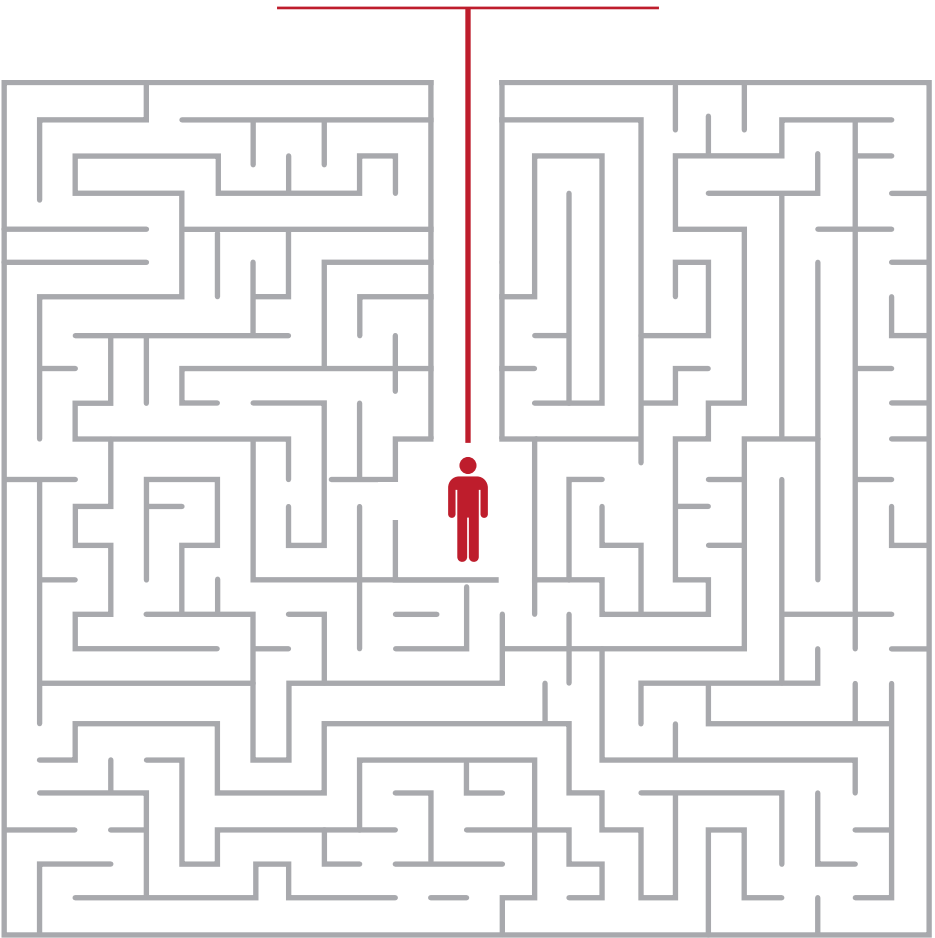


The Health Care Delivery System

A Blueprint for Reform



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Introduction

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Concern about the state of the American health care system ranks consistently among the top three issues that the American public wants policymakers to address. Its prominence only increases as economic insecurity continues to grow.¹ The gaps in coverage, the high cost of insurance, and the quality of care that consumers receive are the most frequently cited problems.

More than 45 million Americans do not have health insurance, for reasons related to the cost of coverage, availability of employer-based coverage, individual priorities, and access barriers in the individual market, such as medical underwriting.² Lack of health insurance leads to health care that is often too little and too late, with serious health consequences as a result. And many people have insurance that is manifestly inadequate because it either lacks coverage for key services such as prescription drugs or is accompanied by steep copayments and deductibles. The number of underinsured, or those with insurance that fails to protect them from high health expenses, has risen by 60 percent since 2003.³

The cost of health care, which contributes to unaffordable and inadequate coverage, adversely affects not only individuals, but the economy. Consumers face onerous out-of-pocket expenses for care, adding yet another burden to illness. At the same time, health care costs have steadily claimed a larger share of the economy, now comprising 16 percent of the gross domes-

tic product, and still rising at a rate at least twice that of general inflation.⁴ Some of the most crucial consequences are aggravated federal deficits, threats to the Medicare Trust Fund, medical debt-induced bankruptcy, and perceived barriers to global competitiveness of American companies.

Compounding the access and cost problems are acute concerns about the quality of health care. One comprehensive study following almost 7,000 patients over a two-year period found that they received only 54 percent of the care scientifically recommended for their conditions.⁵ The Institute of Medicine estimates that roughly 100,000 deaths per year result from errors and injuries to patients in hospital care.⁶ Disparities in the effectiveness and quality of care delivered across racial and ethnic groups continue to grow. The United States also lags behind other nations and most other industries in the use of information technologies, organizational design, and other systems that can reduce errors and improve quality.⁷

Perhaps the most disturbing statistics relate to our population health. Despite spending the most in the world on health care—a projected \$7,868 per capita in 2008⁸—we consistently rank behind other nations in infant mortality and life expectancy. Stated simply, our population health and health care systems are failing.

These problems are forcing solutions, particularly with regard to access. States have led the charge, with a number proposing, and some enacting, plans to provide health insurance to some or all residents. Legislation from both parties has been introduced in Congress to do the same. And the major presidential candidates have proposed more far-reaching reform plans than have been seen on the campaign trail in over a decade.

To date, it has proven easier to enact policies regarding health coverage and financing rather than how much is paid and for what value of care. This is logical, in part because tackling health care coverage and financing first is necessary for most large-scale improvements to the system. The fragmentation that results from having millions of uninsured and underinsured Americans impedes cost containment and quality care, as well as access to care. This situation is exacerbated because multiple public and private payers set their own rules, standards, and benefits—and often find it easier to shift costs to other payers rather than contain them. For these reasons and others, getting everyone into the system and financing their coverage are considered prerequisites for making system changes such as rationalizing payment systems and improving the delivery of care.

The emphasis on addressing coverage and financing first also reflects the political practicality of these issues. The options and their implications are fairly well defined. Expanding public and private coverage, funded through “shared responsibility” or assessments on multiple payers, has gained bipartisan support. The leadership to embrace and implement these policies has emerged among various public and private policymakers.

Yet, no matter how necessary it is to improve access, resolving this problem alone will not produce a first-rate system of care in the United States. The case in point is Massachusetts: Its new coverage policy has made rapid progress toward covering all state residents. But it must now address issues of unforeseen costs and quality concerns. This lesson is not lost on policymakers.⁹ Most now seem to recognize that they cannot innovate in one area and ignore the rest. Unless we link affordability and coverage to large improvements in the quality, structure, and payment patterns of health care in America, our medical bills will remain far too high and the value of our health care far too low. And unless we simultaneously tackle the threats to health outside of the health system, our population health will remain below its potential. Nevertheless, the ideas on how to translate these realizations into a concrete set of policies remain sketchy.

This book aims to fill that gap. It offers recommendations and pathways to systematically promote quality, efficiency, patient-centeredness, and other salient characteristics of a high-performing health system. The blueprint it lays out includes a vision of how different parts of the system should be structured and how they should function. Even more specifically, it proposes policies that the next administration and Congress could enact over the next five years to improve our health system.

To ensure that the policies put forth in this book contribute to the debate without being redundant, the chapters do not address the question of who gets insurance and how that insurance is organized. The chapters assume that the proposed policies would be implemented in a system where everyone has access to affordable, quality health coverage. This assumption may seem bold: After all, the United States remains one of the only industrialized countries without a national health insurance system. Yet it is a common goal among the authors, and the literature is abundant with information on the benefits and risks of various proposals. This book also presumes that with or without national reform, the United States will have a quasi-public, quasi-private health care system. This is

a safe assumption; it is unlikely that either a pure market or single-payer plan will emerge in the near future.

We offer here a summary of each chapter and the policies they propose, as well as an overview of the goals that this blueprint aims to achieve, including the overarching concepts and implications for different types of people that enter the health care system.

GOALS FOR HEALTH SYSTEM REFORM

The design of a health reform plan should begin with a clear idea of what it hopes to accomplish. A reformed system should achieve better performance on the six dimensions outlined by the Institute of Medicine in *Crossing the Quality Chasm: A New Health System for the 21st Century*:

- **Safety:** Avoiding injury and harm from care that is meant to aid patients.
- **Effectiveness:** Assuring that “evidence-based” care is actually delivered by avoiding overuse of medically unproven care and underuse of medically sound care.
- **Patient-centeredness:** Involving patients thoroughly in their care decision-making process, thereby respecting their culture, social circumstances, and needs.
- **Timeliness:** Avoiding unwanted delays in treatment.
- **Efficiency:** Seeking to reduce waste—low-value-added processes and products—in all its forms, including supplies, equipment, capital, and space.
- **Equity:** Closing racial, ethnic, gender, and socioeconomic gaps in care and outcomes.

A health care system that makes advances along these six dimensions would be far more able to meet patient needs. Care would be safer, more reliable, more integrated, and timely. Patients could rely on receiving the full range of preventive, acute, and chronic services that are proven effective. They could also know that they would not be subjected to the risks and costs of excessive, ineffective, and unscientific care that does not help them. Health care providers would benefit through increased satisfaction at being able to deliver care that produces greater health and longevity for their patients, and reduces pain and suffering. Payers, in turn, would get higher value: more quality and better outcomes for their dollar.

These aspirations, taken together, are best understood by considering their application to individuals in different circumstances: those who are well, at risk, acutely ill, chronically ill, or at the end of life. The “well” are relatively healthy, seeking care only when they feel it is needed, and are less likely to recognize or act on their need for health promotion and preventive services. The “at risk” experience unmet care needs, dissatisfaction with the system, or expectations that go unmet. These are individuals who attempt to access preventive and health-promoting services but who may not receive these services efficiently. The “acutely ill” have time-limited or curable health problems, and typically receive outpatient care for an accident or infection. The “chronically ill” have persistent medical problems, such as diabetes or hypertension, that can be managed but last for months and in many cases cannot be definitively cured. The last population, those “at the end of life,” comprise individuals whose proper care is palliative rather than curative.

Integrating the six dimensions of an improved health care system across the population will ensure that patients receive the best quality of care possible (see table on page 6). For example, to ensure that the “chronically ill” receive safe care, an improved health care system must make all pertinent information easily available to both patients and their clinicians. For the “acutely ill” to receive effective care, an improved health care system must ensure that a patient promptly receives all proven treatments likely to improve their health and is protected from excessive and ineffective care. And to ensure that the “well” receive timely care, they must be able to contact—through telephone or the Internet—their primary care clinician or other trustworthy sources of knowledge to ask questions, make requests, and receive replies. A safe, effective, patient-centered, timely, efficient, and equitable system would improve the health of all populations.

One of the greatest challenges for an improved health care system is to achieve racial and economic equity. Research demonstrates that socioeconomic status and race or ethnicity often determine the type of care one will receive. Care itself is often of poorer quality for low-income Americans and people of color than that received by populations who are white, have more income, or have more education. Low-income Americans, for example, are more apt to receive less timely and effective care due to an inability to pay, and African Americans, though less likely to have cardiovascular disease, are more likely to die from it.

Matching Populations with Principles for the Health System

	Well	At risk	Acutely ill	Chronically ill	End of life
Safe	Patients are alerted immediately when one of their medications is recalled due to safety issues.	Patients have access to information on interactions between their prescribed medications and over-the-counter drugs.	Newly prescribed medications do not have adverse interactions with other drugs in patients' regimens.	All key patient information is available to patients and their clinicians.	Patients are not subjected to more intensive care or aggressive management than they desire.
Effective	Patients receive reminders when they need key screening tests.	Patients and clinicians have a shared understanding of preventive health goals.	Patients receive all treatments likely to improve their outcome.	Patients receive all treatments likely to reduce complications of their conditions.	Patients' pain is well controlled.
Patient-centered	Patients are offered a variety of options for working with providers.	Patients' concerns are heard and addressed.	Patients' urgency is heard and addressed.	Patients are actively engaged in the management of their conditions.	Patients are in settings of their preference.
Timely	Patients can access their medical practice to ask questions and make requests by phone or email.	Providers address patients' questions within the time frame the patients want.	Patients with acute complaints can be seen for evaluation promptly.	Patients' frequent, routine follow-up care is provided without significant waits.	Patients' care site can be changed promptly according to needs and preferences.
Efficient	Prevention is provided in multiple settings beyond the medical system through lower-priced providers.	Patients receive education and follow-up, and avoid tests and medications unlikely to benefit them.	Care is delivered in the most cost-effective setting.	Patients are prescribed the most cost-effective medications.	Patients' preferences to avoid hospitalization or intensive care at end of life are known and respected by providers.
Equitable	Culturally sensitive outreach programs are developed and implemented.	A diverse provider organization provides a welcoming setting for care.	All patients are equally likely to receive treatments expected to be beneficial.	All patients are equally likely to receive treatments expected to be beneficial.	Patient preferences regarding end-of-life care are respected.

While not always explicit, the recommendations detailed throughout the book address the racial and economic inequality in our current system. For example, investing in federal scholarships and loan repayment programs for newly trained providers will not only increase the number of providers in underserved areas, but it will also likely increase the diversity of the health care workforce—a proven strategy to reduce racial health care disparities. And because chronic disease is most prevalent in low-income populations and communities of color, providing federal funding for evidence-based programs for chronic disease self-management will also address these disparities. These policies and others will ensure that we do not continue to leave many of our most vulnerable behind.

ENACTING HEALTH SYSTEM REFORM

One common theme that runs through all the chapters in this book is that strong, national leadership is needed to enhance our health system's quality, efficiency, and effectiveness. The next president must be dedicated to reform. He should use his power and influence to create a sense of urgency and forge consensus on how to move forward. The next administration must be focused on developing pragmatic solutions and using executive authority to achieve them.

Policymakers should rethink who makes the key decisions and how they are made. There is currently no single federal policy when it comes to health care. Each public program, such as Medicare and the Veterans Health Administration, has its own eligibility rules, benefits, cost sharing, provider payment rates, quality systems, and consumer protections. Those programs' policies tend to be set by law, which means that Congress is essentially the management team. All the while, there is a significant state role in Medicaid, the State Children's Health Insurance Programs, insurance regulation, and provider licensure. This complexity has limited the ability of public programs to adopt best practices for quality and access and align their purchasing with value. It also adds to the high administrative costs of the system.

The next president and Congress should consider improving the management structure for health coverage programs funded by the federal government. This could be achieved by creating an independent agency to set the standards for the key operating parameters of the public programs. For example, the agency could be charged with defining what constitutes "high-value health care." This definition would then be used to guide programs' coverage, quality review, and/or payment policies. A new agency could have broad scope and authority, similar to the Health Care Connector in Massachusetts. The connector sets statewide standards on coverage delivered to state residents. Some policy analysts envision a new agency creating the "rules of the road," that is, a set of regulatory policies that steer private and public insurers toward a safe, effective, patient-centered, timely, efficient, and equitable system. Regardless of its precise scope and authority, a new governance structure is undoubtedly essential to transform the current chaos into a high-functioning system.

BRIDGING VISION WITH PRAGMATIC POLICIES

This idea of improved health policy leadership and coherence is only as good as the delivery system improvements it advances. As noted above, in the health policy debate there is a dearth of specific policy recommendations to improve the delivery system. This is not for a lack of original ideas. A number of experts and practitioners have identified important systems improvements that could yield measurable progress toward safe, effective, patient-centered, efficient, and equitable health care. And these improvements would go a long way in promoting a healthier America. Yet these ideas are often disconnected from the current system, with no policy pathway, backed by leadership and organization, to get from here to there.

This project created partnerships between some of the best thinkers on health delivery reform and some of the best policy practitioners in order to produce a usable blueprint for health system delivery reform. The scholars and experts whose thoughts are reflected in this book have extensive experience both in health policy development and implementation. They have led major health systems, research centers, and academic associations, and are widely considered to be among the leading authorities in the field. Their partners are policymakers who have cumulative decades of congressional and executive branch experience. Together, they have been involved in every major piece of health policy for the past 15 years, and several of them are the best of a new generation of health policy leaders. Their work has been organized into six chapters covering the health system's key structures and functions. These chapters, along with a subset of the policies they recommend, are described below.

Infrastructure

Chapter one of the book, by David Blumenthal and Karen Davenport, addresses infrastructure and explains that a health system performing to its potential requires the raw materials for high performance. Health care depends on a highly trained, balanced, and motivated workforce; current and accurate information; and technologies that enable the former to use the latter in the right place, the right way, and at the right time. People, knowledge, and the means for their application are, in the end, the foundation upon which an efficient, high-quality health system rests. This chap-

ter explores the state of that foundation in the United States, identifies critical deficiencies, and proposes policies to address them. Policy recommendations include:

- Investing in federal scholarship and loan repayment programs—including the National Health Service Corps and the nursing scholarship and loan repayment programs—to ease the burden of educational expenses and encourage newly trained providers to practice in underserved areas or in primary care.
- Creating a federal, long-term investment in comparative effectiveness research that will guide clinical practice and payment systems, increasing effective and efficient health care delivery.
- Providing federal funds to support the acquisition of federally certified electronic health records, their maintenance, and the technical assistance needed to implement and use them effectively. This could include providing matching grants to safety net providers.

Organization

Chapter two begins with the assertion that the most effective way to address our cost and quality challenges is to confront the root cause—the chaos in everyday health care. Thomas Lee and Robert Berenson argue that we should focus our efforts on accelerating the organization of health care providers into team-like configurations so that they can adopt systems that are likely to reduce errors of overuse, underuse, and misuse, and improve the overall coordination of care. Health care spending will inevitably rise as people live longer and new tests and therapies become available. But, these cost increases can be mitigated if clinicians have help identifying the best and most cost-effective management strategies, if they are given the incentives to adopt these strategies, and if they work in teams that help patients stay as healthy as possible. Policies to support and develop teams of providers with the tools to deliver efficient care include:

- Developing a federal commission with authority to offer one-stop shopping where would-be integrated organizations can obtain a facilitated review of proposals to develop new organizational models and payment approaches.

- Aligning payment approaches to hospitals with incentives for physicians, and encouraging the development of hospital-physician organizations functioning as self-contained and integrated delivery systems—beginning with payment reform in Medicare.
- Supporting regional organizations to support public reporting on individual and organizational quality, with Medicare actively participating by contributing provider-specific data, consistent with privacy protections, to permit more robust measurement of provider performance.

Quality

Chapter three, by Donald Berwick and Chiquita Brooks-LaSure, addresses the subject of quality improvement—a key goal for increasing health system organization. Berwick and Brooks-LaSure explain the apparent contradiction between the fact that the United States has the highest quality health care in the world, yet also has a quality “chasm.” Despite excellence in rescue care, the availability of technological care, and bioscientific productivity, the United States’ health care system significantly underperforms in numerous other crucial dimensions, both with regard to the technical potential of care and by international comparisons. This gap is reflected both in absolute terms—such as rates of injuries to patients in care, overuse of unnecessary and sometime harmful care, and racial and socioeconomic inequity—and in relative terms when outcomes and satisfaction are compared between the United States and other developed nations. Policies to improve quality at the individual and population level include:

- Holding hospital boards accountable for quality, equivalent to requirements for proper financial stewardship, and subject to penalties for failure to discharge it properly; and requiring them to implement mechanisms for its enforcement, possibly as a condition of participation in Medicare.
- Creating a Medicare-based initiative to reduce preventable hospital admissions and readmissions, and working with hospitals to help mitigate the financial burden of that transition.
- Expanding hospice care through both support to community-based programs—especially in small communities—and proper redesign of Medicare and Medicaid payment systems to limit expensive treatments that do little to improve the quality of life.

Payment reform

The fourth chapter, by Paul Ginsburg with input from Elizabeth Fowler, proposes ideas for using federal payment policy to drive systemic reform. Provider payment structures play an important role in how well the health care delivery system meets the goals of delivering care efficiently and at high levels of quality. Even though practitioners and health organization managers are professionals that seek to serve patients in an efficient and high-quality manner, they nevertheless respond to the incentives that come from how they are paid, sometimes perceiving that they have no choice. Policies to align federal payment policy with larger system goals include:

- Revamping the payment system in Medicare so that relative payments for different services better reflect relative costs of delivering those services, thus eliminating inadvertent incentives that negatively influence practice patterns.
- Promoting care coordination through ideas such as having beneficiaries designate a primary care physician practice to serve as their medical home, with the practice receiving a capitation payment designed to cover services not reimbursed under fee-for-service arrangements.
- Bundling payments for acute episodes of care involving a major procedure or inpatient stay; for example, combining payments for post-acute care (both facility care and home health services) into the payment for inpatient care.

Patient activation

The fifth chapter, by Judith Hibbard and Katherine Hayes, examines the demand side of the equation: how best to engage individuals in their own health and care. Chronic disease is a major health threat in the United States. One of the most important factors that determines its onset, as well as health and functioning post-onset, is how well individuals are able to self-manage their health on a day-to-day basis. Maintaining a healthy weight, engaging in regular exercise, and obtaining preventive care require persistent effort. People are more likely to make good decisions and take appropriate actions to promote their own health if they are engaged,

informed, have the necessary resources, and feel confident that they can take care of themselves. There is general agreement on the importance of empowering consumers to be more informed and judicious users of care. The authors go beyond “consumer-directed health care” to explore new models and policies, including:

- Building in accountability and support for patient self-management through provider reimbursement policies.
- Expanding the evidence base to identify what kinds of supports actually engage and activate consumers.
- Removing barriers that keep consumers from taking a greater role in managing their health, including removing financial barriers to making cost-effective choices.

