The Population Health Mandate
A Broader Approach to Care Delivery

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THE NEED FOR POPULATION health management has never been more urgent. More than 49 million Americans are uninsured and almost half (45 percent) of Americans suffer from at least one chronic condition. Our nation is currently facing a population health challenge of unprecedented scope because of the increasing obligation to properly address healthcare costs that are rising exponentially and, simultaneously, a nation of individuals whose health status is lower than previous generations and continuing to decline. These issues send an undeniable signal that we must take a broader perspective if we truly are going to improve the health of the public and, therefore, succeed in solving the healthcare cost conundrum. Population health is essential to health reform. The goals of population health include improving care coordination, which is a cornerstone of both health reform and population health; enhancing access and wellness through prevention and lifestyle changes; reducing or eliminating waste and error; eradicating disparities; and improving transparency and accountability.

Improving the health of the population will require enhanced efforts to promote healthy behaviors and to prevent illness. The so-called "silos" in healthcare delivery will need to be dismantled—providers must cooperate to advance seamless, coordinated care that spans settings, health conditions, and reimbursement mechanisms. Interdisciplinary teams of healthcare providers who are committed to diligent management of chronic conditions and providing safe, high-quality care will play a central role. Policymakers will be called upon to craft policies that support illness prevention, health promotion, and public health, and healthcare professionals must continue their efforts to enforce evidence-based practice. All of these efforts must align to promote health and wellness and to advance a new population health agenda.

Population Health: Components

- Health outcomes
- Health determinants
- Policies

Population health provides unique opportunities to apply overlapping and synergistic interventions to care for populations that can be defined by need, condition, or geography. Although this approach to care continues to undergo rapid evolution, there is a growing consensus that it will be a key component in addressing the twin healthcare challenges of quality and cost. The beauty of the population perspective is that it offers a systematic approach to improving well-being and a framework for monitoring our nation's health status, indicating where there has been improvement and where new strategies are required.

Interactions among the healthcare, business, and political communities are rarely considered in the current illness-focused model for healthcare delivery, yet they are the drivers of population health outcomes. There is significant and as yet unrealized opportunity to advance the population health agenda and to improve health through efforts that focus on personal behavior and health promotion within each of these interactions.

Determining where responsibilities lie is essential to achieving national health reform and population health goals. Another key issue is our emerging understanding of the important role citizens or patients play in their own health. The challenge is to help patients achieve a level of understanding to motivate them to positively affect their own health, and, ultimately, to develop self-efficacy.

From a governance perspective, the fiduciary responsibility for quality and safety is broadened under the population health umbrella. Imagine, for example, coordinated care across the continuum, both inside and outside of the hospital, as is the goal of a patient-centered medical home or accountable care organization (ACO) model. In both of those models, governance oversight will expand to include sites owned by the institution that are not part of the traditional inpatient setting. Practicing population-based medicine is becoming an imperative to tackle many of the healthcare system's major challenges; this imperative will involve a much broader span of control and concern for board members.

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This special section defines population health and what it means from a provider standpoint, addresses the current policy framework, reviews national efforts to address population health, and presents strategies and questions for board members, senior executives, and physician leaders to consider when determining how a population health approach can begin to address the twin challenges of quality and cost in healthcare at the local provider level.

Figure 1: The Four Pillars of Population Health

Beyond Public Health
Population health refers to the "distribution of health outcomes within a population, the health determinants that influence distribution, and the policies and interventions that impact the determinants." Population health spans wellness and health promotion, management of chronic disease, care of the frail and elderly, and palliative care for those at the end of life. Population health approaches address the broader landscape of healthcare consumers to preserve wellness and minimize the impact of illness.

Population health rests on four pillars: chronic care management, quality and safety, public health, and health policy. The incorporation of these concepts into education and practice, as well as the interactions between them, lays the foundation for achieving population health goals and strategies. (See Figure 1.)

Only 55 percent of U.S. adults receive recommended preventive care, acute care, and care for chronic conditions such as hypertension and diabetes. Given the large proportion of the population suffering from chronic conditions, we must consider how to improve care coordination across the many settings in which care is delivered. Behavior, prevention, and education play important roles in chronic care management.

