004;63(1), and Bottles K, Vinz C. Decision-Support Alternative to Prior Authorization for Ordering High-Tech Diagnostic Imaging Scans [PowerPoint Presentation]. Institute for Clinical Systems Improvement; 2009.
190. See, for example, Fischer MA, Avorn J. Economic implications of evidence-based prescribing for hypertension: can better care cost less? JAMA. 2004 Apr 21;291(15):1850-6.
191. See, for example, Bourbeau J, Julien M, Maltais F, Rouleau M, Beaupre A, Begin R, et al. Reduction of hospital utilization in patients with chronic obstructive pulmonary disease: a disease-specific self-management intervention. Arch Intern Med. 2003 Mar 10;163(5):585-91; Cordisco ME, Benjaminovitz A, Hammond K, Mancini D. Use of telemonitoring to decrease the rate of hospitalization in patients with severe congestive heart failure. Am J Cardiol. 1999 Oct 1;84(7):860-2, A8; and Gadoury MA, Schwartzman K, Rouleau M, Maltais F, Julien M, Beaupre A, et al. Self-management reduces both short- and long-term hospitalisation in COPD. Eur Respir J. 2005 Nov;26(5):853-7.
192. A variant of this approach is called "practice capitation."
193. In a market with multiple health plans, any individual health plan will only have data on a small proportion of a physician's patients, making it more difficult to measure the physician's quality of care in a statistically valid way. Combining the data from all health plans enables more statistically reliable measurement.
194. Examples include the California Cooperative Health care Reporting Initiative (www.cchri.org), the Greater Detroit Area Health Council (www.gdahc.org), the Maine Health Management Coalition (www.mehmc.org), Massachusetts Health care Quality Partners (www.mhqp.org), Minnesota Community Measurement (www.mncm.org), the Oregon Health Care Quality Corporation (www.q-corp.org), the Puget Sound Health Alliance (www.pugetsoundhealthalliance.org), Quality Quest for Health of Illinois (www.qualityquest.org), and the Wisconsin Collaborative for Health care Quality (www.wchq.org).
195. See, for example, the Minnesota HealthScores℠ Cost Reports, available at http://www.mnhealthscores.org/?p=cost_landing.
196. Similar incentives will be implemented through state Medicaid programs.
197. Rosenthal MB, Frank RG, Li Z, Epstein AM, Early experience with pay-for-performance: From concept to practice," JAMA 2005; 294(14):1788-1793.
198. Campbell SM, Reeves D, Kontopantelis E, Sibbald B, Roland M. Effects of pay for performance on the quality of primary care in England. N Engl J Med 2009; 361:368-78.
199. For more information, see the information on the Alabama Medicaid Program website, http://www.medicaid.state.al.us/programs/patient1st/patient_1st_shared_savings.aspx.
200. Information on the Medicare Physician Group Practice Demonstration is available on the Centers for Medicare and Medicaid Services website, http://www.cms.hhs.gov/DemoProjectsEvalRpts/.

