Aligning Physician and Executive Compensation with Population Health Management

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About the Authors

Don Seymour is President of Don Seymour & Associates and a Governance Institute Advisor. He has worked with healthcare organizations of all types and sizes on strategy, governance, and organization planning, as well as a broad range of performance and medical staff issues. Mr. Seymour frequently presents on subjects related to senior leadership in healthcare organizations. He has made presentations to the American Hospital Association (AHA), Fortune 100 companies, and a variety of other national, state, and regional groups. He has served as Executive Editor for *Futurescan*™ (AHA's annual healthcare trends publication) since 2004. He is on the board of Cornell University's Sloan Program for Healthcare Management. He can be reached at don@donseymourassociates.com or (617) 462-4313.

William F. Jessee, M.D., FACMPE, Chief Medical Officer and Senior Advisor of INTEGRATED Healthcare Strategies, joined in October 2011 after serving for more than 12 years as President and CEO of the Medical Group Management Association (MGMA). He also holds an academic appointment as Clinical Professor of Health Systems, Policy, and Management at the University of Colorado School of Public Health. Dr. Jessee is one of the nation's leading experts on physician services management and hospital–physician integration. In particular, he is skilled in the development and implementation of strategies for creating aligned economic interests among physicians, hospitals, and payers. He is also widely recognized as an expert on health policy issues, and the role of governance in quality improvement and patient safety. He can be reached at bill.jessee@ihstrategies.com or (612) 339-0919.

Susan O'Hare is a Senior Vice President with INTEGRATED Healthcare Strategies. Ms. O'Hare has over 20 years of leadership experience in the healthcare industry. Her robust insights and knowledge of the inner workings of healthcare organizations has made her a recognized expert in the industry. With a focus on total compensation and rewards, she is a trusted resource for clients. Ms. O'Hare has shared her passion and knowledge for the industry through many leadership roles. Most notably, she was a founding CEO Member and Board Chairperson for the Children's Hospital Alliance of Tennessee. She is a recognized community leader and has chaired multiple non-profit boards. She can be reached at susan.ohare@ihstrategies.com or (612) 339-0919.

Chad Stutelberg is Executive Vice President and Practice Leader of the Physician Services practice at INTEGRATED Healthcare Strategies. He has been a healthcare consultant for 18 years, in the areas of physician benchmarking, compensation, and operations. His extensive experience in the audit, design, and implementation of new physician income distribution models for physicians affiliated with integrated delivery systems, academic medical centers, stand-alone hospitals, and large physician group practices has helped clients better align their compensation systems, improve their financial performance, and increase their success in recruiting and retaining the best physicians. He can be reached at chad.stutelberg@ihstrategies.com or (612) 339-0919.

David A. Bjork, Ph.D., Senior Vice President and Senior Advisor, joined INTEGRATED Healthcare Strategies in 1994 to start a division focused on executive compensation and incentive plans. Over the next decade, as Practice Leader, he helped develop the largest and best respected executive compensation consulting practice serving the healthcare industry. He developed the standards INTEGRATED Healthcare Strategies now uses in evaluating the reasonableness of executive compensation; advising boards on CEO performance appraisal; advising boards on governance of executive compensation; and conducting surveys of executive compensation. He has helped dozens of clients minimize the risk of intermediate sanctions by redesigning their compensation arrangements or providing evidence that the compensation arrangements are indeed reasonable. He has helped several boards recruit and retain CEOs by showing them how to configure compensation arrangements and employment agreements to meet their needs. He can be reached at david.bjork@ihstrategies.com or (612) 339-0919.

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9685 Via Excelencia • Suite 100 • San Diego, CA 92126
Toll Free (877) 712-8778 • **Fax** (858) 909-0813
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Executive Summary

As healthcare evolves, providers are beginning to take steps to understand how to succeed under value-based payments. Much of this success will eventually depend upon an organization's ability to manage population health.

THE IMPETUS FOR CHANGE COMES FROM TWO DIRECTIONS: the intentional pursuit of opportunity, and reaction to changes in the marketplace. Few provider organizations and few health insurers have the full range of capabilities and competencies needed to manage population health effectively. Succeeding at this will require a substantial cultural shift from volume-based to value-based thinking, a behavioral shift to implement the change, and time to learn how to manage population health well.

Healthcare provider compensation has typically not rewarded risk-taking. Incorporating population health management goals and objectives into physician and executive incentive plans is often a multi-year process that evolves as the organization learns how to do an effective job in meeting the needs of its local populace. This white paper looks at what healthcare organizations are doing to realign incentives as payers shift risk to providers; as reimbursement shifts from fee-for-service to bundled payments, shared savings, and capitation; and as payers and providers embrace population health management.