Achieving population health

The last, but surely one of the most important chapters, by Steven Schroeder and Dora Hughes, sets forth an agenda on population health. Even if the access, quality, and cost problems in the medical system are resolved, the health status gains delivered to the American public through a traditional view of the delivery system could pale relative to those potentially gained through population-wide programs. The authors focus on behavioral threats such as tobacco use and obesity, as well as broader public health challenges, and they propose solutions that include:

- Setting national goals of improved health performance, both absolutely and in comparison with other developed nations, and fixing organizational responsibility and authority for achieving those goals.
- Enacting comprehensive tobacco control policies, including a federal smoke-free policy, increased tobacco taxes, warning labels, countermarketing strategies, and smoking cessation efforts.
- Reducing obesity through policies such as updating nutritional standards for school lunches, expanding social marketing, eliminating “food deserts,” and promoting physical activity through workplaces and schools (e.g., increased funding and quality of physical education).

POLICY PATHWAYS

These six chapters offer policies that address many of the structural and functional components of the health delivery system. Some of the policies could be implemented through executive actions, such as support for the Centers for Medicare and Medicaid Services' participation in multi-payer coalitions and cooperatives to specify, enforce, and support health care quality improvements. Specific national improvement goals backed by the administration would simplify the current chaotic situation in which hundreds of priorities are created by a wide array of stakeholders. This approach applies to population, as well as personal, health services. The next administration could also take steps to improve the accuracy of Medicare payment schedules, such as recognizing that productivity may increase over time and that services with rapid growth may need midstream payment adjustments. Medicare payments are often the benchmark for private payers, and Medicare leadership can affect the entire health system.

Congress could relatively easily enact other proposed policies with support from the president. The chapters identify a number of existing bills and policies that require small changes or simple passage. For example, reauthorization of the Workforce Investment Act—expected in the next Congress—could provide an opportunity for leveraging funding to specifically target the training, recruitment, and retention of health care workers in general, or a specific group—such as long-term care workers—in particular. Legislation on funding comparative effectiveness research, which is key to improving quality and efficiency, is both bipartisan and widely supported. And policies to advance health information technology, which undergirds health delivery improvement across the board, have progressed in this Congress and could cross the finish line in the next.

Still other recommendations are achievable, but are more novel or difficult. This is true in the area of organization; increasing the extent to which individual providers are associated with integrated health delivery organizations will require payment, legal, and cultural changes. Improving the effectiveness and safety of care will require organizations to use information and technology to set and meet quality goals, and be held accountable for them. Making patients active participants in their own health monitoring, self-management, and care will necessitate reimbursement models

that foster it, cost-sharing policies that enable it, and information systems that encourage it. And a shift of resources and policy focus from specialty care to primary care and from personalized medicine to population health will take leadership.

These policies are challenging, but they are eminently feasible and would set the delivery system on the pathway toward a high-performing health system. The ideas in this book are bold, but grounded in current realities of the system. They often cost money or take on powerful special interests, but do so only when the short-run pain has the potential to yield long-run benefits. They also cut across the spectrum of public programs and policies—offering options that are narrow and broad, and can be adopted by the executive branch, Congress, or both. We do think that these actions are best enacted by the federal government: a central theme across the chapters is the need for national leadership. A more cohesive governance structure for federal policy would aid in achieving the shared goals of a safe, effective, patient-centered, timely, efficient, and equitable health system for all.

EXPECTATIONS FOR THE BLUEPRINT

This book is designed to contribute to a larger debate on health system change. It aims to ensure that issues of health care quality and population health are not left out of a debate focused on health care costs and coverage, and that delivery system reform is central to any plan. The signs that such a debate could take place in the near future are strong. Both presidential candidates proposed to reform the health care system, demonstrating the political ripeness of the issue. When that opportunity presents itself, it will be essential to be ready with grounded policies that are more than patches, and can serve as pathways toward a high-performing health system.

Setting down this pathway is not just possible, but essential, to our health and to the economy. The policy blueprint set forth in this manuscript includes proven strategies that can be included in any presidential or congressional health reform plan. Because the solutions are steeped in evidence regarding their effectiveness, they are non-partisan in nature—any administration, regardless of political persuasion, could pull policies

and ideas from this blueprint. Policymakers will find here not just broad concepts, but detailed options for improving various aspects of the delivery system. The blueprint's main goal is to improve and create a delivery system that provides the best health care possible to the American people.

ENDNOTES

- 1 See NBC News/*Wall Street Journal* survey conducted September 19-21, 2008, available at http://s.wsj.net/public/resources/documents/WSJ_NBCPoll_092408.pdf; and Kaiser Family Foundation, "Kaiser Health Tracking Poll: Election 2008," Issue 9, August 2008, available at <http://www.kff.org/kaiserpolls/upload/7808.pdf>.
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Workers, Tools, and Knowledge

The Infrastructure for Delivery System Reform

David Blumenthal, M.D., M.P.P.

Karen Davenport, M.P.A.

A health system that performs to its potential, providing high-value care for every dollar invested, requires the raw materials for high performance. To build a state-of-the-art skyscraper, those ingredients would be steel, cement, glass, wiring, pipes, and machinery. In health care, the most vital elements are a highly trained, balanced, and motivated workforce; current and accurate information; and technologies that enable providers to most effectively use resources the right way and at the right time. People, knowledge, and the means for their application are the foundation upon which an efficient, high-quality health system rests.

This chapter explores the state of that foundation in the United States, identifies critical deficiencies, and proposes policies to address them. Five improvements are of particular importance to overcoming the vexing barriers to health infrastructure development:

1. Improving and growing the nursing and geriatric care workforces
2. Building an expanded primary care workforce
3. Establishing federal support for comparative effectiveness research
4. Promoting electronic health record acquisition, particularly for safety-net providers
5. Developing local health information exchange networks

KEY POLICY RECOMMENDATIONS

- Invest in federal scholarship and loan repayment programs—including the National Health Service Corps and the nursing scholarship and loan repayment programs—to ease the burden of educational expenses and encourage newly trained providers to practice in underserved areas or in primary care.
- Create a federal, long-term investment in comparative effectiveness research that will guide clinical practice and payment systems, increasing effective and efficient health care delivery.
- Provide federal funds to support the acquisition of federally certified electronic health records, their maintenance, and the technical assistance needed to implement and use them effectively, such as providing matching grants to safety net providers.

Federal action is required to drive sustained changes in our health system infrastructure. As a major payer for health services through Medicare, Medicaid, and other programs, the federal government will benefit from investments in workers, tools, and knowledge, which will reduce costs and increase overall quality. But the broader public benefits of an improved health care system provide additional impetus for a meaningful federal role in these activities.

THE FUTURE OF HEALTH CARE INFRASTRUCTURE

The prospect of expanded health care coverage is one of the dynamics forcing policymakers to re-examine our health care system's infrastructure. Universal coverage without a health system prepared to serve a larger insured population could rob health reform of its promise and its benefits. However, simply providing more of the same resources, organized as they are today, would also be a mistake. Health care is changing, and the health system's infrastructure must change with it.

The biological and technological revolutions that humans have unleashed are critical forces changing the nation's health system. The flow of new information from the United States' nearly \$60 billion annual investment in biomedical research,¹ together with lesser investments in other western countries, is overwhelming and well beyond the capacity of medical professionals to track or absorb. This explosion in biological information is coupled with the accelerating capability of information technol-

ogy that is most apparent in non-health care sectors. These developments create enormous opportunities and challenges for our health care system.

New information and technology are the life-blood of the health care profession: they empower, motivate, and fulfill providers. Biological breakthroughs are, for the most part, also good news for patients. But keeping up with health advances is like trying to sip water from a fire hose. High-performing health care systems must absorb torrents of new knowledge and equipment. To do so, the health care workforce of the future will need to be trained, both mentally and psychologically, to face this challenge, and they will need assistance from effective information systems.

The workforce of the future will also need to be properly sized to respond to the population's health care needs. It must contain the correct mix of personnel: physicians, nurses, other professionals and non-professionals, generalists, and specialists. The workforce must be prepared for continual changes in the organization of the U.S. health care system, for increasing demands for accountability regarding their performance, and for changes in the demography of the U.S. population, including its older age, increasing burdens of chronic conditions, and growing racial and ethnic diversity.

This workforce will need several types of support. They will need more help than currently exists to distill essential lessons for patient care from the vast stock of data on drugs, devices, procedures, and the health implications of human behavior such as diet, living habits, and exercise. But health care professionals and workers will also need new and different types of information, ranging from the comparative effectiveness of diagnostic and treatment approaches, to how to organize health care systems for maximum effect, to how to be high-performing providers of service.

In addition to managing existing information and generating new knowledge, health care workers in the future will need vastly improved systems for supporting decision making in real time—bringing improved information to bear in a usable form at the point of decision making. This task will require taking advantage of information technologies and their potential.

Our vision for the health care infrastructure of the future is a properly trained, appropriately constituted health care workforce that is supplied with accessible, accurate, and relevant health care information, and is supported by the most advanced information technology. But how close are we to having these elements in place, and what federal interventions are justified to bring us closer?

THE CURRENT STATE OF HEALTH CARE INFRASTRUCTURE

Workforce

The workforce available to our health care system is clearly inadequate. One of the most pressing issues is the large and increasing shortage of nursing personnel.² This shortage is driven by a severe shortage of nursing faculty, which limits new admissions and could result in a nursing shortage of more than 1 million nurses by 2020.³ There is also a huge and dramatic undersupply of health personnel trained and willing to care for America's rapidly aging population. Today, less than 1 percent of nurses are certified in geriatrics, while 7,128 physicians were certified in geriatric medicine as of 2007—a level that may grow by another 700 physicians by 2030. Yet the Alliance for Aging Research has estimated that the nation will need 36,000 geriatricians by 2030. This looming shortage is the topic of a recent Institute of Medicine study, and it demands immediate federal attention.⁴

A third problem is a long-standing and, if anything, growing imbalance between the supply of specialty and generalist physicians in the United States.⁵ While data suggest that higher primary care to specialty ratios are associated with better health and lower costs, specialists represent a majority—approximately 60 percent—of the physician workforce.⁶ This imbalance results, in part, from the higher compensation and sometimes less demanding working conditions specialists enjoy. To compound the problem, trainee physicians are choosing specialty practices over primary care; according to a recent survey, only 2 percent of medical students are planning careers in general internal medicine.⁷

There is also a more controversial debate raging about whether we have enough physicians overall. The number of practicing physicians will have doubled from 453,000 in 1980 to a projected 906,000 in 2010, but the number of physicians per capita will have increased by only 50 percent, and is expected to level off at 293 physicians per 100,000 Americans in 2010. This per capita ratio is about average for industrialized countries.⁸ Some scholars and stakeholders, including many state governments and professional organizations, have concluded that demand will exceed this supply.⁹ The final word on this debate is not in, but if deficits occur, they will likely be focused in certain places, particularly rapidly growing Sun

Belt states such as Florida, Texas, Arizona, and New Mexico. The federal government should continue to monitor this issue while state, local, and private actors respond, as they have in many localities.

Information

The information flowing from our nation's universities and industries has several important gaps. The most important of these is lack of data about the comparative clinical effectiveness and cost-effectiveness of existing diagnostic and therapeutic drugs, devices, and procedures. Without such comparative data, health professionals find it impossible to provide evidence-based care to many types of patients.

The U.S. biomedical research portfolio also systematically omits studies needed to understand how to improve health care systems and services. Studies of systemic issues lack the glamour of disease-oriented studies focused on cancer, heart disease, or HIV. The gaps concern research on how to improve systems of care—to make them safer, higher in quality, and lower in cost. The dissemination of comparative effectiveness, cost-effectiveness, and health system improvement information would benefit the public at large. This information is a type of public good, and federal involvement will be needed to address information deficiencies.

Information Technology

The United States lags behind most western countries in the adoption of health information technology such as electronic health records, which have great potential to improve quality and control the costs of health care services. In Western Europe, Australia, and New Zealand, information technology is nearly ubiquitous in the offices of primary care physicians. In the United States, no more than 17 percent of doctors have functional electronic health records in their ambulatory practices. Hospitals also lag, with fewer than 10 percent (according to the best but inadequate data) reporting the availability of electronic records.¹⁰

The federal government has a big stake in whether health care providers adopt and use health information technology since it is a major payer through its Medicare, Medicaid, and Department of Defense programs. Federal payment practices also have a major influence on whether

the capital is available for many providers—particularly small physician practices and small hospitals—to acquire and maintain expensive health information systems. Studies of other countries suggest that government has a role to play in promoting adoption of health information technology, and it will be important for the U.S. government to put health IT adoption on its federal agenda for promoting the infrastructure needs of a high-performing health system.

POLICY RECOMMENDATIONS

Workforce

Through health care payments, scholarship support, workforce training programs and other avenues, the federal government makes a significant investment in health care workforce development. For example, the federal government supports physician education and training through Medicare Graduate Medical Education payments to teaching hospitals, which totaled \$8.5 billion in 2007.¹¹ Various federal workforce programs seek to improve the supply and distribution of physicians and nurses, with particular emphasis on encouraging health professionals to practice in underserved communities. Additional funding approaches include general workforce development initiatives, notably through the Workforce Investment Act funding stream. Initial steps in addressing our health care system's workforce needs should capitalize on these existing mechanisms.

Invest in scholarship and loan repayment programs. Existing federal scholarship and loan repayment programs—including the National Health Service Corps, Indian Health Service programs, Health Resources and Services Administration's Primary Care Loan program, and HRSA's nursing scholarship and loan repayment programs—ease the burden of educational expenses and encourage newly trained providers to practice in underserved areas or in primary care.

Because physicians with loan obligations are immediately available to practice, loan repayment programs appear to be a particularly effective strategy for quickly improving provider supply in underserved areas. Scholarship programs, in contrast, make an up-front investment in

trainee providers who must finish their training before beginning practice in an underserved area. In general, the funding and numbers of health professionals participating in these programs have been level or declining over the last several years. Participation in the National Health Service Corps, for example, has fallen from 733 scholarship participants and 2,907 loan repayment participants in 2005 to 669 scholarship participants and 2,273 loan repayment participants in 2008. HRSA's nursing programs have recently enjoyed an increase in field strength, but their small size—337 scholarship awards and 902 loan repayment contracts—are dwarfed by the magnitude of the current and forecasted nursing shortage.¹²

Significant new investments in these programs—particularly the nursing scholarship and loan repayment initiatives—should be an important component of a comprehensive strategy to address workforce needs. This investment should begin with the fiscal year 2010 appropriation bills.

Boost capacity in nursing education. The nursing faculty shortage is driven by multiple factors, including the comparatively older age of nursing faculty and low compensation for nurse-educators in comparison to practicing nurses. Nurse practitioners who owned their own practice earned an average of \$94,313 in 2003, compared with nursing professors, who earned an average of only \$61,452.¹³ New federal funding to nursing schools to support increases in nursing faculty salaries may help address faculty retention and help schools fill faculty vacancies. Other strategies, such as streamlining prerequisites for graduate study in nursing and utilizing new models for teaching nursing students may also produce additional capacity within the nation's schools of nursing.

Reauthorize and improve the Workforce Investment Act. The Workforce Investment Act is the major federal program designed to meet the job placement and training needs of displaced and hard-to-employ workers. It has provided employment and training services for health care workers, particularly allied health workers, long-term care workers, and nurses, although exact estimates are difficult to obtain.

WIA-funded health care workforce initiatives have included training programs targeted to a specific job classification, such as certified nurse assistants, or across a range of care-giving occupations. Initiatives have

developed career ladder programs that enable caregivers to obtain skills needed for higher-level health care positions, educational capacity building for workforce occupations, and scholarships to support community college classes or nursing degrees.¹⁴

Reauthorization of the Workforce Investment Act—expected in the next Congress—could provide an opportunity for leveraging WIA funding to specifically target the training, recruitment, and retention of health care workers in general, or a specific group—such as long-term care workers—in particular. This approach would fundamentally alter the existing structure of the WIA, which has attracted criticism for being too locally driven and unresponsive to larger workforce demands.

A related alternative would be to focus on the burgeoning need for direct care workers by launching a new program specifically targeting long-term care workers—in essence, a Long-term Care Worker Investment Act. This type of initiative would specifically direct federal workforce training money to long-term care worker training, job placement, and retention activities, without needing to compete for funding within the framework of WIA.

Strengthen training and licensing standards for geriatric care. The Institute of Medicine’s recent report, “Retooling for an Aging America: Rebuilding the Healthcare Workforce,” highlights the need for greater “geriatric competence” among all members of the health care workforce. The IOM recommends a combination of enhanced training requirements and licensing standards that include competence in the care of older adults for professionals and direct care workers. More specifically, these recommendations include residency training in settings where older adults receive care, stronger state and federal minimum training standards for all direct care workers, and more stringent licensure and certification criteria for professionals and direct care workers, which would include a demonstration of competence in the care of older adults.

These recommendations, which we endorse, require a variety of stakeholders to take action, including teaching hospitals, state licensing boards, and federal policymakers. The federal government, for its part, should amend federal standards for certified nurse assistants and home health aide training to reflect enhanced standards, specifically a minimum of 120 hours of training.

Enact strategies to increase wages and benefits for direct care workers. Payment incentives are popular strategies for improving health outcomes or providing greater access to chronic care management. Pay-for-performance programs, which reward providers for improving quality or lowering cost, have become nearly ubiquitous in health care. Payment reforms could also be used to promote an increased supply of primary care professionals, enhanced numbers of geriatric providers, and greater retention of direct care workers.

Our recommendations include enhancing Medicare payments for primary care professionals to reflect the greater proportion of patient visits devoted to cognitive activities rather than procedures, and enhanced use of wage pass-throughs, wage floors, and other Medicaid payment strategies to increase wages and benefits for direct care workers. These approaches could further additional delivery system improvements such as the development and spread of medical homes. Medical homes reconfigure the delivery of primary care to involve interdisciplinary teams, advanced information technology, care coordination, patient outreach, and other techniques designed to improve quality of and access to services.

Information

As the medical research community makes further strides in developing new drugs, devices, and procedures, it will be important to better understand which new discoveries truly enhance health care, and which are no more effective than products and procedures that are already in common practice. It will be similarly important to understand how to improve health system performance.

Comparative effectiveness research offers one of the most promising avenues for providing patients, providers, and payers with meaningful information about which services, medications, devices, and care processes are most likely to result in improvement or cure. Other nations, including the United Kingdom, Canada, and Australia, rely on comparative effectiveness research to provide guidance on coverage or reimbursement policies for new technologies, pharmaceuticals, and health services, but public payers in the U.S. have lacked the political support and legal authority to do so.

Provide federal support for comparative effectiveness research. Health industry stakeholders, experts, and policymakers—including a major insur-

ance association, a professional society for health services researchers, a former administrator of the Medicare and Medicaid program, and Representatives Tom Allen and Jo Ann Emerson—have all offered proposals that would establish and fund a federal home for comparative effectiveness research. These proposals vary; some would create a new, independent entity to sponsor this research, others would house comparative effectiveness research within the Agency for Healthcare Research and Quality. All proposals recommend a dedicated funding stream, generally by assessing public and private health insurers, ranging from \$375 million per year to \$5 billion per year.

All of these proposals represent viable approaches to jump-starting the comparative effectiveness research enterprise. This enterprise should be authorized and funded in 2009, so that the learning it will yield can be absorbed into medical practice as soon as possible. This effort will take time to gain momentum and deliver actionable research findings, and so a ramp-up of federal funding would probably be the most effective strategy. The federal government could begin with a \$400 million per year appropriation that would grow to \$1 billion per year over a five-year time span. Once this funding threshold is reached, policymakers should examine the effort's efficacy at identifying, funding, and disseminating research on critical coverage and payment issues, and determine an appropriate level of longer-term investment.

Develop a federal strategy for the dissemination and application of comparative effectiveness research. Federal policy toward comparative effectiveness research should move beyond funding and address how the results can be incorporated into the day-to-day treatment decisions made by patients, providers, and payers, as well as providers' efforts to reduce errors and improve care. Federal support for comparative effectiveness research should therefore be accompanied by an aggressive communications and dissemination campaign targeted at both providers and patients. To be useful, this information must not merely be available to patients—it must be appropriately, but aggressively, communicated (see chapter 2 on health system organization for more details on ways to disseminate information).

There is general agreement that the results of comparative effectiveness research should be publicly available, but there is less consensus about the degree to which these results should influence payment or coverage policies.

For example, the Centers for Medicare and Medicaid Services does not regularly assess a service's cost-effectiveness in Medicare coverage or payment decisions, nor does it evaluate a service's clinical effectiveness in comparison to alternative services. The Medicare statute requires the federal government to cover "reasonable and necessary" items and services. On at least two occasions, CMS has attempted to include comparative information in coverage decisions, such as using cost-effectiveness as a factor to determine whether a treatment is reasonable and necessary, or considering whether a service provides added value to Medicare as a criteria for national coverage decisions. In both cases, CMS backed down when faced with significant industry opposition. Today, CMS does not have clear authority to take costs into account when making coverage and payment decisions.¹⁵

Congress should direct the Centers for Medicare and Medicaid Services to incorporate comparative effectiveness research into Medicare coverage and payment policies, giving CMS the ability to consider comparative data for particularly costly services, drugs, or devices.

With this change in statute, Medicare could modify its coverage and payment approaches in a variety of ways. First, Medicare could choose not to cover less effective clinical regimens. CMS could also use less stringent approaches, such as economic incentives to encourage the choice of the most effective treatments. CMS could limit payment for treatment of a given condition to the costs of the least expensive, comparably effective clinical intervention, or could create tiered payment structures based on effectiveness. CMS and other payers could also use this information to encourage patients to choose the most effective procedures through tiered cost sharing.

Health Information Technology

Federal authorities should focus on two health information technology challenges in the short term: encouraging health professionals and facilities to acquire and use electronic health records, and creating local and regional communication networks that facilitate health information exchange among wired providers. These two goals, though related, are distinct in important ways. The former is about getting independent clinical entities to make independent decisions about the value of health IT. The second involves promoting cooperation among independent groups to share clinical health information through electronic means.