201. Center for Health care Quality and Payment Reform. Is Shared Savings the Way to Reform Payment? Available at http://www.chqpr.org/downloads/SharedSavings.pdf.
202. Kaye N, Takach M. Building Medical Homes in State Medicaid and CHIP Programs. National Academy for State Health Policy. June 2009.
203. Peikes D, Chen A, Schore J, Brown R. Effects of care coordination on hospitalization, quality of care, and health care expenditures among Medicare beneficiaries: 15 randomized trials. JAMA 2009; 301:603-18.
204. Goroll AH, Berenson RA, Schoenbaum SC, Gardner LB. Fundamental reform of payment for adult primary care: comprehensive payment for comprehensive care. J Gen Intern Med. 2007 Mar;22(3):410-5.
205. Reid RJ, Fishman PA, Yu O, Ross TR, Tufano JT, Soman MP, Larson EB. Patient-centered medical home demonstration: a prospective, quasi-experimental, before and after evaluation. Am J Manag Care. 2009 Sep 1;15(9):e71-87.
206. Miller HD. From volume to value: Better ways to pay for health care. *op cit*.
207. Glaseroff A, Skootsky S, Shoemaker, W. HMO vs. PPO clinical performance. CAPG Health, Spring 2009. Available at http://www.capg.org/docs/final_capg_spring_09.pdf.
208. Lyles A, Weiner JP, Shore AD, Christianson J, Solberg LI, Drury P. Cost and quality trends in direct contracting arrangements. Health Aff (Millwood). 2002 Jan-Feb;21(1):89-102. Robinow A. Patient Choice Health Care Payment Model Case Study [PowerPoint Presentation on the Internet]: Available from: http://www.nrhi.org/2008summit.html.
209. Blue Cross Blue Shield of Massachusetts, The alternative QUALITY contract. Boston (MA): BCBSM; 2008 Nov. Available from http://quality.bluecrossma.com/press/aqc_white_paper_11_19_08.pdf.
210. More information on PROMETHEUS is available at http://www.prometheuspayment.org/.
211. *Ibid*.
212. See the discussion regarding Global Payment Programs in Section III-E for more detail.
213. Network for Regional Health care Improvement. Pay for Innovation or Pay for Standardization? How to Best Support the Patient-Centered Medical Home. February 2009. Available at http://www.nrhi.org/downloads/NRHI-HowtoSupporttheMedicalHome.pdf.
214. Nutting PA, Miller WL, Crabtree BF, Jaen CR, Stewart EE, Stange KC. Initial lessons from the first national demonstration project on practice transformation to a patient-centered medical home. Ann Fam Med. 2009;7(3):254-260.
215. Miller, HD. How to Create Accountable Care Organizations. Center for Health care Quality and Payment Reform. September 2009. p. 28. Available at: http://www.chqpr.org.
216. Crosson FJ. The delivery system matters. Health Aff (Millwood). 2005 Nov-Dec;24(6):1543-8, and Nutting, Miller, et al., op cit.
217. Blue Cross Blue Shield of Michigan has been pursuing this approach through its Physician Group Incentive Program. See http://www.bcbsm.com/provider/value_partnerships/pgip/index.shtml.
218. Examples of IPAs composed of primarily or exclusively small primary care practices that are managing risk-based contracts include Physician Health Partners (http://www.phpmcs.com) and Primary Physician Partners, LLC in Denver, Colorado; Mesa County IPA Doctors in Grand Junction, Colorado (http://www.mcpipa.org/); JSA Medical Group in St. Petersburg, Florida (http://www.jsahealth care.com); and Northwest Physicians Network in Tacoma, Washington (http://www.npnwa.net/).
219. Miller, HD. How to Create Accountable Care Organizations. *op cit*.
220. P.L. 111–152.
221. It should be noted that states with low *rates* of payment under Medicaid will likely be less able to influence providers merely through changing the payment *method*.
222. Miller, HD. From Volume to Value: Better Ways to Pay for Health Care. *op cit*.
223. For example, if one health plan implements a global payment system or a shared savings program with physician practices, and the physician practices respond by creating care management systems that reduce hospitalizations for *all* of their patients, then the other health plans would reap more savings from the reduced hospitalizations than would the first health plan, thereby making the other plans more profitable.
224. For example, the Institute for Clinical Systems Improvement developed and implemented a multi-payer payment reform to improve the care of patients with depression. For more information on the DIAMOND project, see http://www.icsi.org/health_care_redesign_/diamond_35953/.

225. Burke T, Cartwright-Smith L, Pereira E, Rosenbaum S. Health System Reform and Antitrust Law: The Antitrust Aspects of Health Information Sharing by Public and Private Health Insurers. Robert Wood Johnson Foundation Aligning Force for Quality Program, July 2009.
226. Washington's law states: "The legislature declares that collaboration among public payors, private health carriers, third-party purchasers, and providers to identify appropriate reimbursement methods to align incentives in support of primary care medical homes is in the best interest of the public. The legislature therefore intends to exempt from state antitrust laws, and to provide immunity from federal antitrust laws through the state action doctrine, for activities undertaken pursuant to pilots designed and implemented under section 2 of this act that might otherwise be constrained by such laws."
227. Office of Massachusetts Attorney General Martha Coakley. Investigation of Health Care Cost Trends and Drivers: Preliminary Report. January 29, 2010.
228. Office of the Rhode Island Health Insurance Commissioner. Variations in Hospital Payment Rates by Commercial Insurers in Rhode Island. January 2010.
229. Berenson RA, Ginsburg PB, Kemper N. Unchecked provider clout in California foreshadows challenges to health reform. Health Aff (Millwood). 2010;29(4): 1-7.
230. Murray, R. Setting hospital rates to control costs and boost quality: the Maryland experience. Health Aff (Millwood). 2009;28(5): 1395-1405.
231. Miller, HD. How to Create Accountable Care Organizations. *op cit*.
232. Congressional Budget Office, "Letter to the Honorable Max Baucus Providing a Preliminary Analysis of the Chairman's Mark for the America's Healthy Future Act, as Amended," October 7, 2009.
233. Kaiser Commission on Medicaid and the Uninsured/Urban Institute estimates based on MSIS 2004 data.
234. The Henry J. Kaiser Family Foundation. State Health Facts. Available at http://www.statehealthfacts.org.
235. Smith V, Gifford K, Ellis E, Rudowitz R, Watts MO and Marks C, "The Crunch Continues: Medicaid Spending, Coverage and Policy in the Midst of a Recession," Kaiser Family Foundation, September 2009.
236. C Truffer, J Klemm, E Hoffman and C Wolfe, "2008 Actuarial Report on the Financial Outlook for Medicaid," Office of the Actuary, Centers for Medicare and Medicaid Services, U.S. Department of Health and Human Services, October 2008.
237. Urban Institute and Kaiser Commission on Medicaid and the Uninsured estimates based on data from Centers for Medicare and Medicaid Services-64 reports, March 2009.
238. Chuck Milligan Medicaid paper?
239. 2008 Medicaid Managed Care Enrollment Report. CMS.
240. Smith V, Gifford K, Ellis E, Rudowitz R, Watts MO and Marks C, "The Crunch Continues: Medicaid Spending, Coverage and Policy in the Midst of a Recession," Kaiser Family Foundation, September 2009.
241. Ibid.
242. Ibid.
243. Neva Kaye and Mary Takach, "Building Medical Homes in State Medicaid and CHIP Programs," National Academy for State Health Policy, June 2009.
244. Ibid.
245. Ibid.
246. Holahan J, D Miller, D Rousseau, "Dual Eligibles: Medicaid Enrollment and Spending for Medicare Beneficiaries in 2005," Kaiser Family Foundation, February 2009.
247. Anything?
248. "The Physician Workforce: Projections and Research into Current Issues Affecting Supply and Demand," Health Resources and Services Administration, December 2008.
249. Medicaid/SCHIP Cuts and Hospital Emergency Department Use, Peter Cunningham, Health Affairs, January/February 2006.
250. Pollack C, C Gidengil, and A Mehrotra, "The Growth of Retail Clinics and the Medical Home: Two Trends in Concert or in Conflict," Health Affairs, May 2010, 29(5).
251. Armour BS, Finkelstein EA, Fiebelkorn IC. "State-level Medicaid expenditures attributable to smoking." Prev Chronic Dis 2009;6(3).