In our study of 44 organizations that we believed had embraced population health management and managed care for a sizable number of lives, we found relatively little change thus far in the metrics used for rewarding physicians and executives. More providers have introduced metrics aligned with population health management to their balanced scorecards than have begun tying these metrics to compensation and rewards.

We found a few organizations that are already paying physicians and executives in ways that are aligned with the economics of population health management. These organizations generally have a long history of population health management, or something like it, and ample experience with risk-based contracts.

We found a few interesting examples of organizations in the midst of change—ones that were beginning to reward effectiveness at managing the total cost of care, instead of cost-per-adjusted discharge, and growth in covered lives instead of growth in admissions or outpatient visits. These organizations were changing metrics before they changed incentives, learning to walk before learning to run. We also found a lot of reluctance to do anything, since payers in most markets were still paying for volume on a fee-for-service basis, and providers in those markets saw little or no advantage to experimenting with new metrics that might hurt their bottom lines.

Most organizations are far from ready to embrace or pursue the change, because they don't have the capabilities needed to manage population health or insurance risk. Some providers are taking steps to understand how to succeed under value-based payments, such as hiring people from the managed care industry, starting joint ventures with managed care industry partners, and practicing on their own self-insured employee group. (See the case examples in the body of the white paper for more information on what organizations are doing to link compensation to population health metrics.)

From what we learned in our interviews and from watching organizations move through the process of getting physicians and executives to embrace population health management, and then aligning their compensation to support it, the path outlined below is reasonably likely to work well and better than more direct paths:

1. Getting physicians (and executives and the workforce as a whole) to understand the compelling reasons for engaging in population health management
2. Getting physicians to decide what models and processes to adopt
3. Inviting physicians to participate (implicit in the invitation, of course, is the practical reality that physicians who choose not to participate may get left behind)
4. Helping participants learn how to succeed in the new model

The metrics being used to align physician and executive compensation with the goals of population health management and accountable care and with the economics of value-based contracts fall into three general categories:

- Clinical quality
- Patient experience and satisfaction
- Cost-effectiveness

The measures that get to the heart of population health management have to do with overall cost of care for an assigned population, wellness or health status of a population (particularly

a population with a chronic disease), and care coordination or health maintenance—meaning overall outcomes for a patient over time. Wellness and care coordination are difficult to measure, so instead many provider organizations are using metrics that presumably help maintain or improve wellness or care coordination, such as working in medical homes and using advanced practitioners to better manage continuity of care.

Effective population health management will likely require working with non-traditional partners, as well as locating or developing services that are sorely lacking in many communities.

Boards that are exploring population health management will need to begin paying more attention to community needs and ask what the health system should do to meet those needs. Instead of focusing on inpatient statistics and budgets, they need to pay attention to anecdotal stories, like the story of the woman with the dusty house, or the man who couldn't pick up his prescriptions. They need to think about a broad range of issues that might not have been on their radar a year or two ago.

Before any organization initiates efforts toward more effective management of population health, it needs to ask and answer the question, why are we doing this? Even in an organization that has carefully identified its strategies and goals for population health management and has taken the time to get buy-in to those goals from physicians, management, staff, and the board, the process is not likely to be an easy one—culture change is a slow and difficult process.

Seven obstacles to population health efforts emerged during our research:

1. Lack of resources
2. Lack of risk management expertise
3. Lack of needed data and information systems
4. Difficulty managing the "straddle" between volume- and value-based payment
5. Over-specialization and lack of care coordination
6. Poor or inappropriate end-of-life care
7. Misaligned compensation

Key Board Takeaways

Before launching a population health management initiative, directors should ask the management team and physician leaders to respond to several questions:

- Why do we want to launch a population health management initiative? What is our objective?
- What capital investment is needed?
- When can we expect to see a return on investment?
- To what extent are payers willing to reward us for value?
- How do we stack up on value metrics?
- How well-integrated are our physicians?
- How good is our care coordination across sites and among physicians?
- What is our plan for the interim when some of our revenue is value-driven and some is volume-driven?
- Do we have a good understanding of the costs of care across the entire continuum of care?
- What additional resources do we need for our population health management activities, and where will we get them?
- How will we get the data, analytics, and expertise to manage the financial risk we will assume through our population health management activities?
- What additional information systems will we need and what will they cost?
- How are we ensuring that patient wishes for end-of-life care are known, documented, and easily accessible to our caregivers?
- What more should we do to align our compensation policies with our population health management goals?