Promote the use of electronic health records. Surveys of physicians and hospitals suggest there are two key barriers to adoption of electronic health records: costs associated with acquiring and maintaining electronic health records, and uncertainty about which technologies to acquire.

Solo physicians, small physician groups, and financially stressed health care facilities have particular problems with the high upfront costs of electronic health records and uncertain return on investment. Electronic health records may save the health system money, but it is less clear that they are economically beneficial to providers who must invest to acquire them.

The rapid advance in information systems has also frozen less-sophisticated providers in place. They fear acquiring outmoded systems that are obsolete as soon as they turn them on and investing in systems that lack essential capabilities such as the ability to communicate with their hospital or other health care providers.

The solutions to these problems are straightforward, and some are already in progress. The federal government should provide grants and loans to select health care providers so that they can acquire and support the use of electronic health records. This select group should include solo physicians, small physician groups with fewer than five doctors, federally qualified community health centers, safety net hospitals (those in the top 30 percent of hospitals in disproportionate share receipts), and critical access hospitals. Community health centers, safety net providers, critical access hospitals, small physician practices—especially in underserved and poor areas—and distressed essential providers should be eligible for both grants and loans. Other groups should receive loans only.

Federal funds should support the acquisition of federally certified electronic health records, their maintenance, and the technical assistance needed to implement and use them effectively. Specifically, the federal government should provide matching grants (at a 1:1 match ratio) to assist in acquisition and implementation of the technology in safety net and other financially vulnerable hospitals, and all community health centers, as well as physician practices of five or fewer.

To minimize providers' concerns over which technologies to acquire, federal authorities should continue to review and certify the software that is used for electronic health records in ambulatory and inpatient settings. The Department of Health and Human Services already does this through the Office of the National Coordinator of Health Information Technology

and its Certifying Commission on Health Information Technology. In support of this certifying activity, the federal government should continue to lead a standards development process to assure that the clinical and electronic languages used by various software vendors can communicate with one another. This is a prerequisite to health information exchange, and makes certain that providers will not find themselves isolated from the rest of their health information community if they purchase the wrong system.

Encourage health information exchange. Health information exchange is almost certainly good for patients, assuming privacy is protected, but there is no compelling business case at the current time for independent health care organizations to exchange clinical information within a community or with more distant facilities. When a doctor or hospital shares such data, they may make it easier for their patients to switch to a potential competitor. When they receive information from another facility, they may find that the lucrative test they wanted to perform is no longer necessary because it was already done elsewhere.

Changing financial incentives could improve this situation, but not eliminate it. If providers shared financial risk, and thus benefited from conserving resources, they might see the value of exchanging information to avoid duplicative testing, and thus contain costs. But doctors and hospitals would still worry about losing patients to competitors. Health information exchange is, in many respects, a quasi-public good—its benefits are crystal clear, but these accrue to parties—patients, payers, employers, society at large—who are not directly involved in the private transactions.

Public action will be required to encourage health information exchange. The federal government, as a party to health care transactions in every community in America, needs to be part of the solution. The federal government should provide matching funds to state and local governments to create local health information exchange networks, but should offer no more than one-third of the funds to ensure state and local ownership. The federal government should, at first, target funding to the 100 largest health care markets. Once health information exchange is up and running in those markets it should cover approximately 65 percent of the population. This scale should be sufficient to drive change in most remaining markets.

The success of health information exchange is dependent on electronic health records, and the phase-in of exchange networks will allow physicians

and hospitals the time needed to adopt new technologies. At the same time, planning for health information exchange is essential during the electronic health records adoption phase so that the systems acquired will be ready to exchange information as soon as possible. Health information exchange funds should therefore be provided for both planning and implementation.

The federal government should provide primarily planning grants in the first three years and gradually replace them with implementation grants over time. The federal government should support these grants with an equivalent commitment of technical assistance support through contracts to private technology assistance vendors who would help states and localities work through the technical and political challenges facing health information exchange networks. It is important to realize that there will be ongoing costs to maintain information exchange in local markets, but there will never be a business case to make such exchange self-sustaining. Therefore, ongoing public subsidy of health information exchange will be necessary.

Ensure the privacy of electronic health information. Recent efforts to enact legislation to support health information technology have foundered in part due to concerns about assuring the privacy of electronic health information. Dramatic examples of theft and careless release of private health and non-health information have sensitized the public to this problem, and unless policymakers address it forcefully, progress in wiring the U.S. health care system will be slow.

The Health Information Security and Privacy Act, S 1814, introduced in the last session of Congress, provides a useful template for addressing some of these concerns. Lawmakers are also considering new health IT-related legislation that includes a variety of privacy guarantees. It will also be essential for the federal government to extend the provisions of current privacy law, notably Health Insurance Portability and Accountability Act, to cover the many new entities, such as Microsoft and Google, that are now attempting to become aggregators and vendors of health information.

CONCLUSION

All Americans, regardless of their health care needs, will benefit from a skilled, flexible workforce that reflects our health care priorities and has

the tools and knowledge it needs to make the best treatment decisions and system improvements.

Federal action is needed to transform our health infrastructure for the 21st century. In particular, priority goals such as improving the nursing and geriatric care workforces, expanding the primary care workforce, funding comparative effectiveness research, enhancing the use of electronic health records, and creating local health information exchange networks, depend on an active federal role.

Without vigorous federal investment in and promotion of health information technology, for example, the high acquisition and operation costs for electronic health records and the financial disincentives for information exchange will continue to stymie health information technology development. Similarly, comparative effectiveness research is a public good; it makes little sense for private actors to develop and utilize this information on an independent, isolated basis. The federal government, as a major payer for health services, has an interest in expanding this knowledge base, and as a guardian of the public interest, it has a compelling rationale for ensuring that this information is developed in the first place.

These health infrastructure recommendations should provide a particular benefit to people with acute and chronic illnesses, and subpopulations such as those with long-term care needs. Improving provider training in geriatrics should improve the quality of care for older adults with chronic illness. Building the knowledge base of which treatments, drugs, and devices work best for expensive chronic conditions will help providers manage these health problems correctly and cost-effectively. And better coordinating care using information-sharing tools will improve patient outcomes, while lowering costs and improving quality. Patients who use health services the most, yet are most poorly served by our existing system, will have the most to gain from a more highly skilled, flexible, and appropriate workforce and better information and information-sharing tools.

The recommendations in this chapter are necessary, but not sufficient, to achieve a more effective, efficient health care system. A workforce can have the right tools at its disposal, but it also needs the proper incentives and motivation to use those tools. At the same time, patients have a role to play in managing their own health and health care, and improving their own health status.

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The Organization of Health Care Delivery

A Roadmap for Accelerated Improvement

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OVERVIEW

The problems facing the U.S. health care system are often portrayed as unique to this country. Indeed, our system has the most expensive price tag and the highest rate of cost-related barriers to health care of any comparable nation. Yet we may not be as different as we imagine. Costs in some other developed countries are rising at about the same rate, and concerns over gaps in quality and safety are widespread internationally.

The ubiquity of this trend indicates that policies for financing health care alone are unlikely to resolve cost challenges. Real progress will require a multipronged strategy that promotes greater organization and integration of health care—a goal that should be an explicit focus of the next administration's policies.

Organization of health care providers is itself a means to an end; it will establish and promote systems that improve efficiency, reliability, safety, and patient-centered care—goals detailed in the book's introduction. Greater organization of care has the potential to lead to important benefits such as better integrated and more efficient care, but it will also make difficult demands on health care providers.

KEY POLICY RECOMMENDATIONS

- Develop a federal commission with authority to offer a one-stop shop for would-be integrated organizations to obtain a facilitated review of proposals to develop new organizational models and payment approaches.
- Align payment approaches to hospitals with physician incentives, encouraging the development of hospital-physician organizations functioning as self-contained, integrated, delivery systems—beginning with Medicare.
- Support regionally based organizations to support data and public reporting on individual and organizational quality. Medicare should actively participate by contributing provider-specific data, consistent with privacy protections, to permit more robust measurement of provider performance.

Health care culture will have to move away from the current emphasis on physician autonomy over collaboration, which does not always promote the professionalism needed in an increasingly commercial health care environment. This more unified health system will require shifting away from the fee-for-service payment system that rewards volume of services, and therefore supports the current fragmentation among U.S. health care providers. An information systems infrastructure can facilitate collaboration among providers and with patients themselves, but the federal government will have to work to implement and promote use of these systems.

The relationship between providers and patients will also have to change. Providers will have to overcome public perceptions that organizations may prioritize financial considerations and compromise physicians' duty to act in their patients' best interests. Larger provider groups will also likely need to begin matching and even exceeding the personalized service offered by many small physician group practices in order to attract patients. And patients and providers will have to balance organized provider groups' potential to negotiate higher payments against their ability to provide improved care.

Daunting though it may be, the challenge of disorganized health care is worth confronting. The shared root cause behind rising costs and disappointing quality is the chaos resulting from medical progress in a fragmented and disorganized delivery system. Many providers still rely upon paper documentation and memory in treating patients, and they struggle to deal with a tidal wave of new information, tests, and treatments. Indi-

vidual physicians cannot know all they need to know, and do not have the time to do all that they should to stay on top of medical innovations.

Alternative forms of real-time communication have become standard in other sectors of the economy—phones, email, text messaging—yet they are underused in health care where the fee-for-service payment system stays rooted in face-to-face interactions between physicians and patients. Most clinicians do not even have the systems in place that could help them coordinate their efforts with their colleagues or patients themselves.

The most effective way to address our cost and quality challenges is to confront the root cause—the chaos in everyday health care. We should focus our efforts on accelerating the organization of health care providers so that they can adopt systems that are likely to reduce errors and improve the overall coordination of care. Health care spending will inevitably rise as people live longer and new tests and therapies become available. But clinicians can mitigate these cost increases if they have help identifying the best and most cost-effective management strategies and incentives to adopt these strategies, and if they work in teams that help patients stay as healthy as possible.

Organization of health care providers will not occur naturally or easily. Medicine relies on the high professional standards of individual physicians to ensure quality. Admirable though it may be, holding individual doctors accountable for excellence has led to a health care system in which most patient visits are to small (one to four physicians) practices.¹ These stand-alone small businesses treasure their autonomy, and are often unwilling and unable to adopt information systems that allow them to coordinate care with other providers.

Yet medicine today is so complex that patients with serious conditions virtually always need care from multiple clinicians and other health professionals, who should be working as a team, sharing information about their patients. Teams need structure, leadership, communication tools, and “playbooks.” In short, they need to be organized so that they can create the context for systems that improve care, including information systems, team-based care, and disease management programs.

Information systems, such as computerized physician order entry and electronic medical records, help physicians make better decisions. They can provide information, such as the safest and most cost-effective drug, and facilitate collaboration with other members of care teams by allowing each medical professional to see what has been done for the patient.

Information systems can also facilitate care by permitting the care of populations of patients and of individuals throughout the year, not just when they have acute problems. An example is the use of registries to keep track of patients with diabetes, which enable providers to contact patients who may not have come in for recent office visits with reminders that they need preventive care.

Disease management programs can help improve coordination of care for the sickest and most complex patients by providing highly personalized evaluations of their needs, often via telephone call centers. Just 5 percent of patients account for about 50 percent of healthcare spending; frequent contact with health care professionals outside of physician office visits can reduce their rates of emergency department visits and hospitalizations. Vendors external to provider groups usually provide disease management services, but their functions can often be performed more effectively when they are integrated and coordinated with patients' physicians.

Most U.S. healthcare providers operate in an environment that is too fragmented to support development of such programs. Indeed, most providers are not part of organizations capable of negotiating contracts with the health plans that would reward them for adopting such systems and achieving economies of scale.

Provider organizations can help—and should be expected—to protect a commitment to highly valued professional standards, such as avoidance of conflicts of interest and a commitment to serving the whole community, not just those with preferred health insurance cards. Thus, there is a potential “goodness” to “groupness” that extends beyond the direct effects of better and more efficient care for individual patients.

THE FUTURE OF HEALTH CARE DELIVERY

Organized care is not an abstract concept or an unattainable ideal. Several organizations already use information systems and teams of clinicians to provide care efficiently, reliably, and safely. Some of these organizations are fully “integrated” delivery systems that own the hospitals, employ the physicians, use a single information system, and also play the role of health insurance plan. Examples include the Veterans Health Administration, Kaiser Permanente, Intermountain Healthcare, and Geisinger Health System.

Some of these tightly organized, fully integrated systems have patients who are “locked in”—that is, they pay a substantial financial penalty if they seek care outside of the organizations’ physicians and facilities. When patients, physicians, and hospitals are all completely integrated into a single organization, it makes business sense to meet patients’ needs as efficiently as possible. These fully integrated systems are therefore providing much of the leadership in the United States for the development of systems such as disease management and care coordination programs that prevent hospitalizations and promote “non-visit care,” which allows patients to interact with clinicians without having to make an actual office visit.

Yet the painful reality is that the cost-savings potential of information systems, disease management, and other such systems is largely unproven in mainstream American medicine.² Some organizations have found that these systems can indeed help them provide accessible, efficient, reliable, and safer care, but the costs of the systems often offset savings from greater efficiency. And when systems are able to lower misuse and produce savings, these savings accrue to the payer, but not the provider organization, whose fee-for-service payments go down. This creates roadblocks for further evolution of cost-effective reorganization or health care delivery.

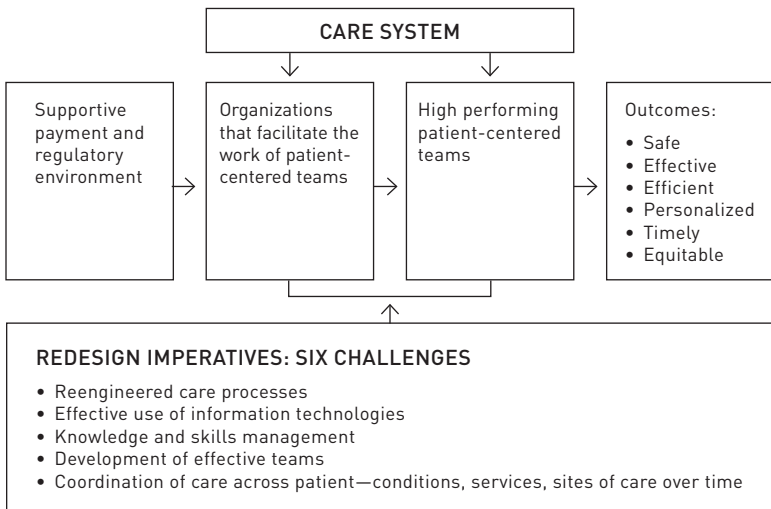
We will need to enhance organized care’s ability to achieve cost savings. Organization of care does more than just save money, but it must do more than pay for itself to ensure widespread implementation. The federal government should provide compelling incentives to encourage providers to become part of organizations, and then achieve the efficiencies that will enable them to reduce costs. To achieve true cost savings, provider organizations must be able to set ambitious goals that transcend the abilities of individual physicians and individual hospitals, such as reducing preventable admissions of patients with chronic diseases, reducing readmissions for recently hospitalized patients, and providing care in the most efficient settings.

We also need to enhance the attractiveness of organized care to patients themselves. Organized care competes with the convenience and personalized service that many small physician practices provide. Organized care must maintain the aspects of service that come with the traditional doctor-patient relationship, as well as implement systems that will provide patients with enhanced services, such as access to information and the ability to schedule appointments and tests online. Organizations should also

encompass small practices dispersed throughout the community, where practical, by encouraging the adoption of information technology, especially fully interoperable electronic medical records. In this way, the small practices that often provide first contact care can retain their responsiveness to patient needs, while also taking advantage of the organized group capabilities for referrals, quality improvement, and systems' support. "Adoption" of small practices by organized groups might also help address the particular organizational isolation faced by small rural providers.

The Institute of Medicine, in its report, "Crossing the Quality Chasm,"³ describes what health care delivery organizations need to redesign their systems (Figure 1). It asserts that effective provider organizations cannot exist without payment and regulatory environments that enable them to thrive. Supportive environments allow providers to organize teams that redesign and coordinate care, and use information systems and management tools to improve performance. These innovations enable providers to follow patients over time, meet their needs outside of hospital admissions and office visits, coordinate their care with other clinicians, and reduce waste. Creating the context for improved care will therefore require policies that spur change in the payment system, the culture of providers, and the market itself.

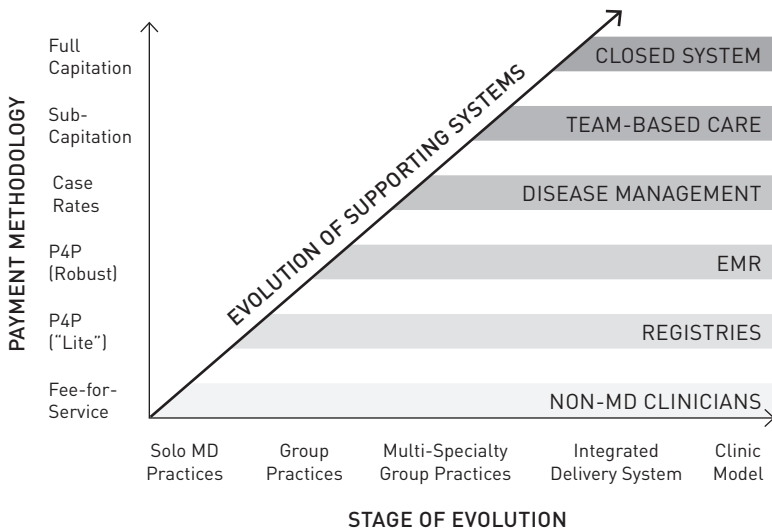
Figure 1.
The Institute of Medicine's requirements for making change possible³



Payment reform

Organization and improvement cannot proceed without change in how health care is financed. Payment systems interact with provider organizations, and there is a rough “fit” between the level of provider organization and the most appropriate and effective type of payment system (Figure 2).

Figure 2.
Evolving Reimbursement and Care Models



Provider organization evolves from solo physician practices to groups and multispecialty practices. These physician organizations can take on contracts with insurance plans that provide incentives for improving the reliability of care—bonuses for higher rates of eye examinations for diabetics, for example—what we label “Pay for Performance - Lite.” Providers can achieve these relatively modest goals with correspondingly modest systems, such as file cards maintained in shoe boxes. Unfortunately, research shows that Pay for Performance - Lite does not effectively improve care. Testing diabetes control, for example, does not necessarily lead to lower

glucose levels or longer lives for diabetics. Nor does this form of pay-for-performance foster other types of improvement, such as greater efficiency or improved safety by decreasing overuse and misuse of care.

“Pay for Performance - Robust” performance systems include direct incentives for improving efficiency, such as increasing the rate of generic agent prescriptions or decreasing the rate of high-cost radiology tests and medical-surgical admissions per 1,000 members. To effectively take on such goals, providers generally need more advanced software systems such as electronic medical records with decision support, as well as more advanced human systems, such as heart failure disease management teams. The more robust pay-for-performance model would also include incentives for improved patient outcomes. But the challenges of measuring and rewarding true outcomes are formidable, and, for now, such measures should only be adopted for important conditions where there are readily implementable outcome measures.

Farther down the road of provider organization are integrated delivery systems that include hospitals and physicians, many of whom may be affiliated, but not actually under employment agreements with the organization. Examples include Advocate Health System in Chicago and Partners HealthCare System in Boston. Beyond these integrated delivery systems are “Clinic Model” organizations, where all of the providers are employed by a single organization, such as the Veterans Health Administration and the Mayo Clinic.

More organized provider groups have the ability to be more effective in developing and pursuing organizational goals, which can be focused on quality, efficiency, or both. Not all relatively well-organized groups are currently focused on controlling overall health care costs. Fully integrated clinics that derive most of their income from patients who are referred to their specialists tend to focus on providing excellent service and saving time for referring physicians and the patients themselves, regardless of the cost. No matter what goal is being pursued, more organized groups have greater potential to be more effective than less-organized groups.

Organizations that include hospitals as well as physicians can negotiate “case rates” or “bundled payments” that provide a fixed payment for an episode of care (see chapter 4 on payment reform for more information). An example that received considerable publicity in 2007 is Geisinger Health System’s coronary artery bypass surgery program, which “guaranteed” that

40 key processes would occur for every elective bypass surgery patient. The program sought a case rate payment that would cover the inpatient procedure and 90 days of care for any complications that might occur afterward. This approach has attracted considerable attention for representing a “sweet spot” in which both quality and efficiency goals are aligned. The Geisinger providers have every incentive to be efficient so that they do not lose money under the case rate. Reducing complications by reliably providing evidence-based care is one of their key tactics for doing so.

Some might view the ideal end-state for health care as the upper right corner of Figure 2—a closed system in which patients receive all of their care from a tightly structured clinic-model organization that is being paid under full capitation—a fixed per member, per month payment. But this ideal model has been limited by the value that patients place upon the option to seek care from whomever they choose—even if it is outside their “network” of providers. Closed systems are especially difficult to develop in rural settings, where there are fewer providers separated by greater distances. And bringing all these providers into one organization can arouse antitrust concerns under current interpretations of the law.

Full capitation approaches have also been hampered by the lack of good risk adjustment, which alters payment amounts depending on the underlying health of the population served. Without payments that reflect enrollees’ characteristics, groups spend inordinate time figuring out how to avoid having to care for patients with potentially high-cost health care needs rather than rolling up their sleeves to better care for them. Newer capitation methods are now available to reduce the perverse effect that capitation payments can have on provider group behavior.