252. "Patrick Administration Announces Positive Results from MassHealth Smoking Cessation Benefit," Governor Patrick News Release, November 2009.
253. Hudman J and M O'Malley, "Health Insurance Premiums and Cost-Sharing: Findings from the Research on Low-Income Populations," Kaiser Family Foundation, March 2003.
254. "Never Events" Become Ever Present as More States Refuse to Pay for Mistakes," National Conference of State Legislatures, July 2008.
255. Smith V, Gifford K, Ellis E, Rudowitz R, Watts MO and Marks C, "The Crunch Continues: Medicaid Spending, Coverage and Policy in the Midst of a Recession," Kaiser Family Foundation, September 2009.
256. K Kuhmerker, and T Hartman, "Pay-for-Performance in State Medicaid Programs: A Survey of State Medicaid Directors and Programs," The Commonwealth Fund, April 2007.
257. "Pharmaceutical Bulk Purchasing: Multi-state and Inter-agency Plans," National Conference for State Legislaters, 2009.

NGA Center Divisions

The NGA Center is organized into five divisions with some collaborative projects across all divisions.

Economic, Human Services & Workforce focuses on best practices, policy options, and service delivery improvements across a range of current and emerging issues, including economic development and innovation, workforce development, employment services, research and development policies, and human services for children, youth, low-income families, and people with disabilities.

Education provides information on best practices in early childhood, elementary, secondary, and postsecondary education. Specific issues include common core state standards and assessments; teacher effectiveness; high school redesign; science, technology, engineering and math (STEM) education; postsecondary education attainment, productivity, and accountability; extra learning opportunities; and school readiness.

Environment, Energy & Transportation identifies best practices and provides technical assistance on issues including clean energy for the electricity and transportation sectors, energy and infrastructure financing, green economic development, transportation and land use planning, and clean up and stewardship of nuclear weapons sites.

Health covers a broad range of health financing, service delivery, and coverage issues, including implementation of federal health reforms, quality initiatives, cost-containment policies, health information technology, state public health initiatives, and Medicaid.

Homeland Security & Public Safety supports governors' homeland security and criminal justice policy advisors. This work includes supporting the Governors Homeland Security Advisors Council (GHSAC) and providing technical assistance to a network of governors' criminal justice policy advisors. Issues include emergency preparedness, interoperability, cyber-crime and cyber-security, intelligence coordination, emergency management, sentencing and corrections, forensics, and justice information technology.

Funding for this report was provided by:

The Commonwealth Fund
Centers for Disease Control and Prevention

The Rx for Health Reform Initiative received funding from a broad range of stakeholders. These contributions support a variety of activities and publications. The NGA Center and Governor Douglas greatly appreciate our partners in this effort:

California HealthCare Foundation
The Commonwealth Fund
State Coverage Initiatives, a Robert Wood Johnson Foundation Program
Centers for Disease Control and Prevention, U.S. Department of Health and Human Services
Health Resources and Services Administration, U.S. Department of Health and Human Services
AstraZeneca Pharmaceuticals
Blue Cross Blue Shield Association
Cerner Corporation
Endo Pharmaceuticals
GlaxoSmithKline
Hewlett-Packard Company
Intel Corporation
Kaiser Permanente
MAXIMUS
Medco
Merck & Co., Inc.

National Governors Association
444 North Capitol Street, Suite 267
Washington, DC 20001
202-624-5300
www.nga.org