The quality and safety pillar requires the collective efforts of patients and interprofessional teams of healthcare providers. Synergy between these groups will be integral to achieve gains in quality and safety. Local, state, and national public health efforts must support and complement the work being done in local healthcare institutions.

The public health pillar contains local and national efforts (usually undertaken by government agencies such as the Centers for Disease Control and Prevention [CDC], and local government bodies) that include clean drinking water, vaccination, obesity reduction, smoking cessation, and preparation for pandemics, among others. Public health activities also include identification of health determinants, disparities, and disease burden, as well as strategies to address community-wide health concerns. These efforts are important and support our national infrastructure to ensure that we live in relatively safe communities and that our basic health needs are met. But, by focusing on public health efforts alone, we fail to recognize that policies influence population health, even at the national level, and that quality and safety exert an enormous influence on the health of the population.

Policy efforts (the fourth pillar) support population-focused chronic care management, quality and safety, and public health. For example, current pay-for-performance initiatives represent policy support that will drive adoption of community-wide quality and safety standards. Taken a step further, making the data available to other healthcare constituents and consumers to review and compare performance (i.e., transparency) creates a sense of accountability for performance, which creates an impetus for improvement. Future policy changes that support transparency and public accountability for health and wellness (beyond the health reform legislation) will be necessary to meet the population health mandate. Taken together, the population health goals, strategies, and implementation tactics associated with the four pillars will drive efforts to achieve health and wellness.

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National Initiatives Addressing Population Health Needs
Health Reform
The Patient Protection and Affordable Care Act creates a new framework for healthcare delivery in the U.S. It adopts a comprehensive national strategy for quality improvement, the foundation of which is clinically integrated, systems-based practice. The result is care that is coordinated across all diseases, providers, and care settings, and over time. Hospitals and health systems will need to extend their quality oversight process as they pursue increasing numbers of collaborative relationships with physicians and other external entities. Various

federal agencies recently issued regulatory guidance with regard to the ACO program that will have a major influence on the extension of the quality oversight process to the outpatient setting. The ACO and patient-centered medical home models contain aspects of care delivery that fall under the scope of population health.

Essentially, these efforts—and the resulting new payment models—are an attempt to identify and eliminate waste and inefficiencies in the system. However, much of the emphasis of health reform is on new payments rather than explicit new methods to deliver care. To succeed in this environment, health care leaders must not simply follow the tenets of reform, but fully understand and follow the tenets of population-based care, as they are intricately related.

The ACO program is a shared savings model. Without the cultural change in practice that ingrains employment of a population health approach, it will be extremely difficult to achieve the savings necessary to succeed in an ACO. Only by using the tools of population-based care can providers hope to achieve the savings.

Other Initiatives
Beyond—and preceding—health reform, the federal government and prominent public-private collaborations have been active proponents of and participants in establishing priorities, strategies, and funding for programs to address population health challenges.

In 2008, the National Priorities Partnership (NPP), convened by the National Quality Forum, undertook addressing four major healthcare challenges that affect all Americans: eliminating harm, eradicating disparities, reducing disease burden, and removing waste. One of the six priorities identified to address these challenges is improving the health of the population. The goal is ambitious, but also fundamental to healthcare reform. This partnership marks the first national effort that identified population health as an explicit priority.

Through the CDC, the U.S. Department of Health and Human Services (HHS) formally established national health priorities in 1979. The Healthy People programs set national public health priorities to be implemented over a 10-year period by national, state, and local entities. Periodic reviews are conducted to measure and report progress toward the goals. The Healthy People 2020 overarching goals are: "attaining high-quality, longer lives free of preventable disease, disability, injury, and premature death; achieving health equity, eliminating disparities, and improving the health of all groups; creating social and physical environments that promote good health for all; and promoting quality of life, health development, and healthy behaviors across all life stages."