The relationship between payment system and provider organizations illustrated in Figure 2 suggests a flexible approach to payment that would allow providers to choose the type of payment model that they prefer. Yet it also incentivizes more advanced payment systems by rewarding the improved quality and efficiency that those more advanced payment systems would enable. Under this approach, individual physicians in solo practices might opt for fee-for-service payments, but more organized groups could choose pay-for-performance, case-rate models, or even capitation. A hybrid payment model used in some marketplaces uses budget-based capitation with the potential for a 3 to 10 percent bonus if the providers achieve specific quality goals. The capitation component pro-

vides a direct incentive for efficiency, while the bonus program provides direct incentives for quality.

These choices should not all have equal value—and more advanced payment systems should carry greater potential rewards that correspond with their greater financial risk. Capitation-based contracts, for example, should be structured so that *most* of the providers enjoy a budget surplus as long as they achieve specified quality goals.

The explicit message for providers who are not part of any organization and are set up to accept only fee-for-service payment should be that annual increases in payments may not keep pace with inflation in their costs. This has essentially been the situation in Medicare in recent years. Indeed, payments for some services provided by specialists might be frozen, or actually reduced in real terms, to correct for current distortions in public and private insurance fee schedules that inappropriately reimburse procedural services more generously than evaluation and management services.

Further improvements to fee-for-service payment could include monthly care management supplements to primary care physicians in a “patient-centered medical home” so they can better support patients with chronic conditions. But while fee-for-service reforms need to occur as an interim step to help promote the conditions conducive to integrated organization development, pure, traditional fee-for-service is not a viable long-term business model, except in unusual circumstances, perhaps in health professional shortage areas.

Provider evolution

Providers need to move from a culture based on pride in individual excellence to one that, while not conceding this core value, adds to it pride in organizational effectiveness. This shift will help make the organizational changes needed to deliver higher quality and more efficient care. Health policies can reinforce two key aspects of this evolution: working in teams that focus on improving care over time, and using systems that improve care.

Payment systems should reward providers who are willing to do more than address the needs of the acutely ill patient. Physicians must work in collaboration with non-physicians to improve care for certain populations, and meet the needs of individuals in between office visits and hospitalizations. Commercial and government insurer payment policies

can promote such collaboration through, for example, contractual incentives to reduce rates of hospital admission for patients with heart failure or re-admission for patients with conditions such as asthma and chronic obstructive lung disease. Considerable evidence exists that close regular contact with such patients can reduce hospitalizations and improve outcomes. “Care coordination” and “disease management” are most efficient and effective when implemented by non-physicians, such as specially trained nurses, with support from others with unique clinical skills such as pharmacists and nutritionists.

Federal payment and regulatory policies can also hasten adoption of information systems such as electronic medical records and computerized physician order entry. The cost-savings potential of such information systems is difficult to isolate or prove, but there is broad consensus that major improvement in health care will be impossible if information systems are not widespread. Incentives could include higher payments for providers that are using such systems or requiring use of electronic records by a certain date.

But policy changes should do more than push cultural changes. Providers need capital in order to fund information systems and the organizational infrastructure to implement more coordinated care. Providers have only three ways to accumulate such capital: surpluses from operations, borrowing, and philanthropy. Borrowing and philanthropy are somewhat dependent on having a stable, profitable operation, and neither can be relied upon to entirely fund the re-engineering of a health care delivery organization.

Provider organizations face financial difficulties because of the varying payment rates paid by various public and private payers. Medicaid programs pay substantially below costs, and Medicare in recent years has not provided cost-based rates of increase in their payments, especially for Part B services. Providers end up shifting costs to private insurers, which diverts focus from efforts to improve quality and efficiency to reimbursement and cost-shifting strategies.

The federal government will have to make policy decisions regarding how active it wants to be in promoting the organization of providers. The Federal Trade Commission and Department of Justice have been generally wary out of concern that provider organization might decrease competition and therefore lead to higher prices without higher value for consumers.⁴ A more neutral perspective may be evolving in which regulators rec-

ognize that provider organizations may be essential to improving health care. But there remain concerns about provider organizations obtaining “market power” that would prevent the efficiencies produced from being passed on to payers and consumers.

The current legal environment has created similar barriers to delivery system innovation, including the movement toward accountable care systems.⁵ Joint ventures between physicians, hospitals, and other providers are all affected by antitrust laws, as well as state laws related to the corporate practice of medicine, scope of practice, and certificate of need. They are also affected by federal laws relating to prohibitions on kickbacks, limitations on self-referral, and private inurement, which occurs when tax-exempt healthcare organizations enter into financial relationships that result in impermissible benefits to other parties.

Many legal barriers have arisen reasonably to protect patients and payers functioning in a fee-for-service payment environment. Yet it should be possible to relax prohibitions that frustrate integration if higher levels of organizational integration are accompanied by higher levels of consolidated payments, with some amount of provider risk taking. Some state laws, such as those regarding corporate practice of medicine, could be eliminated altogether, especially if organizations themselves adopt ethical codes that encompass traditional and important professional duties to clients.

At the federal level, several federal agencies have independent jurisdiction over the interpretation and implementation of relevant laws, yet make little attempt to coordinate their actions with others, frustrating providers’ integration efforts. Some health policy experts have called for a single governmental commission, which would include representatives from each agency and be responsible for offering a one-stop review to permit expansion of new forms of organization.⁶ Successful arrangements could become models for new safe harbors under the tax, antitrust, antikickback, and self-referral laws, and provide information needed to modify existing prohibitions and limitations to promote organizational development.

Health care providers have much to learn from non-health care industries on how to use their manpower more efficiently. New management skills, many of which are lumped under the label “process improvement,” but are also known by names such as Lean Management and Six Sigma, have not been prominent in training health care executives. Policies that promote dissemination of such expertise would help health care organizations control the rate of rising costs.

Market evolution

Policymakers should have realistic expectations for strategies that engage consumers in driving healthcare improvement through greater provider organization. Two key strategies are “transparency,” which encourages the public to report on the efficiency and quality of health care providers, and insurance product design, which pushes patients to seek care from higher quality and more efficient providers.

Public reporting is increasingly widespread; data on the quality of care provided by hospitals and groups of physicians is more widely available than ever before. Yet currently available quality measures have been developed for the fragmented and disorganized U.S. health care system, and therefore may not capture the value created by effective provider organizations. For example, quality measures do not reflect the flow of information from hospital to non-acute facility to ambulatory care settings. Nor do they capture patients’ ability to access care quickly or conveniently. Measures of efficiency for isolated components of the health care system are particularly limited in their usefulness.

Public reporting of organization performance, in contrast to reporting of disaggregated providers, should lead to greater interest in and public use of the information. When considering performance at the integrated organization level, measures of quality and cost on population-based measures—rather than just on particular episodes of illnesses—become possible. Integrated groups can be assessed not only of the quality and cost of an intervention, but also on whether the intervention was appropriately provided in the first place. Because organizational-level assessments permit the aggregation of individual instances into much larger numbers than is possible for individual clinicians, the data would be more valid and reliable for comparison purposes.

A background issue is whether the true targets of public reporting are consumers or providers. Available data suggest that few consumers currently use publicly reported data. On the other hand, providers give disproportionate attention to publicly reported data. This imbalance suggests that public reporting programs should either seek approaches that are more useful to consumers, or tailor their approaches to health care providers in ways that encourage them to pursue better outcomes, which may be facilitated through greater organization.

Another approach to activating consumers is to enroll them in health insurance products that give them a financial incentive to seek care from more efficient and higher-quality providers. However, individual physicians and hospitals rarely have complete control over the quality or efficiency of care, particularly for the most sick and complex patients. Market incentives for patients could therefore be better constructed by encouraging them to receive care from well-organized systems that can assume total responsibility for the costs and quality of their care. Private plans might, for example, develop differential cost-sharing products that provide incentives for patients to select care from organizations, rather than disaggregated providers.

POLICY RECOMMENDATIONS

Promote a flexible payment reform strategy in public programs

The federal government and commercial payers should support flexible payment strategies that reward providers for forming more organized groups and accepting payment systems such as robust pay for performance, case rates, and improved capitation. The federal government and commercial payers can improve fee-for-service payment approaches, not only to encourage a better mix of services, but also to promote conditions that are more conducive to the development of provider organizations. Certain conditions can give physicians increased reason to see participation in organized groups as the best approach to responding to the altered payment incentives, such as reducing the current distortions in public and private fee schedules that promote procedures and tests, rather than patient-centeredness and care management.

It is clear that a “one size fits all” payment strategy no longer serves the diverse types of provider organization. The current fee-for-service approach is the lowest common denominator and not appropriate to support the efforts of organized systems. The federal government will therefore need to make significant investments in moving providers toward more evolved payment systems.

Medicare is a good place to start because its fee schedule guides private payers and Medicaid programs, who would likely follow a major effort in

Medicare to alter the current basis for setting fee-for-service payments (see chapter 4 on payment reform for details).

The federal government should also set expenditure targets for fee-for-service payments that lack incentives for quality and efficiency, except in health professional shortage areas. Organized groups would be held accountable for group-specific performance on cost, quality, and patient experience and therefore should be exempted from the cruder expenditure controls that would apply to unaffiliated physicians. The federal government can also increase the potential financial reward to providers in proportion to their willingness to accept financial risk. For example, case rates or capitation-based contracts should offer providers the potential to achieve margins greater than inflation if these providers are creative and effective in improving quality and efficiency.

Payment approaches to hospitals should be modified to promote alignment with physician incentives, which would encourage the development of hospital-physician organizations functioning as self-contained integrated, delivery systems.⁷ For example, bundling physician and hospital services—and perhaps post-acute care services, such as skilled nursing for discrete episodes of care—would reward efforts to develop integrated systems and lay the ground for movement to more fully developed case rates and, ultimately, capitation.

Encourage adoption of information technologies

The federal government should promote national initiatives to make information technologies more widespread, especially electronic medical records in physician offices (see chapter 2 on infrastructure for more detail on information technology recommendations). These initiatives should include financial support for providers combined with mandates for adoption.

The government might arrange for long-term loans to help finance infrastructure enhancements, especially the adoption of electronic medical records, and in some cases, short-term loans to manage cash flow during the often-difficult practice transformation. Enhanced information technologies will make it much easier for organized systems to incorporate geographically dispersed, but community-based, small practices into their groups, thereby combining organized systems' ability to manage cost and quality while supporting the patient-centered attitudes that community-based small practices often display.

Promote public reporting

Government programs should engage providers in the development of public reporting methods so that they are “customers” instead of merely critics. Efforts to improve public reporting need to be cognizant of the inherent limits of relying on objective quality measures in such a highly technical area as health care. Models of performance measurement development and implementation in health plans, organized provider groups, and consumer collaboration, such as the Integrated Health Care Association in California, offer the promise that information can enhance consumer choice while also giving providers the structured feedback needed for self-assessment and improvement. Government—at both state and federal levels—can play an important role in encouraging regional organizations to come together to support these efforts. Medicare should actively participate in these regional collaboratives, contributing provider-specific data, consistent with privacy protections, to permit more robust measurement of provider performance.

Develop a federal commission to oversee system innovations

The federal government should create a new commission that centralizes control over health care regulations and has the authority to permit delivery system innovations, including new forms of organization, that are time-limited and contingent on periodic evaluation demonstrating cost savings and improved quality. This new commission would be charged with modifying existing laws that were developed to protect the public from incentives inherent in fee-for-service reimbursement. The modernized laws would recognize and encourage the variations in payment approaches that provide inherent incentives to restrain cost increases. The proposed single government commission would also have the authority to offer one-stop shopping for would-be integrated organizations to obtain a facilitated review of proposals to develop new organizational models and payment approaches.

Provide government oversight of accountable care organizations

Provider organizations have the potential to lead a transformation in how care is provided, at the same time improving quality and patient experience and restraining health care spending. The federal government needs

to provide the public with basic protections that ensure that organizations receiving new forms of payment that incentivize efficiency are acting responsibly and not cutting corners. A basic regulatory oversight program needs to be developed that is specific to this unique provider type.

Fortuitously, because integrated provider organizations rely on advanced health information technology, including interoperable electronic health records, oversight can move away from the sometimes counterproductive emphasis on assuring the presence of specified structures and processes to oversight more oriented to outcomes. Regulatory oversight can also assure the public that organizations have adopted and implemented codes of ethics acknowledging the long-accepted professional duty to act in the best interest of clients and avoid conflicts of interest, while also addressing the new expectations that organizations need to prudently manage resources and be accountable for their performance. Regulatory oversight can make sure that the relationships organizations enter into with other components of the health care system are transparent to the public.

CONCLUSION

The next administration should develop and implement policies that address the health care system's underlying chaos by reinforcing the organization of health care and integration of health care providers. Incentives to promote and reward organizations will need to be carefully crafted so that their primary interest is improving quality and patient experience while conserving resources and not attempting to use market power to extract higher prices from payers. Given the correct incentives, new forms of organization will become indispensable to efforts to increase the value of health care that citizens deserve, altering the U.S. health care system's mediocre performance on objective measures of system performance.

The federal government needs to be much more assertive than it has been to promote integration of providers into a variety of potential organizational structures that would better support high quality and improved patient-centered care. It needs to do a better job restraining cost increases, while at the same time being vigilant about the potential for misuse of the approach. Not all physicians, health care professionals, and institutional providers are ready to participate in organized systems, and there will

need to be parallel work to improve quality and efficiency for those that initially choose to remain independent. Over time, with a supportive payment system, providers should migrate to this approach and be better able to take on the growing challenges of caring for an aging population.

ENDNOTES

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Quality of Care

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OVERVIEW

The quality of health care in the United States is the best in the world, but the Institute of Medicine notes that, “Between the health care we have and the care we could have lies, not just a gap, but a chasm.” It sounds like a paradox. To understand, we have to disassemble the idea of “quality,” itself.

The United States probably has the best high-technology health care in the world; it certainly has the most high-tech care. Patients who need complex cardiac surgery, audacious cancer care, or “rescue care” in trauma centers or intensive care units are more likely to get state-of-the-art help in the United States than in most other nations in the world. This is not to say that such high-end care is either uniformly available or equitably distributed in the United States—it is not.

We also have the most abundant care in the world, per capita. The good news is that abundance reduces waiting times for treatment. American patients wait, on average, less than patients anywhere else in the world to get the advanced, technical care that they need. The bad news is that the bill is enormous and that all that abundance doesn’t always help patients. The United States in 2006 spent about \$6,500 per capita for health care for its citizens, more than any of the 30 democracies in the Organization

KEY POLICY RECOMMENDATIONS

- Hold hospital boards accountable for quality. This accountability would be equivalent to requirements for proper financial stewardship, subject to penalties for failure to discharge it properly, requiring them to implement mechanisms for its enforcement, possibly as a condition of participation in Medicare.
- Create a Medicare-based national initiative to reduce preventable hospital admissions and readmissions, and work with hospitals to help mitigate the financial burden of that transition.
- Expand hospice care through support to community-based programs, especially in small communities, and proper redesign of Medicare and Medicaid payment systems to limit expensive treatments that do little to improve the quality of life.

for Economic Cooperation and Development. The next most costly nation spent 60 percent of that per capita, and several nations whose systems outperform ours in satisfaction and health status spent even less.¹

One reason for high cost and low value in U.S. health care is the phenomenon of “supply-driven care,” as documented by researchers at Dartmouth Medical School. Their studies show very high correlations between costs per capita in Medicare and local and regional levels of supply of specialists, hospital beds, ICU beds, and technologies—without any relationship between costs and outcomes.² Health care experts differ widely in their estimates of the degree of waste in America’s \$2 trillion health care bill, but many calculate it to be on the order of 30 percent of total production costs. Some say it is even higher.

The United States, in general, also leads the world in health care research. Biotechnical innovations and bioscience are successful in many nations, but no other nation has an organization that in scale, excellence, and achievement matches the National Institutes of Health or the Centers for Disease Control and Prevention.

Despite this excellence in health care technology, abundance, and research, the U.S. health care system in numerous other crucial dimensions significantly underperforms, both in absolute terms and relative to other developed nations and across states in areas such as injury rates of patients in care, absence of needed care, overuse of unnecessary and sometimes harmful care, continuity failures for the chronically ill, and racial and socioeconomic inequity.

The Institute of Medicine outlines six “aims for improvement” when it comes to health care system performance: safety, effectiveness, patient-centeredness, timeliness, efficiency, and equity (see the book’s introduction for more details). The IOM report, “Crossing the Quality Chasm,” summarizes evidence on major problems in every one of these six dimensions of health care quality, and suggests that the United States can significantly improve its health care quality in every dimension with the aid of already-available technology.³

Research since the report’s publication has continued to confirm that the quality chasm exists. Multinational comparison studies between the United States, the United Kingdom, Canada, Australia, New Zealand, Germany, and the Netherlands have ranked the United States last on measures of quality, efficiency, equity, outcomes, and most of all on health care costs as a percentage of GDP. Our life expectancy is even almost a full year lower than the average OECD country.⁴

The past decade has included some progress on quality of care, in many cases led by or catalyzed by federal policy and governmental actions. These include improved safety and care reliability in the Veterans Health Administration, higher chronic disease care quality in the Indian Health Service and in safety net services sponsored by the Bureau of Primary Care in the Health Resources and Services Administration, better technical assistance capacity in several Quality Improvement Organizations, Medicare’s successful Hospital Quality Improvement Demonstration Project, and the Agency for Healthcare Research and Quality’s annual National Reports on health care quality and disparities, as well as AHRQ’s research products on patient safety indicators and other standardized measures of quality.

These successes suggest that the federal government—as both a payer and provider of care—can catalyze focused health system improvements. It can lead through example as a care provider, have direct influence as a purchaser, and provide metrics for quality measurement and goal-setting. The National Quality Forum has made significant gains in certifying evidence-based measurements for health care quality in the private sector, with the active participation and encouragement of the Centers for Disease Control, the Agency for Healthcare Research and Quality, the Centers for Medicare and Medicaid Studies, and other federal agencies.

Private-sector activity on improving health quality also gained strength following the release of IOM’s “Crossing the Quality Chasm” and “To Err Is

Human” reports. A few of the particularly relevant improvements include a new Leadership Center at the American Hospital Association; tightened purchasing standards through the Leapfrog Group and the National Business Group on Health, among others; increased activity at the Institute for Healthcare Improvement, including two massive national campaigns on patient safety; formation of the Hospital Quality Alliance and the Ambulatory Quality Alliance, which promulgate quality goals and measurements in their respective sectors; new requirements for physician training in quality improvement as part of the standards of the Accreditation Council for Graduate Medical Education; and the widespread deployment of multi-organization collaborative improvement projects by foundations and multihospital systems.

Even though the private sector may be expanding its efforts to improve health care, the quality chasm remains wide. The Commonwealth Fund in July 2008 released its most recent report card on health care quality America, which observes that performance has deteriorated across the dimensions.⁵ Preliminary private-sector efforts are not enough; the United States needs more consistent and insistent federal leadership to accelerate progress.

THE FUTURE OF HEALTH CARE QUALITY

The pursuit of health care quality can be divided into two broad components: improving the quality of care for individuals, especially for people with acute and severe illnesses; and reshaping our health care systems to improve care across the population.

Each of these pursuits requires a different set of actors and a different set of changes in the regulatory and financing environment. Addressing the needs of the population as a whole will be more difficult than helping individuals, because it requires more structural changes and will mobilize stronger opposition from stakeholders in the status quo. But a new administration has opportunities to help on both agendas.

Improving individual care

The new administration should use the Institute of Medicine’s six dimensions of quality to set its aims for improving individual health care. Most

care providers, even large hospitals, still lack both the will and competence to improve the processes of care, and most health care boards of trustees and senior executives view the improvement of care as a strategic agenda at best secondary to maintaining revenues and stabilizing public reputation. The federal government should therefore push hospitals, nursing homes, and office-based practices to make the changes in care processes they need to achieve much higher levels of reliability and teamwork, and to invite patients and families much more into positions of influence and control over their own care.

The next president in his first term should set specific goals that include:

1. Reducing medically induced injuries to patients in hospitals by a specific target amount. A 20 percent reduction in four years is probably technically achievable.
2. Measurably improving the delivery of evidence-based care for a list of major chronic and acute illnesses in all relevant settings.
3. Supporting and expanding the use of shared decision-making supports for patients and families facing difficult choices among treatment options.
4. Identifying and reducing overuse of specific, ineffective health care procedures in hospitals and other acute care settings.

These overall goals for improvement cannot be achieved through a single policy change or action on the part of the federal government alone. A range of specific policies and regulatory actions, described later in this chapter, can increase the odds of success.

Improving care across the population

Improving individual care is important, but it cannot solve the concertmaster problems of better health outcomes and lower costs. The best long-term strategy for affordability—and making universal health care economically feasible—is to improve care systems. This means focusing on changes that affect structures and processes of care for the entire population—patterns well beyond individual, case-by-case improvements.

Systematic factors and preconditions drive excess treatment, leading to avoidable and wasteful costs. These factors include inadequate sec-

ondary prevention of complications in chronic disease care; over-reliance on technologies that are unproven or have very marginal value; administrative waste due to complexity and variation in billing, licensure, and record-keeping; the outmoded, defect-ridden, and inefficient paper medical record; and inefficiencies and inequities in the malpractice liability system.

Oversupply and fragmentation—the absence of integrated structures, processes, and behaviors, especially in the care of the chronically ill—are the two overriding characteristics that explain many of the problems with the current U.S. health care system. And neither can be mitigated substantially by focusing on the care of individuals alone.

Health providers can achieve sensible cost reductions while maintaining or improving the care experience of patients and families, but incentives are not aligned to get that done. One important example is the very high rate of readmission of Medicare patients who are discharged from the hospital after experiencing congestive heart failure. Congestive heart failure is the most common reason for admission among Medicare beneficiaries—almost 1 million admissions per year—and about 40 percent of the congestive heart failure patients discharged are readmitted within 90 days. This is nearly pure waste from the viewpoint of both patients and science.