Once the population health management initiative is underway, the next step is to tie physician and executive compensation to population health metrics, to help accelerate the culture change and achievement of new goals.

The process improvement required under population health management takes time and will not happen overnight. It is important to begin changing the organization's structure and culture today, and begin changing incentives to reward the kinds of structural, operational, and behavioral changes needed to make population health management effective in the future.

The following are initiatives healthcare leaders can take now to begin the transition to population health management. Many of these initiatives will be beneficial to communities, patients, and providers even while fee-for-service remains predominant. In all cases, these are practical steps that can be taken to link executive and physician compensation to progress on population health management goals:

- Begin tying physician and executive compensation to new metrics.
- Begin introducing advanced practice clinicians or expanding their use in primary care practices.
- Introduce patient-centered medical homes staffed to manage care of people with chronic diseases.
- Develop IT capabilities for pinpointing care needs and begin tying physician pay to use of electronic health records.
- Begin adopting e-health apps.
- Introduce access to care as a metric for primary care compensation.

Introduction

As healthcare evolves, providers are beginning to take steps to understand how to succeed under value-based payments. Much of this success will eventually depend upon an organization's ability to manage population health.

THE IMPETUS FOR CHANGE COMES FROM BOTH THE INTENtional pursuit of opportunity as payment models change, and reaction to changes in the marketplace. Few provider organizations today have the full range of capabilities and competencies needed to manage population health effectively. Succeeding at this will require a substantial cultural shift from volume-based to value-based thinking, a behavioral shift to implement the change, and time to learn how to manage population health well.

Healthcare provider compensation has typically not rewarded risk-taking. Incorporating population health management goals and objectives into physician and executive incentive plans is often a multi-year process that evolves as the organization learns how to do an effective job in meeting the needs of its local populace. This white paper looks at what healthcare organizations are doing to realign incentives as payers shift risk to providers; as reimbursement shifts from fee-for-service to bundled payments, shared savings, and capitation; and as payers and providers embrace population health management.

As discussed in detail below, we found relatively little change thus far in the metrics used for rewarding physicians and executives. More providers have introduced metrics aligned with population health management to their balanced scorecards than have begun tying these metrics to compensation and rewards. As such, we looked also at patterns that suggest what changes providers will make eventually, when the time is right.

Purpose and Focus: What Did We Look For?

We undertook this study to learn what healthcare organizations are doing to realign performance expectations, goals, and incentives to support population health management as payers shift risk to providers and as providers embark on initiatives to manage population health. We wanted to identify the types of changes providers are making, or planning to make; find out how these changes are being received by physicians and managers; learn what types of changes seemed to be taking hold in the industry, as indicators of what might eventually become widespread patterns; and share these lessons with others who are just beginning to wonder what types of changes they should consider making.

Recognizing that population health management and risk-based reimbursement are slow in arriving in most locales and that, even where they have arrived, they typically represent only a small portion of most providers' volume, we expected to find most organizations not yet ready to change the metrics they use to measure, promote, or reward institutional performance. Still, we expected to find some providers engaged in testing new metrics to learn how best to manage performance as reimbursement shifts from paying for volume to paying for value.

We wanted to find out what healthcare organizations are already doing to realign incentives for physicians, executives, and managers to shape the change in behaviors needed to be successful at population health management. We also wanted to find out how they are attempting to discover what they will eventually need to do, if and when risk-based reimbursement and population health management become a major portion of their volume.

To do so, we identified which provider organizations are already engaged in population health management, and which already have a significant portion of their reimbursement through risk-based contracts. This process included determining which organizations have already decided to change the metrics they use for managing performance, and which ones are exploring the alternatives. It also included discovering what is driving the pace of change, what is encouraging organizations to change the way they measure performance, and what is keeping others from doing so.

Performance is managed in multiple ways, of course, and not all of these ways involve monetary incentives. So we looked not just for metrics used in compensation plans, but also those being used in operating goals and balanced scorecards.

Methodology

We began by identifying 44 organizations that we believed had embraced population health management and managed care for a sizable number of covered lives. We reviewed lists of accountable care organizations (ACOs), asked our consultants for suggestions, reviewed the news and literature on population health management and accountable care, obtained suggestions from other professionals, and then chose the 44 organizations that seemed to be the likeliest to have begun changing the metrics used in evaluating their performance. Of these 44 organizations, four were health plans with large affiliated physician groups and a number of hospitals; five were large medical groups, several of which were closely affiliated with a hospital and one of which owned its own health plan; nine were single-hospital systems with a large group of employed physicians and a network of voluntary physicians involved in a physician–hospital organization for managed care contracting; the remainder were large or midsized integrated health systems with multiple hospitals and large networks of employed and voluntary physicians.