All 50 states and the District of Columbia have been active participants in national initiatives, including the NPP and Healthy People programs. In addition, individual states have implemented their own reforms to eliminate self-identified healthcare disparities, increase access to high-quality and cost-effective care, and improve healthcare delivery at manageable costs. Of note is Massachusetts, which was the first state to provide universal coverage for all residents in 2006. Vermont has implemented the Blueprint for Health, which is a legislated chronic care management program that incorporates policies and support for accessible, appropriate, and timely coordinated clinical and community care, self-management tools, and information technology. Vermont's plan has already yielded positive outcomes.

11. For more information, visit www.nationalprioritiespartnership.org.
13. Massachusetts Trial Court Law Libraries, Massachusetts laws about health insurance, Commonwealth of Massachusetts. See www. lawlib.state.ma.us/subject/about/health-insurance.html.

Challenges in Implementing a Population Health Approach

Most stakeholders in healthcare reform agree that the status quo cannot remain and that implementing a population health paradigm will involve three broad arenas: clinical, policy, and business.

Clinical
Healthcare students and providers need to be educated about the importance of incorporating healthcare promotion and prevention into day-to-day patient management. In addition, health behavior counseling that emphasizes self-care should be incorporated into primary and treatment care. Evidence-based models of care must be expanded and used in the creation of clinical care guidelines that are readily accessible at the point of care and that also inform health insurance coverage.

Policy
A broad array of legislative, regulatory, and policy changes must be enacted that provide economic and structural support to a health promotion (or disease prevention) delivery system. In addition, legislative and regulatory changes will be warranted to enable economically sound changes in health insurance that improve access to chronic care, wellness, and prevention activities. Furthermore, legislative, regulatory, and policy changes are required to increase the systemic quality of care and eliminate waste. Last, but not least, the integration of community/public health and clinical systems, as envisioned in the patient-centered medical home, must be broadly promoted across the entire spectrum of care.

Business
As the use of information technology continues to expand in the health sector, purchasers need to be acutely aware of the business case for developing and implementing Meaningful Use, interoperable systems and data warehouses that support population health interventions across multiple healthcare settings. This is critically important to establishing the links between outcome measures, evaluation of competing healthcare interventions, and reimbursement for various services, which will enable the incorporation of mandatory reporting and improvement procedures that lead to continuous quality improvement and reduce the rate of healthcare cost inflation.

Where to Start: Identifying Population Groups

Groups of individuals defined by geography, condition, or other attributes can be considered a population if data are available to track them over time. Research has demonstrated that patients with chronic diseases (e.g., diabetes, obesity, cancer, and cardiovascular disease) account for most of the dollars spent in the healthcare system. Additionally, we know that patients’ health literacy, education level, geography, and socioeconomic status can have an adverse impact on their access to proper preventive healthcare. Our care delivery system currently does not provide adequate care coordination to properly address the needs of these patients, and they ultimately cost the healthcare system more because they enter the system when their illness is more severe—usually via the emergency room, the most expensive point of care. These groups of patients are a logical place to begin a population-health approach.

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Population-based care seeks an interdisciplinary approach in which primary care providers collaborate with allied health professionals to educate, support, follow up, and evaluate the efficacy of their treatment plans. Via the first two population health pillars of chronic care management and quality and safety, providers can address patient needs with better coordination of care through the use of patient-centered medical homes, and/or entering into accountable payment agreements that emphasize payment for quality outcomes for a defined population, such as the ACO model. The emphasis here must be on interdisciplinary provider teams that focus on entire episodes of care, rather than individual physicians treating individual problems, one at a time—this is a fundamental cultural difference in the way care is provided.

Additionally, without proper data and technology to first identify and then track the outcomes of these groups, improving the health of a population will be next to impossible. The Mobilizing Action Toward Community Health (MATCH) project, a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute, contains health data by county that include outcomes, behaviors, clinical care, social and economic factors, and physical environment factors; data also are available on national benchmarks and rankings. The CDC also collects data for chronic disease patients by state. Local providers can use this information as a starting point to identify population groups or areas of focus. Providers with an interoperable electronic health record would need to build a registry of patients by target group, and then track those patients’ outcomes over time. The current capabilities of electronic health records do not allow for this health policy must spearhead and support this effort in order to make progress.