Clinical researchers have known for over a decade that a well-designed chronic care support system can reduce that readmission rate by over 85 percent. The potential cost savings for Medicare would be enormous, and patients and families would be better off in terms of health and functional status. Achieving this result requires a combination of team-based care, home health care outreach, patient and family education, simple forms of home-based monitoring, proper pharmaceutical management, and self-care skills. All of this could be arranged by a hospital, in theory, if it cooperated and shared information with local physicians and agencies, and extended its efforts to the period after discharge. The result would be cost reductions for Medicare, better health for patients, and a major revenue loss to the hospital.

The catch is that more effective a hospital is, the worse its finances would become. Beds would lie empty, whereas hospital leaders and business plans are currently rewarded financially for keeping beds full by increasing admissions. Some hospitals, despite this toxicity of reimbursement, work hard on better chronic disease care and secondary pre-

vention. But they are too few. Physicians in primary care may focus more on these goals, but they usually lack the system leverage to execute chronic disease care properly, and their payment tariffs do not reward large investments in patient education or the hiring of allied health professionals to do the same.

Even more to the point, suppose that the Dartmouth research group is correct in determining that a lot of care—perhaps \$3,000 of per capita Medicare expenditures in the highest quintile areas each year—is supply-driven and does not help patients.⁶ That care is waste from Medicare’s viewpoint, but it is income for the professionals who, of course, believe that it is helpful care. Without a budget constraint or some sense of limitation, curiosity remains low about what care helps and what care does not help. This is not just a problem of excellence in individual care; it is a structural problem in the design of the financing and delivery system itself. When it is not in health provider’s interest to remove waste, they do not.

This lack of incentive, in our opinion, explains more than anything else why and how some European systems and a few U.S. systems are able to achieve better care at a far lower cost. Their structures and financing help them think and act in population terms. They can, and want to, integrate care across boundaries. They want to limit capital growth, rather than relying on it for revenue. They work with a sense of limited resources, and avidly seek to remove waste, because with capped resources, waste reduction is “internal” revenue, available for reinvestment. They can essentially harvest and reinvest the financial gains of reducing ineffective care. Public health investments and secondary prevention systems that avoid the need for high-technology services and hospital days become the “winners,” not “losers,” in these systems. In short, integrated care structures and population-based budgets provide the preconditions for far higher value and lower cost.

A strategy to address health quality must address the underlying payment incentives that influence clinical decisions. We must move away from treating only acute care needs and move to a more holistic approach. One recent framing of the needed social agenda is the so-called “triple aim”: improve care for individuals, improve the health of populations, and stabilize or reduce the per-capita cost of health care for the population.⁷

POLICY RECOMMENDATIONS

Improving individual care

Federal agencies need to improve care in the systems they oversee. The new administration should insist on, monitor, and fully support the continual improvement of care in all federally operated and sponsored health care organizations according to the IOM dimensions of quality. Specifically, a new administration should:

Strengthen oversight in Medicare and Medicaid. The new administration should support the expansion of the Centers for Medicare and Medicaid Services' quality improvement programs to designate, monitor, and technically support progress in hospitals, nursing homes, and physician practices toward specific and bold improvement targets. These should be reflected in the Quality Improvement Organizations' Scopes of Work. CMS should, in particular, set and monitor stringent standards for measuring and reducing patient injuries and complications, improving evidence-based care reliability, expanding patient-centered care practices, and reducing overuse of ineffective practices.

Encourage public-private payer cooperation. The federal government should support CMS' participation with the private sector in multi-payer coalitions and cooperatives to agree upon and together specify, enforce, and support care improvements. Strong administration leadership toward specific national improvement goals would be helpful in reducing the current chaotic situation, in which literally hundreds of priorities are created by a wide array of stakeholders.

One key barrier to setting goals at the national level is the number of entities that want to control priorities. Funding the National Quality Forum makes sense in pursuit of a more rational and better-harmonized set of goals and metrics. The federal government should provide stable funding for a 10-year horizon to the National Quality Forum to certify, develop, and help deploy system-level measures of health care quality, outcomes, and costs, including per capita costs, in full cooperation with the Agency for Healthcare Research and Quality. Initial priorities for improving U.S. health care can be guided, at least in part, by NQF's

recent “National Priorities Partnership,” which specifies goals with the endorsement of 28 NQF stakeholder groups.

Increase funding for AHRQ and expand its role in quality research and development. The new administration should increase budgeted support for the Agency for Healthcare Research and Quality to \$1 billion. The administration should designate AHRQ as the primary federal center for developing new metrics on health care quality, safety, reliability, outcomes, and costs; conducting research on the comparative effectiveness of treatments and procedures; and leading a major research program into redesigning health care systems and processes to achieve better individual care, better population health, and lower per capita costs. AHRQ should also continue to improve the annual National Quality Report and the National Health Disparities report, which should be received formally by the president and Congress, and responded to publicly each year by the president.

Hold hospital boards legally accountable for quality and safety improvements. The new administration should work with Congress to consider enacting a firm legal and regulatory requirement that hospital boards would have to “continually improve patient care quality and safety.” This would be equivalent to existing requirements for proper financial stewardship, subject to penalties for failure to discharge it properly, and should include mechanisms for its enforcement, or at least as a condition of participation in Medicare.

Support no-fault malpractice demonstration projects. The federal government should support statewide experiments in no-fault malpractice insurance, subject to the conditions of full disclosure, prompt compensation, apology, and systemic learning and improvement. No-fault malpractice policy would adapt to health care settings the basic principles of worker compensation programs, which focus less on judicial contests and findings of fault than on administrative procedures for prompt and fair compensation of injured parties. This would, admittedly, be a reach for the federal government, since malpractice liability is largely a matter of state-level policy, not federal policy. The new administration should therefore seek demonstration authority under which the federal government can try to help or influence a trend toward no-fault regimes.

Improving care across the population

The strongest lever available for truly altering our health care quality is moving away from paying providers on a transactional basis, and changing payments so that provider incentives align with better and more efficient care, especially for people with chronic illnesses.

The United States has experimented modestly in the past with integrated care systems under population-based budgets. The emergent format was the Health Maintenance Organization, or HMO, which was originally conceived by the founders of classical models such as Kaiser-Permanente in California, Group Health Cooperative of Puget Sound, and Health Partners in Minneapolis. In their heyday, which was approximately the 1960s and 1970s, these classic models significantly outperformed the fragmented majority of plans.

HMOs' popularity declined not because the classical HMO models failed at first, but because the HMO label was expanded in use to include a collection of restrictive, insurance-based models which did not really manage care, but managed rules and restrictions and the flow of money. The good forms of managed care, like the Kaiser Permanente-type model, still exist, but these programs are the exception rather than the rule. Less integrated health plans have difficulty changing the behavior of physicians and hospitals because they pay on an episodic basis. At worst, they may emphasize a restrictive role for primary care physicians, making them gatekeepers to limit care and keep costs low, rather than care coordinators with responsibility for making sure patients' providers are coordinated such that each individual patient receives efficient, timely, and effective treatment. The growth in these less integrated plans reflects the difficulties in aligning payment incentives to produce quality care.

High-performing health care systems in other developed nations tend, by and large, to “manage care” in the original sense: plan and coordinate it, maintain flexibility as to how resources are used, measure success primarily through health and satisfaction, be subject to overall budget limits, and unify the experience of patients across boundaries.

This level of coordination will be difficult to achieve given our current fragmented system with many different payers and many individuals managed by several different payers. Nonetheless, policy changes could be made to promote a fee-for-service model that contains strong case-management and disease-management tools and that financially rewards pro-

viders for services that improve quality. More integrated payment models are also needed in which providers, hospitals, and other health care providers are paid through means other than for episodic care. These changes are fundamental to any quality improvement effort.

Assuming major payment changes (see chapter 4 on payment for more information), the new administration will have to take a larger role in supporting wise and useful standardization in the private care system, a role largely played today by the states. Three ideas underlie all of these proposed changes: strengthening information technologies, especially electronic patient records, so that they become our nation's norm, not the exception; developing systems of integrated care for people with chronic illness across the entire continuum of care; and aligning financial incentives and payment streams to encourage, reward, and support effective care of the chronically ill. To accomplish these goals, the new administration should undertake five new initiatives:

Simplify and standardize health care administration. Standardizing codes and billing across industries would save much time and reduce errors and administrative costs for the government, insurance plans, and health care providers. Providers and patients would have a better understanding of what each plan covers and what payments they can expect. Billings should be done electronically rather than through paper to reduce costs and errors. These changes would also greatly reduce the amount of staff time devoted to deciphering each payer's billing practices so that providers could focus more of their time and attention on delivering patient care.

Developing electronic medical records that are accessible by a patient's treating physician or facility will be an important asset in improving quality. We ultimately need a system that guards confidentiality and is under the patient's control, but that is still accessible, with the patient's permission, to anyone treating the patient—physicians, providers, facilities, pharmacies, and others. Systems will achieve better dividends if an emergency department doctor does not have to rely on a patient's memory of treatment, or if uniform medical records follow chronically ill patients wherever they seek care. Electronic health records would aid in reducing duplicative or conflicting treatments and decreasing the likelihood of prescribing incompatible medications, avoiding adverse drug events, and reducing medication errors.

Support large-scale chronic disease registries. The federal government should promote the development and deployment of large-scale chronic disease registries that would, with major safeguards for confidentiality, allow health care providers to better manage patients across time and among institutions, as well as assess progress in clinical outcomes and total costs. Requiring electronic medical records could facilitate this change.

The new administration will need to develop a system to address privacy concerns over collecting these statistics. Private plans also object to data collection because of the administrative costs associated with managing it while ensuring confidentiality. The White House and Congress could use positive or negative incentives to obtain these data from private insurers, Medicare, Medicaid, and other federal health care programs.

Implement comparative effectiveness studies for treatments. The new administration should ensure that providers have the most up-to-date information about clinical research and effective treatments by establishing a neutral entity, free of commercial and political pressure, whose mission would be to compare procedures, drugs, and other treatments and to determine which course of treatment is most effective for different conditions. The federal government would also need to help and encourage providers to use the most effective treatments, and not simply the ones with the highest reimbursement levels or those believed, without evidence, to be more effective than less costly alternatives.

A critical component in a system using comparative effectiveness research is to assure that clinicians are educated about differences among procedures, drugs, and treatment alternatives, and that their management strategies reflect the most current knowledge. One of the major causes of health disparities among racial minorities stems from beneficiaries not getting adequate treatment at the right time—not getting needed preventive care, not being screened for conditions, and not getting the proper treatment when they do receive a diagnosis. This difference can be partially explained by a disproportionate lack of insurance, but racial disparities also persist among the insured.⁸ Educating providers about appropriate treatments and enforcing clinical standards would help narrow this care gap.

Develop a national initiative to reduce preventable hospital admissions and readmissions. The new administration should work with the Centers for

Medicare and Medicaid Services to develop and launch an initiative to reduce preventable hospital admissions and readmissions, and work with hospitals to help mitigate the financial burden of reaching this goal. Bottom-line financial losses will undoubtedly occur as hospitals demonstrably and measurably reduce patient visits for chronic illness through better home care, outreach, prevention, and coordination of services. The federal government may therefore need to step in for a period of time to protect the bottom-line financial losses they would thereby experience—protecting, for example, their absolute profits, but not their top-line revenues.

Expand hospice care through support to community-based programs. End-of-life care too often involves expensive treatments that do little to improve the quality of life. The federal government should aim for a major shift in patterns of end-of-life care throughout America, starting with a proper redesign of the of Medicare and Medicaid payment systems to improve dignity, comfort, family involvement, pain control, and the match between the care people want and the care people get in the last stages of their illnesses. Implementing such a policy would require an educational shift to move away from employing heroic, and often futile, efforts at the end of life. Effective programs for superb care at the end of life can reside both within appropriate health care organizations and in community and social service agencies.

KEY CHALLENGES

Improving individual care

A series of relatively feasible policy changes can improve care for individuals, especially hospitalized patients. Payment, public reporting, and technical assistance to hospitals could all focus on goals for improving patient safety and the reliability of evidence-based care. Much of this is already underway, led by the Centers for Medicare and Medicaid Services and progressive purchasers, among others.

The federal government could help accelerate quality of care improvements through increased funding, which is a perennial issue, and helping to shift political will. These changes are attainable with federal leadership.

Few major organizations would be losers in this pursuit, although hospitals and clinicians will have to change their behavior.

Many hospitals and other health care providers complain about the proliferation of performance metrics mandated or requested by both public and private stakeholders, such as payers, employers, accreditation bodies, government agencies, and consumer groups. For hospitals alone, the list of such measures now numbers many hundreds and is growing steadily, and the internal costs of managing reporting requirements is high. The stakes, and the worries, increase as payment gets linked to such performance metrics. One way to constructively mitigate these concerns and the associated political pushback is to try to progressively “harmonize” these goals and metrics into a smaller set of focused and important indicators of health care performance. Harmonization could decrease the cacophony, reduce the total costs of measurement, and focus energy on the most important goals for improvement.

Holding hospital boards legislation accountable for quality and safety improvements would, of course, be likely raise to concerns from the American Hospital Association and other trade groups. But, the questions remain: What happens to a board today that fails in due diligence to financial stewardship? And can we spread the same thinking to the requirement of the diligent stewardship of patient care quality and safety as a requirement of proper governance?

Improving care and health across the population

Improving quality for the entire health care system across the continuum and aiming for an overall healthier population requires more significant structural changes. The needed policy initiatives create losers, as well as winners, mainly as acute care needs decline in favor of primary care and integrated services. Specialist and acute-care provider opposition to these proposals could therefore be strong. If structural changes are not properly implemented, they could easily lead to a cost shift from Medicare to providers, plans, or both, and they would fail to improve the quality of care.

The most serious threat to health quality improvements would be “gaming” by plans and providers, who could recruit and enroll members who need the care least, leaving expensive subgroups to others, a problem that is already far too common in some Medicare Advantage plans. Policies

aimed at restructuring and improving care for populations will require more effort to implement, but could fundamentally change both the true costs and quality of our health care delivery if successful.

Trying to simplify billing procedures would generate some opposition because of the costs associated with making changes. Convincing all payers to move to a uniform system will take time, money, and political will. The federal government will need to offer some incentives or support to private payers to make these changes. Since states primarily regulate private insurance, Congress could just require these changes without positive incentives, but the industry would oppose this. Congress could have the Department of Health and Human Services develop model billing practices and give private insurers financial incentives such as tax credits to use national standards.

There is emerging consensus that electronic health records and comparative effectiveness are needed to improve health care quality, but there is also much concern about the very slow pace of actual implementation (see chapter 1 on infrastructure for more information on electronic health records). Privacy concerns will need to be addressed to implement either electronic health records or enhanced chronic illness registries. Again, in comparative effectiveness research, there will be winners (those whose procedures, drugs, or offered services are found to be most clinically effective) and losers (those whose services are found to be less effective), and thus we can expect vigorous opposition from at least some quarters to a comprehensive approach.

CONCLUSION

The United States has the largest economy in the world and the highest per capita health care costs, yet it consistently scores below other industrialized nations across several quality measures such as wait times to see physicians, life expectancy, mortality rates, coordination for chronic care, and deaths per capita from medical errors. We should not be outspending every country and still falling at or near the bottom across important quality measures. The American health care system needs a better return on its investment. Changing the way health care is conducted in our fragmented system will be difficult, and will require significant changes that

demand political will. Nonetheless, if the new administration can meaningfully manage opposition to these systematic changes, it would radically improve our health care system.

ENDNOTES

- 1 Organization for Economic Cooperation and Development, *Health Data 2006*, October 2006. OECD member countries include Australia, Austria, Belgium, Canada, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea, Luxembourg, Mexico, The Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Spain, Sweden, Switzerland, Turkey, United Kingdom, and the United States.
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Provider Payment Incentives and Delivery System Reform

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OVERVIEW

Recent analyses by the Congressional Budget Office and others have shown that the long-term federal budget outlook is dominated by spending trends in Medicare and Medicaid. These trends cannot be addressed in the long term without changes in the entire health care delivery system that slow spending increases by promoting more efficient delivery of care and more judicious choices about incorporating new medical technologies into the system.

Health practitioners, such as physicians, and provider organizations, such as hospitals, seek to serve patients in an efficient and high-quality manner. They also respond to financial incentives embedded in the structure of payment rates for their services. Provider payment rates play an important role in how well the health care delivery system is able to supply quality, efficient care.

¹ Preparation of this chapter began with Elizabeth Fowler as the co-author responsible for bringing the policy implementation experience to it. She participated fully in the planning of the chapter, drafted some sections, and commented extensively on drafts. But during the process, she rejoined the staff of the Senate Finance Committee, which does not permit its staff to author published papers. I want to acknowledge her valuable contributions to this chapter. My work on this chapter was performed in a private capacity. The views expressed do not reflect those of the Center for Studying Health System Change or its funders.

KEY POLICY RECOMMENDATIONS

- Revamp the Medicare payment system so that relative payments for different services better reflect relative costs of delivering those services, thus eliminating inadvertent incentives that negatively influence practice patterns.
- Promote care coordination through ideas such as having beneficiaries designate a primary care physician practice to serve as their medical home, with the practice receiving a capitation payment designed to cover services not reimbursed under fee-for-service arrangements.
- Bundle payments for acute episodes of care involving a major procedure or inpatient stay; for example, combining facility and home health post-acute services into the payment for inpatient care.

Today, those incentives are sending the wrong signals. Most payment today is fee for service, meaning that each service a doctor provides is paid for separately. Fee-for-service sends an undeniable economic signal that more services are better. The system also underemphasizes to physicians the importance of the cost of services delivered by complementary providers because it does not affect what they receive for their services. Furthermore, high-quality services are not compensated any more than poor-quality ones. In fact, when poor-quality care results in complications that must be treated, total payment can turn out to be higher. Finally, some services involved in managing chronic disease, such as care coordination and patient education, are not paid for by insurers at all.

Inpatient hospital care is a notable exception. Medicare, Medicaid programs, and a growing number of private insurers now pay for inpatient care on a per case, not per procedure, basis, using a classification of diagnosis related groups or DRGs. Yet even these bundled payments apply only to those services delivered in the hospital, not to the services provided by others, such as physicians and post-acute care facilities, involved in a patient's episode of care.

Health insurers aim to ensure that relative payments for different services parallel the relative costs of providing the services, both for fairness and to avoid influencing the pattern of care through unintended incentives. Yet major departures from this goal are evident today. Inpatient admissions for cardiovascular procedures, for example, are widely recognized as the most profitable cases for hospitals. Physicians tend to be paid more—

in relation to costs—for procedures than for evaluation and management services. Minor procedures and services involving expensive equipment are paid particularly generously in relation to costs.

These distortions in payment structures are causing changes in the delivery system. Hospitals have long been aware of which DRGs are most profitable; surgical DRGs, for example, tend to be more profitable than medical DRGs, with those for mental health among the least profitable. But recently some have taken aggressive steps to expand their volume of more profitable cases by selectively developing “service lines” that restructure the organization to attract such cases.² The most extreme response is the creation of entire hospitals specializing in heart or orthopedic procedures. Physicians have also recognized that the facility component (equipment, technicians) of services such as imaging—x-rays, MRIs, CT scans—are more lucrative than the professional component (interpretation of the images by a physician). They have invested in free-standing facilities not related to hospitals and expanded their practices through mergers to achieve the scale needed to profitably provide additional facility services, as well as the professional services that must accompany them.

Equally worrisome is the impact of these distortions on segments of the delivery system that cannot do as much to respond to the incentives. Primary care physicians’ earnings have been declining after adjustment for inflation, both in absolute terms and relative to other physicians.³ This trend has precipitated a decline in practitioners training for these specialties. Other specialties in which procedures are not a large part of practice are experiencing the same problems. A recent *Wall Street Journal* article reported that too few physicians are training in neuro-ophthalmology—a subspecialty in which most services are visits—to replace those approaching retirement age.⁴ Over the longer term, these inadvertent distortions in our payment system will further exacerbate physician supply problems in important specialties.

As the nation’s largest payer of health care services, Medicare can and should do more to reform provider payment incentives. Changes in Medicare’s payment structure will likely be adopted by Medicaid programs and private insurers. In physician payment, for example, Medicaid programs and private insurers use the Medicare fee schedule as a baseline; they set payments as a percentage of Medicare rates. Private insurers sometimes negotiate even higher rates for certain large practices to assure adequate

numbers of each specialty in their network. Similarly, Medicare's recently implemented prospective payment system for hospital outpatient care has helped move private insurers from paying on the basis of discounted charges to paying a percentage of the Medicare bundled rate. Private insurers, however, have followed Medicare's lead for hospital inpatient care payments to a lesser extent.⁵

Medicare's leadership in provider payment is an important asset for federal policymakers interested in using this tool to improve the delivery of care. Improving Medicare payment methods has not historically been a partisan issue and represents a way to influence payment broadly without direct federal regulation. The speed and magnitude of the intended impact on the delivery of care will depend on how much other payers follow Medicare's lead. Federal policymakers need to recognize Medicare's leadership role and invite Medicaid program officials, private insurers, and providers of care into discussions aimed at gaining both technical support in developing effective payment tools as well as political support for the reforms.

THE FUTURE OF HEALTH CARE PAYMENTS

A strategy of payment reform has four key components. First, existing payment mechanisms, especially those based on fee for service, should more accurately reflect relative costs of providing different services. As discussed below, these steps can be implemented quickly and do not require extensive experimentation.