We pursued interviews with all 44 organizations and completed interviews with 26 of them, which provided us with the information included in this study. This group of 26 organizations included two health plans with a number of hospitals and a large group of employed physicians; three large medical groups, two of which owned one or more hospitals and one with a health plan; five single-hospital systems with large networks of employed and voluntary physicians; and 16 large or midsized integrated health systems with multiple hospitals and large networks of employed and voluntary physicians. All 26 organizations had accountable care contracts with CMS; most of them also had value-based contracts with commercial insurers. The smallest organization was a freestanding medical group with about $200 million in revenues; the largest, an integrated delivery system with over $8 billion in revenues.

We developed an interview guide with 13 questions, beginning with questions about the degree to which the organization was committed to population health management and the amount of business under value-based payment contracts, then moving on to questions about metrics for success, use of those metrics in balanced scorecards, and use of those metrics in physician and executive compensation. We asked 10 of our consultants to interview 50 executives at 44 organizations, using this interview guide. Between May and October of 2014 we completed interviews with 29 executives at 26 organizations with enough information to use in the study. Half of the interviews were conducted via telephone, and half were conducted face to face. Thirteen of the interviewees were physician leaders and 16 were lay executives.

Status: What Did We Find?

Our study found little change in the metrics used for determining variable pay for physicians and a modest amount of change in the metrics used for determining variable pay for executives.

WE FOUND METRICS BEING INTRODUCED TO PROMOTE change and to manage performance, but not yet used to reward performance. We found some pilot projects intended to test the feasibility of linking pay to these new metrics.

We also found, as we knew we would, a few organizations that are already paying physicians and executives in ways that are aligned with the economics of population health management. These organizations generally have a long history of population health management, or something like it, and ample experience with risk-based contracts. They have well-established practices for managing performance, offering monetary incentives to drive success in their own economic environment. They are health plans with their own delivery systems, or provider organizations with their own health plans or with a major portion of their payment stream already tied to success at managing the total cost of care for a designated population.

We found a few interesting examples of organizations in the midst of change—ones that were beginning to reward effectiveness at managing the total cost of care, instead of cost-per-adjusted discharge, and growth in covered lives instead of growth in admissions or outpatient visits. We also found a lot of reluctance to do anything, since payers in most markets were still paying for volume on a fee-for-service basis, and providers in those markets saw little or no advantage to experimenting with new metrics that might hurt their bottom lines.

We found that most of the organizations in the midst of change were beginning by changing metrics before they changed incentives, learning to walk before learning to run. This gave them the opportunity to begin to measure performance using these new metrics as they developed new measurement systems, and as they developed databases, norms, and baselines that allowed them to calibrate performance expectations, set reasonable goals, and refine the metrics before taking on the additional risk of tying rewards to the new metrics. This way, they could do "dry runs" and show physicians and managers how their rewards might be determined in the future. With this approach, the physicians and managers could learn how to change their behaviors in ways that would work under new reward systems, without having to put their current income at risk as they were adjusting to the new metrics.

We learned that most organizations are doing little even to introduce and explore using metrics related to population health management, for four reasons:

- In most locales, reimbursement patterns haven't changed enough to matter. The amount of revenue from risk-based contracts amounts to only 2.4 percent for the median hospital.
- Many hospitals and systems have chosen to wait and watch, rather than experiment. They have decided that they will be able to learn from others' experience what works best, without having to invest or risk much in the early stages of learning.
- Most hospitals and systems don't have the information systems or databases they need to measure or manage risk. Some are developing systems and databases but not yet using them for measuring performance.
- Many hospitals and systems don't have the resources needed to make the changes necessary to manage population health. Many can't afford the information systems they would need and are exploring other alternatives—mergers, sales, or affiliations—instead.

Providers that are true managed care organizations—staff- and group-model HMOs like Kaiser and the Permanente medical groups, Health Partners in Minnesota, Group Health Cooperative and Pacific Medical Centers in Seattle, Family Health Plan Cooperative in Wisconsin, Harvard Pilgrim Health Plan and Harvard Vanguard Medical Associates, Univera Healthcare in western New York, and Valley Health Care in Santa Clara, California—have decades of experience managing population health, using metrics that promote management of members' health, and rewarding physicians and executives for managing members' health well. So do provider organizations that have long had their own health plans, like Mayo Clinic, Carle in Illinois, Henry Ford Health System in Detroit, Geisinger and UPMC in Pennsylvania, Scott & White in Texas (now Baylor Scott & White), Presbyterian Healthcare Services in New Mexico, Sharp Health in California, Fairview Health Services in Minnesota, Intermountain

Healthcare in Utah, Sentara Healthcare in Virginia, and Health First in Florida.