Target “Hot Spots”

One of the best examples of targeting a “hot spot” (i.e., a population group that is most at risk and/or most costly to the health system) is the story of Dr. Jeffrey Brenner in Camden, New Jersey, which was reported on by Dr. Atul Gawande in a New Yorker article. Camden was on its way to becoming one of the poorest, most crime-ridden cities in the nation when Dr. Brenner joined the staff of a family medicine practice there in 1995. Concurrently, a police reform commission was centered on mapping and focusing resources on crime “hot spots.”

Deducing that he could do something similar with healthcare, Dr. Brenner persuaded Camden’s three main hospitals to grant him access to their medical billing records, and spent weeks determining how to use the information to create a searchable database. He then started tabulating the emergency room visits of victims of serious assault.

He also studied patterns of patient flow into and out of Camden hospitals. For example, he found that more people from a single building in Camden were sent to the hospital with serious falls—57 elderly in two years—than any other city, resulting in almost $3 million in healthcare bills. He created maps of the city, color-coded by the hospital costs of its residents, and identified the two most expensive city blocks. In his experience, the people with the highest medical costs—the people cycling in and out of the hospital—usually were the people who received the worst care.

Dr. Brenner’s efforts led to the creation of a special clinic to focus on those groups he identified as being the most expensive. The care teams included doctors, social workers, physician assistants, hospice workers, and other caregivers to provide the full scope of care from nutrition, lifestyle, and behaviors to ensuring that the patients take medications properly and show up for appointments. Now known as the Camden Coalition of Healthcare Providers, and made possible through grants from philanthropies including the Robert Wood Johnson Foundation and the Merck Foundation, the group has been able to measure its long-term effect on its first 36 “super-utilizers.” They averaged 62 hospital and emergency room visits per month before joining the program and 37 visits after—a 40 percent reduction. Their hospital bills averaged $12.6 million per month before, and just over half a million after—a 56 percent reduction. The approach, in a nutshell, is to look for the most expensive patients in the system and then direct resources and brainpower toward helping them.

The Chronic Care Model

The greatest contributor to premature death from preventable chronic illness is patient...
Aligning Incentives to Focus on Prevention

Although the benefits are substantial, the short-term costs of preventive care are high. In addition to cost, gaps in participation are common as a result of the traditional focus of healthcare on treating sickness, diminished access to and availability of preventive services, lack of insurance coverage, health illiteracy, and minimal integration between public and clinical health.20 Because more than 60 percent of Americans obtain health insurance coverage through their employers, businesses have a significant stake in their employees’ health.21 At the policy and leadership level, resources must be allocated to ensure the system structure supports the needs of the population. At the care delivery level, providers must ensure that the most appropriate care is provided to every patient within the targeted population. Health and wellness must be fostered at the community level through a partnership between public health, employers, and healthcare systems. The goal is to promote preventive services, healthy lifestyle behaviors, and measures consistent with numerous national reports.22

There are three levels of prevention strategies in a population health approach: primary, secondary, and tertiary. Primary prevention strategies (i.e., health promotion and wellness activities) ultimately will improve the overall health of our citizens and decrease the costs associated with over-medicalization. Secondary prevention strategies (i.e., screening) are important for early detection of disease. Such efforts will reduce barriers to early treatment, or completion of therapy, leading to improved outcomes and reduced disease chronicity. Tertiary prevention focuses on minimizing disease complications and comorbidities through appropriate, evidence-based treatment and—critical to reducing healthcare costs—by coordinating and providing continuity of care for chronic conditions.

A major cultural change is occurring in the practice of medicine. Emanating from that cultural change in the practice of medicine is the realization that the span of control for hospital and health system boards now includes new entities that previously had not been considered.

Issues for the Board, Executives, and Physician Leaders

Understanding Specific Patient Populations

Dr. Brenner’s example of targeting the most expensive patients is an extreme scenario that most boards across the nation will not face. But each healthcare provider organization will be faced with certain groups of patients who require better-coordinated care. One way to begin to address this issue is to ask questions such as:

- For all the diabetic patients we cared for this year, how do we compare to regional and national benchmarks?
- Although our medical care measures might be good for our heart failure patients, how are we doing in other measures of well-being for our heart failure patients in the last year, relative to a regional and national benchmark?
- How do the outcomes of our patients in various ethnic groups compare to regional and national norms? (Begin by examining a couple of chronic issues [e.g., blood pressure, angina control] from an ethnic disparity.