A second component involves payment for potentially cost-effective services not currently reimbursed, including services to coordinate care, palliative care counseling, and consultations through e-mail. For services involved in managing chronic disease, a periodic payment to the provider for all of the services they provide to a patient to treat the disease in question (called "capitation"), is often the most attractive way to provide payment because it reduces the need to document numerous services and provides incentives to deliver care efficiently. Capitation rates would vary according to a patient's chronic diseases and their severity. This targeted plan, which would apply only to some patients and services, is different from the broader and cruder approaches to capitation that were used by HMOs in the 1980s and 1990s.

The third component is per-episode payment for acute episodes of care involving a major procedure or hospitalization. Currently much inpatient care payment is based on diagnosis-related groups, and a global fee is the norm for major surgery. Per-episode payment, however, could be far more cost-effective in making care more efficient if a single amount is paid for the services of all of the providers involved in a patient’s care, including physician services, outpatient diagnostic services, and pharmaceuticals.

The fourth component is better alignment between payment and outcomes. Providers with better quality should be paid more when they provide better value to patients. This is the notion behind “pay for performance” systems. However, pay for performance will be valuable only if the measures of quality that generate extra payment have strong relationships with important outcomes of care.

POLICY RECOMMENDATIONS

Reversing current perverse payment incentives and implementing new approaches to provider payment will take time. A new administration, working together with Congress, can implement some steps in the short term, within 18 months of taking office. The new administration should also consider a longer-term agenda of changes that might take five years to implement to improve payment incentives in Medicare.

Key Policy Recommendations for Reforming Provider Payment Incentives

SHORT TERM	LONGER TERM
<ul style="list-style-type: none"> • Revamp the process for updating the relative value scale used in Medicare’s physician fee schedule so that relative values more accurately reflect relative costs. • Reduce relative values for services undergoing high rates of growth in volume. • Adopt incentives for additional processes that improve patient care (e.g., electronic health records). 	<ul style="list-style-type: none"> • Bundled payment covering all providers for acute episodes of care and post-acute care. • Capitated payment for the management of chronic disease. The medical home can be seen as a first of such an initiative. • Revise or eliminate Sustainable Growth Rates in conjunction with a major package of payment reforms.

SHORT-TERM REFORM AGENDA

The new administration should make revising payment rates a priority for the Centers for Medicare and Medicaid Services. Congress might want to add its voice by directing CMS to revise payments so as to better reflect relative costs.

A 2007 House bill to reauthorize the State Children's Health Insurance Program contained many initial steps needed to improve the accuracy of relative Medicare physician payment rates. The Children's Health and Medicare Protection Act of 2007, or CHAMP Act, would have modified the Sustainable Growth Rate, the formula used to determine Medicare payments to physicians. The adapted SGR would create separate conversion factors for six service categories:

1. Primary care and preventive services
2. Other evaluation and management, or E & M, services
3. Imaging services and diagnostic tests (other than clinical diagnostic lab tests)
4. Major procedures
5. Anesthesia services
6. Minor procedures and other physician services

The legislation recognized the need for greater emphasis on primary care and preventive services, allowing these services to grow at an annual rate of 2.5 percentage points above gross domestic product. The growth rate for the other five service categories was pegged instead to GDP. Implementation of this new system would have taken place over three years, in order to lower the cost of the SGR changes and to give CMS adequate time to establish service categories.

CHAMP included additional provisions aimed at achieving a more accurate structure of payment rates for physicians. These include bundling services that are typically performed together, adjusting relative values for services that have undergone substantial changes and for efficiency gains for new procedures, and reducing relative values for services with accelerated volume growth. These provisions address many of the shortcomings in the current fee schedule identified by the Medicare Payment Advisory Commission, or MedPAC, and independent analysts, who have pointed out the

need to develop an effective mechanism to reduce the relative payments for services in which providers' productivity increases (faster procedures, lower equipment and supply costs, and higher utilization rates for equipment) have reduced the amount of physician work or practice expense over time.⁶ Still, administered pricing systems tend to respond slowly to changes in cost structure. Policymakers therefore might use tools to speed response times, including: market surveillance to identify mispriced services; projecting a learning curve for new services to adjust for expected declines in unit costs over time; and use of rapid growth in volume of a type of service as an indicator of the price having been set too high.

Also in the near term, Medicare could provide incentives for measuring processes that have the potential to improve care, either through rewarding measurement or requiring it as a condition of participation. Indeed, the Medicare Improvement for Patients and Providers Act of 2008, or MIPPA, (P.L. 110-275) will encourage electronic prescribing by offering bonuses for its use, which transition to penalties for not using electronic prescribing beginning in 2011. CMS should explore other opportunities to reward better processes, such as the use of electronic health records.

Ultimately, however, the new administration should prioritize rewarding better outcomes rather than processes of care. For this reason, the new Congress could take steps to transition the current hospital quality reporting program to one in which payments are linked to performance. As outlined in a recent CMS report to Congress, the transition from reporting to performance-based payment will require time to develop measures, determine baselines, and establish benchmarks and thresholds.⁷

Having payment structures more accurately reflect relative costs will help address the cost-increasing incentives of physicians referring patients to their own facilities for services—called “self-referral.” Congress has limited physician self-referral, but changing technology and patterns of delivery have made these limits less effective. The Stark physician self-referral laws, passed by Congress in the 1980s, prohibit physicians from referring Medicare patients to an entity in which the provider or a member of his or her immediate family has a financial interest. Exceptions to the existing law, however, have provided ample opportunity for imaging self-referrals. The “in-office ancillary service” exception, “group practice” exception, and nuclear medicine exclusion to the Stark Law have provided many opportunities for physicians to act in a manner contrary to the interests

of Medicare beneficiaries and taxpayers. To curb overuse of imaging services, physicians could be prohibited from referring patients to facilities—including imaging centers—where they own equipment or space that is leased to the provider.

CMS has recently attempted to curb some of these abuses through regulatory changes to the existing Stark Law, but proposed changes were ultimately dropped from final regulations due to provider opposition. MIPPA requires accreditation of providers of the technical component for advanced diagnostic imaging services. Congress could take additional steps to ensure that constraints on physician ownership are reinforced. Yet as longer-term changes move the payment system away from fee for service and toward per-episode payment and use of capitation, restrictions on self-referral will become less important and even counterproductive.

LONGER-TERM AGENDA

Three distinct aspects of a longer-term agenda are important. The first is substantive changes in provider payment methods in Medicare. These include many of the changes outlined above, such as bundled payment for acute episodes of care and capitated payment for management of chronic disease. Some of these changes can be examined through pilots and demonstrations. Too much reliance on demonstrations can be detrimental, however, due to the lengthy delays involved and the fact that providers will not invest as much in time-limited programs.

The second aspect is long-term resolution of the increasingly frequent need to legislate short-term “fixes” to the Sustainable Growth Rate formula. The third aspect, which is discussed briefly in the book’s introduction, is potential changes in the governance of the Medicare program.

Reforming provider payment methods

Reforms in payment for management of chronic disease and for acute episodes will require some important changes in Medicare approaches.

The patient-centered medical home, an idea that has gained extensive attention, is really a step toward capitated payments for managing chronic disease. In one model, patients designate a primary care physician prac-

tice to serve as their medical home, and the practice receives a capitation payment designed to cover services not reimbursed under fee-for-service arrangements. Down the road, the entire payment for management of a patient's chronic diseases could be paid by capitation, an approach long used by Medicare to reimburse physicians for management of renal failure. Ultimately, this could be a bundled payment to all of the providers involved in the management of a chronic disease.

Capitated payment for management of chronic disease will require identifying both those beneficiaries with serious enough chronic disease to be involved in this and the physician or medical practice that will be responsible for management and receive the capitated payment. Beneficiaries can designate a physician, in some cases in response to a physician explaining the program to them. Simply using Medicare claims data to assign a beneficiary to a practice is problematic because of too many errors in assigning responsibility.⁸ Designating a practice will not limit the beneficiary's choice of provider—they can always designate a different provider to manage their chronic disease. Assignment of beneficiaries to physicians will not be close to 100 percent, but as long as the capitation payments are in addition to fee-for-service payments, less than full compliance would not cause large problems. Indeed, physicians would have strong incentives to have beneficiaries who come into their practice for chronic disease management and designate them as care managers.

Monitoring will be necessary to ensure that the management and coordination services, which are not now reported because they are not eligible for payment, are actually delivered. This issue can be addressed by certifying practices as eligible for these payments and auditing a sample of patient records. Medical home demonstrations can pilot many of the administrative procedures as well as support design issues such as how to assign levels of payments for patients with different chronic diseases and levels of severity. After experience with an additional capitation payment for management of chronic disease, the program could move to payment for all services related to a chronic disease (except perhaps major procedures) on the basis of capitation. Medicare already has experience with this approach for beneficiaries with end-stage renal disease; the program has covered only services related to ESRD through a capitation system, although issues of undertreatment did arise.

Compared with payment for management of chronic disease, bundled payments for acute episodes of care involving a major procedure or inpatient stay has greater need to be approached in stages. A relatively easy step would be to bundle post-acute care (both facility care and home health services) into the payment for inpatient care. The hospital would take on the risk for the costs of care in skilled nursing homes and rehabilitation facilities after patients are discharged. Broadening the per-episode payment to include physician services, outpatient diagnostic services, and outpatient pharmaceuticals would be a more ambitious step. Bundling would sharply reduce the role of fee-for-service payment, but not eliminate it entirely. Diagnostic services and minor procedures would continue to be paid under the fee-for-service model. More accurate relative payments in fee for service would underlie calculation of capitation and per-episode payments.

This would address an undesirable incentive for hospitals to substitute post-discharge care for inpatient care. The step is considered “easy” by some because hospitals are the provider that should receive the bundled payment and take responsibility for payment for post-acute care. Since most of the resources for this broader bundle of services would come from the hospital, the change would not add large amounts of financial risk to the hospital.

Another transitional step would involve reducing DRG payments for re-admissions. Hospitals could be supported in efforts to reduce re-admissions by payments for physicians for activities to ensure better transitions to home and permission for hospitals to share gains from reducing re-admissions with physicians.

A challenge in broadening the bundle further to include physician services is the question of which party should receive the payment and thus be at risk for the costs of the episode of care. Physicians might object to becoming a contractor to hospitals, but the financial risk of bundled care would likely be too large for them to handle alone, since the bulk of the costs of an inpatient episode would be for hospital care. Medicare’s demonstration of bundled payment for coronary artery bypass graft surgery during the 1990s included only integrated delivery systems, where physicians are employed by the hospital or where a large physician group has a close relationship with a hospital, so receipt of the payment was not an issue.

In other situations, this challenge could be addressed through a default mechanism that pays each provider involved a fixed percentage of the per-episode amount. For example, if 20 percent of the Medicare payment for

hip replacement episodes goes to the orthopedic surgeon and 65 percent goes to the hospital under today's methods, then the program could pay those percentages of the bundled episode payment to the respective providers. Each provider would have incentives to reduce their own costs and to choose more efficient or higher-quality providers to work with. Providers would develop relationships to work together to reduce overall costs and develop mechanisms to share the rewards equitably. This approach could begin with a carefully chosen set of procedures for which the episode is relatively easy to define and where potential to make care efficient across multiple providers appears to be large.

Role of demonstrations

Many in the policy world approach major changes through initiating demonstrations. But it is important to consider that demonstrations involve substantial delay and are often difficult to learn from. Indeed, many of the major policy changes in Medicare over the years have not involved prior demonstrations. For example, neither inpatient hospital prospective payment nor the physician fee schedule were preceded by federally initiated demonstrations. In many cases, it is better to plunge ahead without the benefit of a demonstration and revise the policy based on the early experience.

CMS has broad authority to conduct demonstrations, but many are conducted under specific authorizations from Congress. The purpose of these authorizations range from emphasizing the priority on certain demonstrations to offering a consolation to members who advocate a policy change but do not obtain sufficient support to enact it. In the payment area, CMS is demonstrating new payment methods for medical groups and is planning one for the patient-centered medical home. But CMS has cancelled a demonstration of payment for disease management services because early results were not encouraging.

Some point to New Jersey's experience with DRGs as a demonstration that led to Medicare's inpatient prospective payment system. New Jersey's pioneering use of DRGs was an asset to Medicare's launching a national policy, but most would not call New Jersey's experience a demonstration. The state launched the experiment on its own as a way to contain hospital costs. Medicare's involvement was granting a waiver to New Jersey that brought Medicare payment under the state's DRG system. In contrast,

when Medicare initiated demonstrations that must cover all providers or beneficiaries in a geographic area—as it did with an alternative payment system for Medicare Advantage plans—the members of Congress from the local areas affected have intervened to block the demonstration. They even intervened in one case in which the demonstration was conducted according to procedures spelled out in a specific congressional authorization. Some of these policy changes have since been implemented despite earlier opposition to the demonstrations.⁹

Demonstrations conducted with volunteer providers tend to skirt opposition, but less is likely to be learned from them. Evaluations of the experience are particularly challenging, and often the results cannot be generalized beyond the uniquely positioned providers that seek to participate in such demonstrations.¹⁰

The alternative approach is to phase in reforms. Payments for chronic disease management, for example, could be implemented first for chronic conditions that are easiest to define, where differences in severity are easiest to manage, and where important management services, such as care coordination, are not covered under current payment policies. Congress could either give CMS authority to modify the reform on the basis of initial experience or do so through legislation inspired by its program oversight. Giving CMS or a new entity the authority to make modifications would be the more effective way to proceed.

Notwithstanding the above discussion, some payment innovations are large enough departures from current systems that demonstrations are needed. In this case, much more can be learned if Medicare pursues these demonstrations in coordination with other payers. Otherwise, providers have less at stake and less motivation to invest in the infrastructure needed to change the delivery of care.

Sustainable growth rates

The SGR was enacted in 1997 to provide some control over spending on payments to providers in a fee-for-service system. It replaced an earlier formula, the Volume Performance Standards, or VPS, in which spending growth in physician services determined subsequent payment rate changes. When VPS was enacted, with separate mechanisms for surgeons, primary care physicians, and other physicians, the vision behind it was

that organized medicine would respond to these system-wide incentives by developing practice guidelines with the potential to slow the growth of volume of services performed and support Medicare efforts at discouraging unnecessary services. But VPS and its successor, SGR, do not change incentives to individual physicians. For years, VPS and SGR did not garner a great deal of attention because the results were small increases or decreases to payment rate changes otherwise determined by changes in medical practice input prices.

But in 2002, SGR resulted in a 5 percent reduction in payment rates to providers. Each year since then, the SGR formula has called for additional reductions in payment rates and Congress has blocked them. These temporary “fixes” have only postponed reductions and a cumulative reduction of 45 percent over many years is now pending. Although Congress is not happy about the large increases in spending for physician services, it does not want to substantially reduce payment rates because of the risks to access for Medicare beneficiaries. The succession of last-minute “fixes” have resulted in a long-term pattern of minimal payment rate increases, with essentially no increase from 2001 levels. As a result, an increasing number of providers are not accepting new Medicare patients, especially those in primary care practice, who have suffered the largest declines in income.

Addressing the problems with the SGR will require large spending cuts in other parts of Medicare, large tax increases, or acceptance of a larger budget deficit. There are some opportunities for spending cuts, for example in services where the payment rates are widely seen as being too high, such as in Medicare Advantage plans. But Congress is unlikely to be able to close the gap with spending cuts alone, or with tax increases. A major reform of Medicare physician payment does have the potential for long-term reductions in the rate of spending growth, if it leads to greater efficiency in the delivery of care. But the reforms are not developed enough at this point, and their impact is too uncertain for the Congressional Budget Office to confidently estimate large savings in Medicare and federal Medicaid spending. However, Congress may be able to justify increasing the deficit if it at the same time launches a major reform of the program, including revamping the payment mechanism and reforming governance. So, a needed long-term revision of SGR could serve as an important prod to reform the program and serve as a vehicle for the reforms.

DISCUSSION

Adopting these reforms to provider payment incentives will be complicated by the existence of multiple stakeholders on each side. When Medicare's physician fee schedule was enacted by Congress in 1989, there were large winners and losers by physician specialty. But the legislation had the support of the American Medical Association, in part due to the designated role of the AMA in hosting a process to resolve disputes between physician specialties over relative values—the Relative Value Update Committee, which advises the Medicare program. In recent years, decisions on changes in relative values have become more contentious as equipment manufacturers and device companies have played an increasingly greater role in issues that affect the profitability to physicians of services using their products. These additional stakeholders might make reform more difficult than it was in 1989.

Providers will probably find new payment methods threatening because of uncertainty. Although the “average” provider might be unaffected by a change, most providers are not average. Proposals for payments to medical homes are very attractive to primary care specialties because of the potential for payment for services that are not paid for today. The costs of the extra payment are to be offset by reduced need for services by beneficiaries who have better outcomes.

The payment reforms discussed in this chapter do not explicitly involve the patients or beneficiaries. In economics jargon, they are “supply-side” reforms rather than “demand-side” reforms. Medicare spending issues have traditionally been addressed by changing how providers are paid. But private insurance during this decade has placed much more emphasis on the patient side. Although consumer-driven health plans have received the most attention (see chapter 5 on patient activation), the most important changes have been the increasing use of financial incentives for patients enrolled in HMO and PPO products. Some of these approaches have entered Medicare through the Part D prescription drug benefit. Most Part D plans have incorporated their commercial insurance experience with tiered cost sharing, prior authorization, and other cost-containment mechanisms for prescription drugs into their Medicare products. Tiered approaches blend the supply-side approach of making judgments that assign drugs to tiers based on costs and effectiveness with the demand-side approach of allow-

ing consumers to decide on their own whether or not to choose the drugs with lower out-of-pocket payments. Virtually all enrollees who have aged into Medicare in recent years enter the program with experience under private insurance of responding to financial incentives.

Patient and beneficiary-focused elements could be incorporated into some of the payment reforms discussed in this chapter. In addition to rewarding more efficient providers through the payment system, incentives could also be offered to beneficiaries to use them, for example. This might build more political support for reform by giving beneficiaries more of a stake. A safety valve could also potentially be established so that inefficient providers with a loyal following of patients could continue through higher patient payments. Should demand-side tools become a fixture for the long term in private insurance, continuing to oppose their adoption in Medicare will be difficult, especially because most Medicare financing comes from active workers.

ENDNOTES

- 1 Congressional Budget Office, *The Long-Term Outlook for Health Care Spending* (Washington, D.C., November 2007).
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- 3 Ha T. Tu and Paul B. Ginsburg, *Losing Ground: Physician Income, 1995-2003*, Tracking Report No. 15 (Washington, D.C.: Center for Studying Health System Change, June 2006).
- 4 Vanessa Fuhrmans, "Medical Specialties Hit By A Growing Pay Gap," *The Wall Street Journal*, May 5, 2008.
- 5 HSC site visit interviews do show a slow trend toward adoption of DRG payment by private insurers.
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- 7 Centers for Medicare and Medicaid Services, *Report to Congress: Plan to Implement a Medicare Hospital Value-Based Purchasing Program* (November 21, 2007).
- 8 Hoangmai H. Pham and others, "Care Patterns in Medicare and Their Implications for Pay for Performance," *The New England Journal of Medicine* 356 (11) (2007).
- 9 Payment rules for Medicare Advantage plans authorized under the MMA included elements that were to be tested in demonstrations. These demonstrations were never implemented due to opposition from Members of Congress representing geographic areas chosen for participation.
- 10 This should not be confused with initiatives in which a permanent program might be limited to volunteer practices, such as medical homes. Ideally, a demonstration should obtain experimental and control groups from a population of those capable of performing what is being tested.

Second-Generation Consumerism

Increasing Consumer Activation to Improve Health Outcomes and Lower Costs for Patients with Chronic Disease

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OVERVIEW

With health care costs increasing, some policymakers have sought to make patients better health care consumers through increased cost-sharing linked with greater information on the cost of care. These may be successful cost containment strategies in the short term. But patients are just as likely to forgo necessary as unnecessary care, which ultimately leads to greater demand for more intensive and expensive care in the long term. Patients can, however, play an important role in preventing the onset of chronic conditions or preventing deterioration in health once they have

KEY POLICY RECOMMENDATIONS

- Building in accountability and support for patient self-management through provider reimbursement policies.
- Expanding the evidence base to identify what kinds of supports actually engage and activate consumers.
- Removing barriers that keep consumers from taking a greater role in managing their health, including removing financial barriers to making cost effective choices.

been diagnosed with a chronic condition. In this chapter we discuss tools available to identify and empower—or “activate”—patients to be better managers of their health. We also suggest health care delivery reform options to encourage the expansion of programs that empower patients to improve their health and control personal health care costs, thereby improving health outcomes and containing costs for all.

WHAT IS PATIENT ACTIVATION?

In an effective delivery system, patient activation—defined in this chapter as the “ability to self-manage”—is a key outcome. The outcome is measured, and the measurement is used to improve care. At every encounter, patients are implicitly and explicitly encouraged to take ownership of their health and health care and to be proactive, and are given the support to do so. This means changing the norms for both provider and consumer behavior. It also means supporting patient self-efficacy, skill, and knowledge acquisition. Strategies that support this trio of skills are mirrored and reinforced at home, in the community, and at work. They include giving patients and consumers the appropriate amount and type of information for their abilities and their needs. The ideal endpoint is a delivery system connected to communities, with medical care organizations and health providers supporting consumer activation, and where increases in patient activation are measured as outcomes that are part of provider performance evaluations and are linked with compensation.

Preventing or delaying the onset of chronic conditions, along with effective management after diagnosis, can lower the demand for health care services. The Institute of Medicine has recommended providing support for patient self-management as a priority for improving quality.¹ IOM states that self-management is a critical success factor for chronic disease programs because patients and their families are the primary caregivers in chronic illness. According to the report, traditional health education that focuses on simply providing information is inadequate for people with chronic illness.² Most research on engaging consumers has been focused on patients with one or more chronic illnesses, but activating or engaging patients can also be useful as an approach for preventing the onset of chronic conditions (see chapter 6 on population health).

ACTIVATING PATIENTS CAN CONTROL COSTS AND IMPROVE OUTCOMES

Finding a way to prevent chronic conditions and to lower the costs of caring for people with chronic conditions will be critical to reducing health care spending. Patients with one or more chronic conditions are a driver of the increase in health care costs. Virtually all of the growth in Medicare spending from 1987 to 2002 can be traced to the 20-percentage point increase in the share of Medicare patients receiving treatment for five or more chronic conditions. The factors responsible for these trends are likely to continue. According to the Agency for Healthcare Research and Quality, about 60 percent of adults have at least one chronic condition.³ In 2005, about 50 percent of total medical expenditures were spent on treatment of chronic conditions, but about 90 percent of health spending went to treat both acute and chronic care for people with chronic conditions.⁴

In recent years, Congress and the Bush administration have taken steps to try to address the cost of chronic conditions. In addition to prevention funded through public health programs, Congress directed the Secretary of the Department of Health and Human Services to conduct demonstrations to determine whether case management and disease management programs could lower costs and improve patient outcomes in Medicare fee-for-service enrollees.⁵ While reports indicate that the Medicare coordinated care demonstration has neither generated savings nor increased costs in Medicare,⁶ many argue that a host of correctable factors led to that conclusion.

The more recent Medicare physician group practice demonstrations have shown some success and have provided important lessons in fee-for-service care management.⁷ The report noted a need for greater emphasis on patient involvement in managing chronic diseases to assure cost-effectiveness. Challenges to successful disease management programs among group practices included limited reimbursement and lags in the availability of information to providers to determine the impact of interventions and to permit timely revisions in treatment plans. Finally, the report suggested a need for more information regarding the successful components of programs that address multiple chronic conditions, as opposed to a single condition, such as diabetes or heart disease. Consistent with these outcomes, many chronic care management experts recommend that chronic disease management programs must include a robust self-management

support focus in order to succeed. In addition, in implementing a congressionally mandated medical homes demonstration project under Medicare, the Bush administration has included in the plan design a requirement to encourage chronic disease self-management.⁸

Appropriate health care decision making can be challenging for patients with chronic conditions. Patients are given complex treatment regimens, asked to monitor their conditions, and told to make lifestyle changes. Barriers to making good choices include a lack of motivation, insufficient knowledge of a condition or treatment, a lack of self-confidence or skills to manage the condition, inadequate support from family members or friends, environmental or community obstacles, physical impairments, or a lack of financial resources to purchase medications or supplies.⁹

How well the individual is able to self-manage their health on a day-to-day basis is one of the most important factors in determining the onset of a chronic condition, as well as maintaining health and functioning. Maintaining a healthy weight, engaging in regular exercise, and obtaining preventive care require daily effort. People are more likely to make good decisions and take more actions to promote their own health if they are more engaged, informed, and feel confident that they can take care of themselves.¹⁰ Those who are equipped with the skill and confidence to take on these challenges are better able to function and experience fewer health crises and functional declines.¹¹

Recognizing the challenges faced by patients with chronic conditions, Congress revised the Medicare program to cover self-management training for patients with diabetes. Access to this service has been limited, however, particularly in rural areas. Providers perceive the certification process necessary to qualify for reimbursement as expensive and laborious. In addition, reimbursement is inadequate to justify the application process and to cover administrative and staffing costs associated with implementing the program.¹²

FIRST-GENERATION CONSUMERISM MODEL

Both private market and public sector payers have been working to put in place infrastructure that will support a model of care designed to make patients better health care consumers. Beginning in the late 1990s, this

model has focused on reducing the demand for health care services by employing increased cost-sharing linked to greater price transparency. The dominant model has aimed to increase the information about cost and quality available to consumers and to increase consumer liability through cost-sharing, so that consumers have a personal investment in reducing costs. High deductible plans such as Consumer Driven Healthcare Plans and Health Savings Accounts reflect these approaches.

CDHPs were designed explicitly to encourage patients to play a more active role in their health care delivery. While the evidence so far indicates that those who are more activated are more likely to enroll in a CDHP, the plan design itself does not significantly increase a patient's ability to take more responsibility for their care over time. Further, the greater cost-sharing inherent in many CDHPs appears to result in reduced utilization, with consumers making reductions in care indiscriminately, cutting back on both evidence-based care and care that is less effective.¹³

Providing consumers with information is necessary to support informed choices, yet it is often not sufficient to stimulate action. Consumers have been slow to take interest and use information that is currently available. Research indicates that only patients who are highly motivated use comparative quality data.¹⁴ This may change as the information becomes more readily available and as quality gaps and price differentials become more recognized by consumers. However, there is no evidence that giving consumers this information engages or activates them. In fact, the evidence suggests the opposite: In health care, studies have shown that consumers consider higher cost to be an indicator of high quality.¹⁵

SECOND-GENERATION CONSUMERISM MODEL

Engaging and activating patients to better manage their health

We actually know quite a lot about measuring and supporting patient activation. The validated Patient Activation Measure has provided insights into how and when activation occurs, what seems to facilitate or inhibit it, and clues as to how to go about explicitly supporting activation. Using the PAM and studying health behaviors, researchers have observed that those who are highly activated are overall more proactive about their health, more likely to seek out and use information to inform their decisions, and

more likely to engage in healthier behavior.¹⁶ In addition, some behaviors—those that are more complex and require sustained action, for example—are rare among individuals who are at lower levels of activation.¹⁷ Those lower in activation have fewer problem-solving skills, and therefore are more vulnerable to simply giving up when they encounter difficulties. Understanding the challenges and the reality or feasibility of care for individuals at each level of activation is key to providing appropriate support.

Emerging evidence suggests that people who work and live in social environments that are more supportive and encourage proactive health behaviors are actually more activated. Becker and Roblin¹⁸ found that in workplaces, neighborhoods, and clinics where people were encouraged to take a proactive role in their health, people were more engaged in more health-promoting behaviors. In neighborhoods and worksites where there were opportunities to exercise and choose healthy foods, employees engaged in more of these healthy behaviors.

Activation appears to be developmental, meaning people go through phases on their way to becoming effective self-managers. For this reason, strategies that meet consumers where they are and support their progress are more likely to be successful. That is, strategies that help consumers by encouraging small steps that are realistic given their level of capability, and ones that provide opportunities to gain confidence, are more likely to be successful. Simply providing information or exhorting people to make multiple changes in how they live their lives, as is the usual approach, does not work. These exhortations typically make people feel overwhelmed, and ultimately do nothing. This dynamic tends to reinforce feelings of inadequacy and a sense of failure.

Interventions have been successful in increasing activation, particularly interventions that are designed to increase empowerment and self-efficacy. Tailoring activities based on cultural norms has been shown to be effective, including in the CDC's REACH U.S. programs.¹⁹ Customizing support to the individual's level of activation is also a promising direction for increasing activation and improving outcomes. Results from a study conducted within a disease management program show that patients who were given support that was tailored to their individual level of activation had significantly greater gains in activation, greater improvements in clinical indicators, and larger reductions in costs and utilization than patients who were coached in the usual way.¹⁹

PATIENT ACTIVATION MODELS IN CLINICAL PRACTICE

Managing a chronic illness is a time consuming and complex process that requires a new model of care. Several programs have been developed in response to this recognition to provide education and support to patients to increase their skills and confidence in managing their health problems.²⁰ Studies have shown that peer support programs targeted toward patients with one or more chronic conditions can achieve savings in our health care system.²¹

These strategies focus more specifically on supports to activate and engage consumers, to build capacity within individuals and communities, and to make it easier for individuals to make better health care choices. While first-generation consumer strategies focused on information provision and financial incentives, second-generation strategies will be based, where possible, on evidence about what is effective for engaging and activating consumers. Because social environments can stimulate activation and engagement, strategies that focus on building self-efficacy and capacity, fit the individual, and are reinforced by the people and institutions that surround the individual form the core of second-generation consumerism approaches.

Promising models for chronic disease self-management have been built around peer support programs. A study published by the California HealthCare Foundation identified seven successful models of peer support, including professional-led group visits with peer exchange, peer coaches, use of community health workers, support groups, and telephone, email, and Web-based programs.

Environments that appear to foster activation tend to have the following characteristics:

1. Support and encouragement from peers and authority figures (e.g. supervisors, physicians, etc.)
2. Opportunities to engage in proactive health behaviors exist, or it is easier to make cost-effective or healthy choices
3. One's values, needs, and priorities are taken into account in decisions
4. Support is tailored to the individual's level of activation and cultural norms

POLICY RECOMMENDATIONS

Policymakers can implement numerous strategies to support consumers and patients in making better decisions to prevent and manage chronic conditions. The following recommendations are designed to address barriers in the health care delivery system that limit the ability of health care professionals to provide the support necessary to implement successful patient activation programs. Although not addressed here, policymakers may also consider increasing public health funding to support chronic disease prevention and health promotion programs that more actively engage patients in preventing or managing conditions (see chapter 6 on improving public health).

Many private sector health plans have implemented successful chronic care self-management programs—primarily for those individuals enrolled in managed care—but numerous barriers exist to implementing these programs in a fee-for-service system. Barriers to successful implementation of patient self-management include a lack of information about the key components of successful self-management programs, health plan benefit designs that do not support patient education or support services in managing chronic diseases, a reimbursement system that does not provide incentives for patient education and involvement in their care plan, lack of training among physicians and other health professionals, and a reluctance among physicians to adopt innovative models of care that rely on non-physician providers and patients to more actively monitor and manage chronic conditions. The following recommendations are designed to address these barriers.

Fund research to identify key elements of effective self-management programs

A variety of chronic disease self-management models exist, and although studies have shown some models to improve patient outcomes and control costs, it often is not clear which elements of programs lead to these outcomes. According to a report commissioned by the Agency for Healthcare Research and Quality, a limited evidence base translates into uncertainty about programming features and wide variation in the way programs are designed, delivered, and evaluated.²²

To increase the evidence base and more clearly define and evaluate effective self-management program features, the Secretary of Health and Human Services should implement a Medicare demonstration project testing those models that have proven effective in supporting self-care among chronic disease patients. This demonstration would differ from previous chronic care demonstrations by limiting participation to providers that have experience in or a commitment to supporting patient self-management. Models tested by the secretary should emphasize redesigning and supporting a team-based approach to care management; improving communication with patients and their families; educating patients on their conditions, including the development of a patient care plan; and giving patients the tools they need to take an active role in the managing their condition.

Several models have already proven effective in improving patient outcomes and reducing hospitalization. The demonstration project should seek to identify key program elements from those models that are effective in improving patient skill and confidence in managing their conditions as a means of improving health outcomes and reducing cost, rather than defining a single model of care. The secretary should also develop standards for evaluating chronic care self-management programs and provide for the adoption outcomes measures to determine which providers and patients improve patient outcomes and reduce inpatient utilization.

Support self-management through benefit design

Evidence-based plan designs use financial incentives for patients to encourage the use of care that is proven to be effective, while discouraging care for which there is less evidence for efficacy. Successful strategies include reducing out-of-pocket costs for evidence-based care such as the use of preventive services and specific chronic illness medications. The point is to make the cost-effective choice (the choice reflecting high-quality care) the easier choice for consumers to make. Evidence has shown that patients with chronic conditions face a myriad challenges in managing their conditions, and financial barriers should not be an added challenge.

Under current law, Medicare chronic disease self-management for diabetes education and medical nutrition therapy consists of a limited number of visits, which are subject to Medicare coinsurance and deduct-

ibles. Based on the outcome of the Medicare self-management demonstration, the secretary should develop a broad self-management benefit under Medicare for a broad range of chronic conditions. Under Medicare fee-for-service, the chronic care self-management benefit could be structured as a list of services not otherwise reimbursed under Medicare, or it could be designed as a bundle of services. The secretary should draw on lessons learned under the Medicare demonstration program to permit varying program designs to meet outcomes. The benefit should include a waiver of Medicare Part B cost-sharing for services provided under chronic care self-management programs to assure that cost is not a barrier to patient participation.

Chronic care self-management should also be included as an optional service under Medicaid and the State Child Health Insurance Program. Defining chronic care self-management support and the immediate outcomes of that support would permit states to receive federal matching funds for services provided under these programs. As in Medicare, cost-sharing should be waived for individuals who enroll in self-management programs. States already have the authority to contract with managed care plans to provide chronic care self-management programs, but the federal government could provide incentives to states to implement chronic care self-management either through an expedited waiver process or through grants. Congress could, as an example, expand and extend Medicaid's state transformation grants to encourage the adoption of chronic care self-management in both managed care and fee-for-service Medicaid.

Finally, the secretary should make the data collected in implementing these programs available to private health insurance plans and employers. If chronic care self-management can improve patient outcomes and reduce hospitalization, private sector plans that have not adopted self-management programs may find the data useful in deciding whether to offer the services, what benefit design they wish to use, and how to structure provider payments. Once Congress and the administration have sufficient data to support chronic care self-management, policymakers may also want to consider requiring or providing incentives to plans under contract with the Federal Employees Health Benefit Program and employer plans regulated through the Department of Labor to implement chronic care self-management programs.

Support self-management through provider incentives

Implementing self-management requires changes in traditional medical practice. According to researchers, successful models have included group visits for interested patients with comparable chronic illnesses, scheduling of extended office visits, delegating education and support functions to office staff or other trained health professionals, and systematic follow-up, which may include weekly phone calls from a nurse manager.²³

Although many providers see the potential of chronic disease self-management, there are disincentives to implementing these programs in a fee-for-service model of care. Where self-management or similar programs have been implemented by hospital outpatient clinics, for example, any resulting decrease in hospitalization use has reduced revenue to the hospital. For group practices, community clinics, and solo practitioners, many of the services provided as part of a self-management program are not reimbursed under Medicare fee-for-service. Those services that are covered, such as evaluation and management, are often not reimbursed adequately to cover provider costs.

To address these issues, Congress should pass legislation directing the Secretary of HHS to develop a payment methodology under Medicare Part B for chronic care self-management services. Payments could take the form of an increase in the value of evaluation and management services, a per-member, per-month payment to clinics and physician practices, or another methodology. The medical home model of care may also lend itself to effective patient self-management support. Patient self-management support programs and outcomes (such as gains in patient activation) should be included in public and private sector value-based purchasing initiatives. Payment for such services should be tied to performance and demonstrated outcomes.

Finally, services defined in the chronic care self-management benefit that are not otherwise covered under either Medicare or Medicaid should be added to Federally Qualified Health Center services with an appropriate adjustment to the FQHC prospective payment system under Medicaid and an increase in reasonable cost payments under Medicare.

Ensure information technology enables self-management

Active involvement in one's own health requires access to reliable information. Personal electronic health records can help patients to more effectively manage their care and improve their health outcomes by improving their access to information. Providers involved in chronic care self-management programs have indicated that at least one proven successful model of care relies on the ability of patients to have access to personal health records. Denying patients access to their own records sends an implicit message that they are not an important part of the care process.

Personal health records can help patients make better health care choices by providing access to information relevant to their particular conditions and treatment options. A personal health record should reflect care delivered by multiple health care providers, biometrics such as BMI or blood pressure that a person records directly, and data collected passively in the home and/or work environment by sensors and other monitors. The record can also be coupled with alerts, reminders, and other decision-support tools that help people take action to improve their health. Diaries and logs included in the record could also help individuals monitor their own progress on behavioral change, such as weight control or smoking cessation (see chapter 1 on electronic health information for a more detailed discussion on the overall implementation).

As policymakers move forward to ensure systemic interoperability in the exchange of personal health information, ambulatory programs should not be certified as meeting the interoperability standard unless the program includes secure patient access to an electronic health record. Failure to include such a provision could seriously impede the ability of providers to implement successful chronic care self-management programs.

Promote provider support for patient-centered care

One of the key indicators of success in reliance on patient self-management programs is provider buy-in. Some physicians have been reluctant to relinquish patient management to the patient and a care team established to support patient self-management. The Institute of Medicine has also recognized that providers need to change medical practices to understand the importance of patient values and preferences. In addition, the American

Medical Association issued a report in June 2007 outlining recommendations for change in the system of medical education. These recommendations were in response to reports that raised concerns about medical education and the inadequacies in physicians' preparation for practice in a health system that is focused on patient-centered quality and patient safety.²⁴

Congress can implement a number of changes to promote provider training and acceptance of patient self-management. First, Congress should request an IOM report on the key elements in medical school curriculum designed to promote patient self-management. Some preliminary work has been done on the IOM's recommendations on promoting patient-centered care. Furthermore, Congress should provide federal funding to medical schools and academic medical centers to test and implement teaching methods designed to promote patient-centered care. As successful training programs are identified, Congress should enact legislation conditioning receipt of funding for direct, or GME, and indirect medical education, or IME, on the adoption of programs designed to train health care practitioners and implement chronic care self-management programs in outpatient clinics, as part of the hospital discharge planning processes, and in other areas as deemed appropriate.

DISCUSSION

The first generation of consumerism strategies focused on the provision of information coupled with financial incentives as the main approach for stimulating consumer activation. Financial incentives, particularly increased cost-sharing, do not necessarily stimulate more cost-effective choices or result in greater activation.

In contrast, second-generation strategies will be built on existing evidence of what does actually activate and engage consumers. These strategies will focus on improving consumer health and functioning and supporting self-management competencies among those with chronic illness. Key characteristics of these approaches are that they are embedded in the community as part of a coordinated web of efforts that change social norms and influence skill levels and self-efficacy for self-management. They may take advantage of peer support and lay health advisor approaches, and be linked with existing efforts. Financial incentives and informational supports will still be needed, but they will be more tailored and targeted to

increase their impact. Information about both cost and quality will become both more actionable and accessible for consumers. And plan designs and benefit packages, which seek to encourage evidence-based care and discourage less effective care, are part of this approach.

Second-generation strategies will use measurement to tailor support to patient needs, track patient progress, and assess provider performance. These strategies will require provider accountability and will connect community efforts with those in the clinical setting.

Both first- and second-generation consumerism strategies affect different segments of the population. The first-generation strategies, because they rely so heavily on information and financial incentives and penalties, tend to disadvantage those who are already disadvantaged: those with lower literacy skills; those who have less access to or fewer web skills; and those with a greater illness burden and who have less income and education. The first-generation consumerism strategies tend to enlarge some of the factors that contribute to health disparities. Because second-generation strategies are designed to support consumer competencies, connect consumers more directly to needed resources, and focus on behavioral and health outcomes, they should lessen disparities.

The second-generation consumer models will be grounded in evidence and tied to outcomes. They will be designed to increase the capacity of consumers to be actively in charge of their health and health care. Without building this capacity within the consumer population, efforts to control costs and improve quality will elude us. Building a research base for launching initiatives and tying efforts to reimbursement models are essential to strategies aimed at controlling costs.

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An Agenda to Improve the Health of the Public

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Health policy discussions, ironically, seldom focus on health itself. Rather, the challenges of how to expand health insurance coverage and curtail runaway health care costs—both issues with an immediate effect on everyday lives—dominate the health policy agenda. Yet even if access and the cost problems are resolved, they may pale in comparison to those potentially gained through broader population health initiatives. Population health can be defined as the health outcomes of a group of individuals, including the distribution of such outcomes within the group. The field of population health includes study of health outcomes, patterns of health determinants, and policies and interventions that link these two.¹

Behavior, social circumstance, and the environment have a powerful influence on health, and tackling these determinants would help prevent or delay the onset of disease and disease complications. The United States performs poorly compared to other countries when it comes to achieving health for its citizens, but the new administration can lead the federal government in reforming the health care delivery system so that it improves the health status of all and makes the U.S. health care system more competitive.

The United States ranks near the bottom in measurements of health when compared with other countries of comparable economic status. Among the 30 developed nations that make up the Organization for Eco-

KEY POLICY RECOMMENDATIONS

- Set national goals of improved health performance, both absolutely and in comparison with other developed nations, and fixing organizational responsibility and authority for achieving those goals.
- Enacting comprehensive tobacco control policies, including a federal smoke-free policy, increased tobacco taxes, warning labels, countermarketing strategies, and smoking cessation efforts.
- Reducing obesity through policies such as updating nutritional standards for school lunches, expanding social marketing, eliminating “food desserts” and promoting physical activity through workplaces and schools (e.g., increased funding and quality of physical education).

nomic Cooperation and Development, or OECD, the United States ranks close to the top in per capita Gross Domestic Product, but anywhere from 19th to 25th on standard health indices. Even less prosperous countries outside the OECD have better health records than the United States. The United States ranked 46th in life expectancy from birth and 42nd in infant mortality among the 192 nations for which 2004 data are available.²

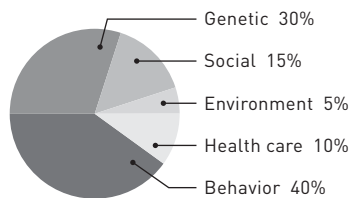
The public, health policy experts, and health care professionals complacently accept these unfavorable comparisons. This complacency may reflect perceptions that the United States’ poor ranking is caused by its ethnically heterogeneous population compared with the nations at the top of the rankings such as Japan, Switzerland, and the Scandinavian countries. Indeed, large disparities in health status do exist within the United States—by geographic region, race and ethnicity, and class.³ Yet even when comparisons are limited to white Americans, our performance is dismal.

DETERMINANTS OF HEALTH

- Genetic predisposition
- Behavioral patterns
- Environmental exposure
- Social circumstances
- Health care

Source: McGinnis JM, Russo PG, Knickman JR, *Health Affairs*, April 2002.