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Our challenge, from a leadership standpoint, is to train the future leaders from across the healthcare spectrum who will go forward and improve the health of the population.

Creation of Interdisciplinary Care Teams
The need for interdisciplinary care teams to provide coordinated care to these groups of patients cannot be overemphasized. The creation of patient-centered medical homes (or similar methods) to coordinate and track care across individual points of care will be essential. Beyond providing acute care for patients, these interdisciplinary teams educate patients on nutrition, lifestyle choices, and behaviors; support patients by seeking and helping to eliminate obstacles to patient wellness; follow up on points of care to monitor patient progress; and evaluate the efficacy of treatment plans and protocols for the population group. This also will require new physician leaders who are able and willing to practice in such a team setting. Hospitals and health systems seeking to shift their focus to population health should consider creating a leadership team of primary care physicians, specialists, nurses, nutritionists, behaviorists, and other allied health professionals who then can disseminate this new interdisciplinary culture throughout the organization.

Eventually, new graduates of medical school will undergo this type of team and leadership training as a part of their undergraduate medical education. This generally is not part of current medical training, although there has been some small but significant improvement in this area. Health reform legislation includes resources to pay for annual prevention visits, expand federally qualified community health centers (i.e., access to care), and provide more funding for population health efforts at the CDC. However, hospitals and health systems cannot wait for a new generation of physicians and slow-moving policy implementation to change the care delivery culture in their institutions.

The board and management team must take a realistic look at their relationships with physicians and other care providers in the community, and develop strategies to involve the necessary providers in this effort. The “business case” for this activity—and the reason it is a board-level issue—rests in the need to reduce costs through the elimination of waste, inefficiency, and errors, and to improve the quality of care through better care coordination.

Culture
The imperative to change the way care is delivered using a population health approach requires a fundamental change in the culture of practicing medicine. Healthcare boards are now focused on the relationship between quality and cost, but they are making decisions in this area within the “old” framework of individual points of care and individual physicians in the hospital setting. Boards looking to integrate and align physicians with their hospitals and other provider groups (whether to prepare for becoming an ACO or for other reasons) must place culture at the top of their agenda. With clinical integration comes new relationships with physicians, and this is an ideal time and opportunity to start fresh, with new expectations, standards, and accountability. Engendering physician support for this effort at the outset will allow culture change to happen more swiftly.

Getting Physicians “On Board”
Current policy creates some obvious incentives for hospitals and health systems to apply population health strategies, including increasing efficiency, quality improvement, and accountability, and reducing costs—all of which will serve to prepare hospitals and health systems for bundled payments and pay-for-performance. However, this incentive is not yet as strong for physicians—especially those who still practice independently and are not affiliated with a hospital or health system. Once the payment system has been fully transformed into a value-based system, the impetus for physicians to focus on population health will be much greater. Health reform legislation is attempting to move the healthcare system in this direction, but perhaps not strongly or quickly enough to create a sense of urgency for change in the current care delivery environment.

In addition to aligned economic incentives, physicians also need training and practice in using a population-health method. Along with the need to develop new relationships in physicians and create new physician leadership positions to facilitate clinical integration, the board must provide the resources to train doctors on these issues. Our challenge, from a leadership standpoint, is to train the future leaders from across the healthcare spectrum who will go forward and improve the health of the population.

Looking Forward
In order to achieve the ambitious goal of improving the healthcare system in the United States, we must be prepared to broaden our current focus, the results of which will allow managed withdrawal from our addiction to acute, episodic healthcare. This will mean making a commitment to incorporate population health strategies in our practice of medicine. Prevention and disease management are integral to maintaining population health and encouraging wellness. All healthcare professionals have a role to play. Strong leadership from the board, senior executives, and physician leaders will enable hospitals and health systems to achieve the population health mandate.

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