PROPORTIONS (Premature Mortality)



National and local policies, programs, and funding allocations that support health—not just health care—must be realigned and prioritized in order to meaningfully improve population health. This process can be informed by examining the factors underlying the health status measure “life expectancy from birth” which incorporates the main causes of premature death.⁴ These reside in five domains: behavioral patterns, social circumstances, environmental exposures, health care, and genetics. This chapter will focus on behavioral patterns, social circumstances, and environmental exposures, which arguably have the greatest effect on population health.

Boundaries pose a major challenge to the implementation of policies across each of these domains. Many of the roads to health improvement travel outside of the traditional components of a health care delivery system such as work, school, and communities. The current congressional committee structure and executive branch organization are not optimally constructed to address these issues in a health context. The new administration will likely need to restructure responsibility for public health within the federal government in order to centralize knowledge and resources around population health improvement.

THE FUTURE OF POPULATION HEALTH

Our vision for a healthy nation is one in which all Americans are enabled and empowered to achieve their full health potential, through policies that effectively address traditional health concerns as well as behavioral, environmental, and socioeconomic health determinants. This vision will require the new administration to articulate health improvement—both absolute and relative—as a national goal, and then pursue that goal as relentlessly as we have pursued the war on cancer or putting men on the moon.

Two efforts will be key to realizing this vision of optimal health: expanding and accelerating population health interventions that reduce behavioral causes of death such as smoking and obesity; and prioritizing information gathering and policy development to mitigate health disparities, particularly in low socioeconomic and racial and ethnic minority populations. But neither will be possible without strong leadership from the new administration.

Leadership

Pathways to improved national health status do not depend primarily on improving either access to medical care or the quality of that care, although both would yield important benefits, particularly for those who do not currently have access to high-quality health care. Population health improvements will come first from asserting and exercising leadership to ensure that improved health status is the central goal of American health policy. Derivative from that goal would be a greater understanding of the pathways to improved health as well as the development and implementation of the policies illuminated by those pathways.

Since the 1970s, the United States has engaged in a regular exercise—the Healthy People Project—to set decade-long targets for health improvement. The most recent report, Healthy People 2010, was, like its predecessors, the product of an extensive national consultation involving widespread public meetings, the input of a broad range of health professionals, and replication at the state and regional levels.

The Health People Project is a well-intended and well-structured effort that, for the most part, has admirable goals. But it falls short in three major respects. It is so comprehensive—comprising 28 focus areas and 467 objectives—that it is overwhelming in volume. It has very little visibility outside the public health community. And most importantly, no single health agency or official is vested with the responsibility for attaining those goals and monitoring progress toward their achievement. No one can be held accountable for failure to realize the Health People 2010 goals for the simple reason that responsibility for attaining them is too diffuse.

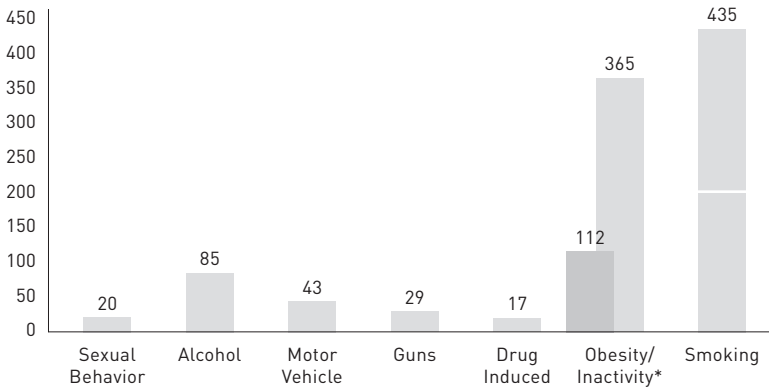
The new administration will have to reinvigorate its investment in health improvement by asserting leadership on population health at all levels of the government. A key component of this leadership will be centralizing responsibility and accountability for reaching national goals in one entity.

Behavioral patterns

The single greatest opportunity to improve health and reduce premature mortality is to change personal behavior, which accounts for 40 percent of all premature deaths in the United States. The seven most important

BEHAVIORAL CAUSES OF ANNUAL DEATHS IN THE UNITED STATES, 2000

Number of deaths (thousands)



* The two numbers reflect widely differing estimates by the CDC.

Source: Mokdad, et al., *JAMA*, 2004, 291: 1238-1245; Mokdad, et al., *JAMA*, 2005, 293: 293; KM Flegal, BI Graubard, DF Williamson, and MH Gail, "Excess Deaths Associated with Underweight, Overweight, and Obesity," *JAMA*, 2005, 293: 1861.

behavioral causes of annual deaths in the United States are tobacco use, obesity and physical inactivity, alcohol, motor vehicles, guns, sexually transmitted diseases, and drug abuse. Smoking and obesity constitute the two largest behavioral threats to the health of the public and thus represent the two best opportunities for population health improvement.

Given the tremendous health burden of tobacco use, the ultimate population health goal would be to make tobacco use so de-normalized that, over time, the United States would evolve into a smoke-free nation. The fact that tobacco use rates are declining is one of the major health success stories of the past century, along with sanitation, immunizations, and the discovery of antibiotics. The reported prevalence of adult smoking declined to a modern low of 19.7 percent for the first six months of 2007.⁵

Obesity and physical inactivity are, together, the second largest contributor to behavioral causes of premature death, and have been increasing at alarming rates. Some advocates have wondered whether the same strategies that have worked in lowering the prevalence of smoking could be applied to obesity. Two major contrasts exist, however, between the challenges posed by smoking and obesity. The tobacco industry's duplicity as

yet has no counterpart in agribusiness. And there is no real analogue in obesity for the way that nonsmokers mobilized against public smoking in response to the danger of second-hand exposure. Fortunately, the issue of obesity continues to generate significant attention and activity, and support has grown for reforms in schools, worksites, and communities that can help Americans adopt healthier lifestyles.

The new administration should prioritize building and expanding upon these smoking and obesity efforts. Better health across the population will require comprehensive tobacco policy reform that helps Americans stop smoking and removes the threat of second-hand smoke, as well as new initiatives to improve American diets and increase physical activity.

Social circumstances

The second most important remediable determinant of premature death, after behavioral causes, is found in social circumstances. This includes direct effects of social circumstances such as social isolation, as well as indirect effects whereby lower social class—measured by income, wealth, education, occupation, and neighborhood—impairs health.

The cause that receives the most attention is the obvious fact that low-income Americans often receive less medical care and poorer quality care by dint of lower rates of health insurance coverage and diminished access to high-quality health care providers. A second indirect effect operates through health behaviors, since those with lower education and income are less able to engage in health-promoting behaviors such as eating fresh foods or exercising regularly. And a third operates through differential exposure to pollution and toxic substances. But an unappreciated reality is that people enjoy better health at every step up the socioeconomic ladder, even when correcting for such factors as access to care and behavioral risk factors such as smoking, obesity, and alcohol abuse.⁶

We are beginning to understand more fully the connection between social circumstances and health disparities, but much remains to be learned. Absolute poverty creates clear food and housing instability that in turn jeopardizes health. Yet relative poverty most disadvantages the health of the poor. African-American men in Harlem, for example, have a shorter life expectancy than men in Bangladesh despite the fact that the

latter are poorer on an absolute level than the former. The United States is not unique in this regard. Countries with large gaps between the wealthy and the poor generally have worse health status than those with a similar average income, but smaller disparities in wealth. The same pattern also holds within the United States in that states with smaller wealth disparities have healthier populations, controlling for mean income.

This phenomenon may exist because countries (and states) with greater income disparities may invest less in common “goods” such as libraries, public schools, and parks than those with more equal distribution of income. There may also be more conflict and less social integration in less equal societies, and individuals who are relatively disadvantaged may feel less able to control the circumstances of daily life. The lower down the socioeconomic ladder, the more likely a person is to live a life with high stress and low control. Individual stress coping mechanisms are activated in such instances; while these are helpful in the short run, they exert long-term costs in the form of accelerated cellular aging and higher risk factors for a number of illnesses, including cardiovascular disease and diabetes.

Racial and ethnic minority populations are particularly affected by “weathering,” or premature aging leading to early development of illness and death. Indeed, compared to white Americans, minority Americans experience significantly higher rates of disease, including diabetes, stroke, asthma, and HIV/AIDS; lower levels of health care quality; and worse health outcomes.⁷ Differences in socioeconomic status play a critical role in the development of these health disparities.

Minority Americans are disproportionately more likely to have a lower socioeconomic status, which translates into reduced health care access and quality, and higher risk for negative health behaviors such as obesity and physical inactivity. Yet, it is noteworthy that racial and ethnic minority disparities in health and health care persist even at equivalent levels of socioeconomic status.⁸ As such, although federal efforts to improve socioeconomic status will greatly benefit the health of minority populations, studies are needed to increase understanding of the complex interaction between race and socioeconomic status and its effect on health. Additional research is also needed to identify effective interventions that can mitigate the damaging effects of racism on health.

POLICY RECOMMENDATIONS

Leadership

The federal government should assign accountability and responsibility for setting and attaining population health goals at all levels of the government—federal, state, and local—to a single entity, which could be an agency, office, or individual. This entity would be charged with periodic assessment of absolute and relative performance, with ample opportunities for “health competition,” or the opportunity for localities, states, and even nations to improve on health status measures such as life expectancy and smoking prevalence by trying to improve on a previous record or ranking.

The new entity’s responsibilities would include identifying strategies to achieve health goals, budgeting appropriate resources at each level, and expanding the concept of health improvement beyond traditional health silos. This entity would also have to have the authority and political independence to engage entrenched and formidable groups such as the tobacco lobby and agribusiness to ensure that federal policies for improving health clearly take precedence over these special interests.

The Secretary of Health and Human Services or the Surgeon General could, in principle, be assigned responsibility for population health improvement. The Centers for Disease Control could, as the nation’s primary public health agency, assume such responsibility. In fact, there are multiple ways that this authority and accountability could be vested in a single entity. The incoming administration or the next Congress could make this decision, or they could create a “Health of the Public” commission that would be charged with exploring the various options. If a commission leads this effort, there would have to be mechanisms to translate recommendations into action, complete with appropriate authorities, structures, and financing.

Vesting leadership at the federal level would only be a first step. Realizing the vision of establishing accountability for population health will require multiple individual strategies plus the capacity to coordinate them, monitor progress and make adjustments when necessary, and engage in continued surveillance of health status and those factors that endanger as well as promote health.

Behavioral patterns

TOBACCO USE

The next administration should strengthen effective existing anti-tobacco policies and interventions and apply them more vigorously. A first step should be to work with Congress to enact federal legislation to make all public facilities smoke-free, following the example of increasing numbers of European countries such as the United Kingdom, Ireland, and Italy. Already 24 states have stringent smoke-free ordinances, and over 2,000 individual cities and communities are smoke-free. That still leaves most of the nation lacking the strongest protection against the proven carcinogenic and cardiac risk factors contained in second-hand tobacco smoke.

The federal government should also raise the price of tobacco products to decrease their usage. The price elasticity of demand for tobacco products is about negative 0.4, which means that for every 10 percent increase in the price of a pack of cigarettes, there will be a 4 percent decline in consumption. Over the past seven years, 82 separate state tax increases have been enacted, but the federal tax has remained at 39 cents per pack, despite numerous attempts to increase it.

Raising tobacco taxes and expanding the number of smoke-free areas—either locally or nationally—are the two most powerful tobacco control measures currently known. Yet a number of other strategies would also be effective. Congress could strengthen the currently anemic warning labels on cigarette packs, as has occurred in multiple countries, such as Australia and Canada. The new administration could promote and expand counter-marketing initiatives, such as the American Legacy Foundation's truth® campaign, which has been shown to reduce initiation of youth smoking.

The federal government could also increase support for smoking cessation services to help smokers quit. Reforms are needed to improve coverage of smoking cessation drugs under state Medicaid plans; fund more aggressive cessation programs through the Veterans Health Administration and Federally Qualified Community Health Centers, both of which serve at-risk populations; and expand marketing for the national toll free telephone quitline (1-800-QUITNOW), which despite its meager marketing budget, has still logged over a million calls.

Research on more effective interventions to reduce smoking will also be needed. The first step would be to increase funding for tobacco control

research at the National Institutes of Health. Given the degree of health damage caused by tobacco use, NIH investment in tobacco research is disproportionately small, especially regarding tobacco cessation. It would be particularly useful to understand the connection between smoking and mental health and substance abuse. It is estimated that persons with mental illness and/or substance abuse account for nearly half of the 435,000 annual deaths from tobacco in the United States and that they consume 44 percent of the cigarettes sold in this country.⁹

OBESITY AND PHYSICAL INACTIVITY

Considerable effort has already been focused on improving dietary intake, and promoting healthier diets in school settings should remain an important area of focus for the new administration. The U.S. Department of Agriculture should update nutritional standards for school lunches, and the president should expand the department's authority over "alternative foods"—such as food and beverage items sold in vending machines, sold during or after schools separately from, and sometimes in competition with, the school lunch program. The Secretary of Agriculture could be charged with developing and implementing standards for alternative foods as well school lunches.

Even outside of school settings, the federal government can implement community-level interventions to change children's diets. The CDC could, for example, conduct general media or social marketing campaigns with anti-obesity messages to educate families about the obesity epidemic. This federal effort would be augmented by more aggressive efforts by the Federal Trade Commission, which recently examined the practice of marketing unhealthy food products to young children.¹⁰ The president could further direct the FTC to develop and enforce standards for marketing to children, building upon the voluntary efforts by the Alliance for a Healthier Generation and other groups.

For the general population, obesity prevention initiatives targeting diet generally attempt to increase access to healthy foods and increase transparency of nutritional content. The federal government should expand these initiatives by providing grants through the Department of Agriculture to tackle "food deserts" by encouraging entry of new grocery stores, farmers markets, and cooperatives into underserved neighborhoods. Zoning ordinances and financial incentives are being used to address this issue in cer-

tain states and locales.¹¹ Supporting these activities through earmarking small business tax credits could prove fruitful as well.

Congress and the next administration can also direct the Food and Drug Administration to improve current nutritional labeling of foods and expand the scope of foods that it labels. FDA has begun to study how current labels could be modified to improve label literacy and dietary choices by everyday Americans. The FDA should accelerate efforts in this regard. A number of advocates have also recommended that FDA's authority over nutrition labeling be extended to encompass meals sold in chain restaurants and foods sold in vending machines. If Congress legislated such authority, the FDA could propose regulations that would require large chains to publish caloric and fat content of food items on menus or menu boards, which could positively influence food choices at the point of service. A few states and localities have already introduced legislation to do just that, although the restaurant industry opposes such measures.

Experts have also noted that efforts to encourage better food selection must include restructuring agricultural subsidies to promote greater production and consumption of healthier food products. Specific policies would include altering the agricultural legislation that subsidizes foods to incentivize the growth of fruit and vegetables. Imposing selective taxes and rebates on different food products may be another viable option.

The federal government will have to combine policy efforts to promote healthier foods with initiatives that enable and encourage physical activity. Policies to enhance physical activity span school, worksite, and community settings. The major policy option for schools is to restore regular, if not daily, physical education, which has been reduced dramatically over the last decade because of competing education requirements and funding constraints. Physical activity improves both the health and academic performance of children, and thus merits higher priority by educators and a greater appropriation of funding for the Carol M. White Physical Education Program, a federal grantmaking program. Federally funded physical education should also be required to adhere to national standards for quality.

The federal government could target children outside of school settings, as well, with social marketing campaigns directed by the CDC. Funding for the VERB campaign—a national, multicultural social marketing campaign that applied commercial marketing strategies in order to increase

and maintain physical activity among tweens—was eliminated by the Congress, but it is one model for a successful campaign. The evaluation found significant increases in physical activity in the “tween” age group.¹²

In worksite and community settings, interventions that reliably lead to higher rates of physical activity are still being examined. Levels of physical activity are largely influenced by sociodemographics, personal and cultural norms, safety and security, and time constraints. However, some experts believe that enhancing the built environment may increase physical activity by providing greater opportunities and choices for individuals to be physically active.¹³ Such enhancements include better design of buildings and communities so that stairways are a convenient and safe alternative to elevators, and residents have access to sidewalks and bike paths.

One good example of a built environment enhancement is the Department of Transportation’s Safe Routes to Schools program, which assists community efforts to encourage and enable more children to safely walk and bike to school, and could be expanded. Most ordinances and guidelines that influence the built environment or community design are promulgated at the state or local level. The Environmental Protection Agency in collaboration with the CDC and National Institute for Environmental Health Sciences could be charged to develop federal ordinances or guidelines that include standards or benchmarks for new construction or renovation, and expand grant programs or establish a Hill-Burton type of capital fund to assist compliance. The Department of Interior could also be held accountable for reasonable access to parks and trails so that recreation is not just the pursuit of the wealthy.

The EPA and CDC, in collaboration with their public partners such as the National Association of County and City Health Officials and the American Public Health Association have begun to support the conduct of Health Impact Assessments. HIAs have been defined as a “collection of procedures and tools by which projects, policies, and programs can be evaluated based on their potential effects on the health of a population, and the distribution of these effects within the populations.” The EPA and CDC could encourage voluntary HIAs by increasing availability and usability of current tools and expanding funding support. Although certain to be contentious, HIAs could also be required as part of environmental impact assessments.¹⁴

Social circumstances

Experts debate the best policy options to address socioeconomic determinants of health, but all agree upon the need for greater information. The federal government should dramatically expand data collection and analysis that would help explain the influence of poverty and education on health and the intermediary mechanisms that make the poor and less-educated less healthy, and the better off relatively healthier.

Existing research has demonstrated that health improvement strategies targeting the other determinants of health—behavior, access to medical care, and the environment—may differentially benefit the poor and less well-educated because the burden of these determinants falls disproportionately upon them. However, the most actionable policies lie predominantly outside the domain of health and health care. They involve the social arenas of education, jobs, taxation, minimum wages, maternal and paternal leave, child care for working parents, universal preschool education, K-12 education and higher education, and transportation.

In the environmental field, new construction projects are required to file an environmental impact report. In the health field, there should be a similar health impact report that makes explicit what effect new social policies will have on population health and how negative results could be mitigated. Other countries have already embraced such a policy. Britain, for example, has enacted three overriding policy recommendations: all policies that influence health must be evaluated for their effect on the disparities in health resulting from differences in socioeconomic status; high priority should be given to the health of families with children; and income inequalities should be reduced and living standards improved among the poor.

Much remains to be learned about how race and ethnicity interact with socioeconomic factors to influence health, but the federal government could pursue a number of tested policy options right now to reduce racial and ethnic minority health disparities. Cultural competence—language access, a diverse workforce, cultural awareness, and racial and ethnic data reporting—has been proven to be an important step toward addressing racism in health care and should be expanded dramatically.¹⁵ The federal government could promote cultural competence by encouraging, if not requiring, racial and ethnic minority health data collection, in addition to health

data collection for low socioeconomic groups across federally supported or operated programs through the Department of Health and Human Services, Veterans' Health Administration, and the Department of Defense. Increased oversight and assistance with implementation of standards on Culturally and Linguistically Appropriate Services in health care settings is a second strategy, which would require renewed leadership from the Office of Civil Rights. And the federal government could also restore funds for diversity training and pipeline programs within Title VII Health Professions Programs directed by HRSA.

Whether targeting individuals from low socioeconomic populations, racial or ethnic minority populations, or both, the federal government should lead efforts to integrate empowerment principles into overall population health strategies, ensuring that disenfranchised individuals have a strong voice to advocate for their concerns. The World Bank emphasizes four key elements of empowerment: access to information, inclusion and participation, accountability, and local organizational capacity. The United States is a nation that values entrepreneurialism over solidarity, and individual responsibility over a social contract, so these underlying principles may be difficult to embrace, but they point to a path toward improving the social circumstances of public health.

DISCUSSION

Improving the health and well-being of the American people is critically dependent on greater investment in population health interventions. Such investment has historically fallen short in two fundamental ways. It has been far too small relative to the investment in medical care focusing on diagnosis and treatment of disease. And investment has been targeted narrowly on addressing factors that directly contribute to disease causation. Experts now understand that long-term success in population health improvement is contingent upon addressing traditional health concerns as well as ensuring economic and educational opportunity and healthy environments for all Americans.

The next administration will have the opportunity to lead federal intervention to tackle the two most important behavioral categories of death

and disability: smoking and obesity/physical inactivity. It can also address the socioeconomic determinants of health, which have an independent effect on health, but also act synergistically with behavioral factors and with race and ethnicity to worsen health outcomes. Addressing socioeconomic factors has been and continues to be a major challenge, forcing population health advocates to move outside of the traditional public health realm to examine the effects that federal policies at the Departments of Education, Housing, Agriculture, and Treasury have on health.

Finally, no population health improvement strategy would be complete without examining and addressing environmental health challenges that can cause serious health concerns. And addressing the gaps of the nation's public health infrastructure will be critically important. In particular, the public health workforce shortage, antiquated physical structures, fragmented communication and organizational networks, and above all, inadequate financing, require urgent attention and action.

The next president must insist upon leadership across and within our federal agencies for any or all of the strategies described to be successful at advancing population health. He should designate a single entity to have primary responsibility and accountability for population health improvement, and ensure the authority and necessary resources, including budgetary support, needed to implement the vision and achieve meaningful reform. It will be incumbent upon the president to elevate the field of population health to the same level as disease care, and prioritize realignment of investment of federal health dollars to emphasize prevention and public health.

For many of our population health challenges, we have as many questions as we do answers. Yet, there exists an impressive body of knowledge that has or could be readily translated into effective interventions right now, and an urgency that demands greater action. If the 20th century is our guide, we know that 21st-century population health improvements will enable and empower a greater number of Americans to be healthy, independent, and productive. As a result, the United States will be a stronger nation.

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