Most of these organizations have been using metrics for physician and executive compensation that align rewards with the economics of population health management in their own environment. These metrics and incentives can usually be adapted to work perfectly well with shared savings and bundled payment plans as well as with other types of risk-based reimbursement. They also provide models that can be adopted or adapted by other providers that are now just learning how to manage the risk in risk-based contracts. More important, however, is the knowledge and skills these organizations have developed for managing population health. Simply adopting the metrics and incentives isn't likely to work for novices without also learning how to manage care under risk-based contracts.

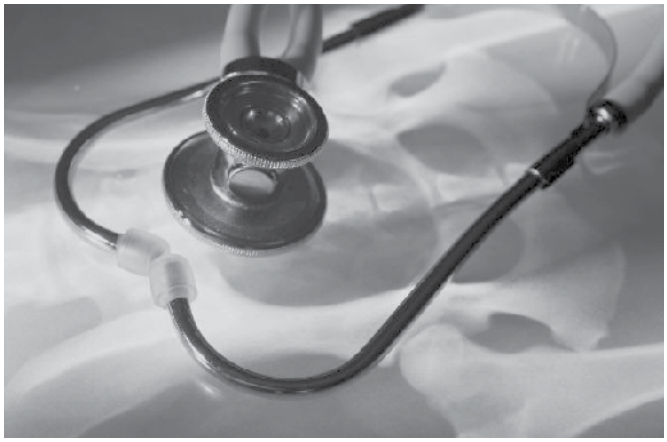
> Most of the organizations in the midst of change are beginning by changing metrics before they change incentives, learning to walk before learning to run.

Many medical groups and health systems in California, Massachusetts, and Minnesota have had enough experience with capitation to have learned how to manage health for a specific population, even though that experience may have been 20 years ago. If that experience was recent enough, the skills they learned may still be useful, but if not, the skills they learned long ago may now be rusty. Likewise, systems that used to have their own health plans but no longer do, like Allina in Minnesota, once learned how to manage health for a specific population, and may have retained or may be able to recover those skills.

Some large systems are now acquiring established health plans, thereby acquiring the expertise of those health plans. Catholic Health Initiatives, North Shore Long Island Jewish, and Partners are all buying health plans. Health plans, though, may know how to manage the risk inherent in health insurance, but they don't know a lot about managing health. Buying a health plan is a strategy for acquiring market share and learning how to manage insurance risk, more than a strategy for learning how to manage population health. It is, however, a step toward acquiring a lot of risk-based business, which will give them the opportunity to learn how to manage population health.

Likewise, some large insurers are acquiring provider organizations. Highmark has acquired West Penn Allegheny Health System, for example.

There is a new universe of consultants, presumably experts, offering providers guidance on population health management, with packages of metrics that can be put directly to use in managing diseases, managing handoffs and transitions in care, moving care to the most cost-effective site, measuring performance, changing behavior, and aligning incentives with the economics of population health management.



The following section details a few examples from organizations that have already begun to tie physician and executive compensation to population health metrics.

Case Examples

A midsized integrated health system in the Southeast region with an unusually large portion of its patient volume covered by Medicare has decided to encourage its primary care physicians to maintain their productivity while using resources more conservatively by integrating panel size into the reward program for physicians.

Physicians are paid largely for personal productivity, but the pay rate per wRVU rises with panel size and with productivity. For physicians with the smallest panels (under 2,000 patients), the payment per wRVU is lowest and doesn't increase with productivity. To encourage physicians to take on larger panels, the payment increases by $3 to $5 per wRVU as panel size increases, and by $1 to $4 as productivity increases in the larger panels. The payment rate also rises if physicians meet a set of quality goals—and more for physicians with large panels than for those with smaller panels.

As a result, a highly productive physician can earn $50,000 more with a large panel than with a smaller panel.

A highly integrated health system in the Midwest, with a large network of primary care and specialty physicians and extensive prior experience with capitation, has gotten most of its payers to offer risk-based contracts that make it possible to encourage its specialists as well as its primary care physicians to accept a risk-based compensation program. Physician compensation is based largely on personal productivity, but a small portion of production compensation is tied to panel size. If a practice group earns enough under the risk-based contracts to fund a bonus, physicians can also earn up to 15 percent of their production compensation for meeting goals for quality and patient satisfaction and for "citizenship" (participating in efforts to develop and implement initiatives to improve quality, continuity of care, and patient experience).

Ten percent of production compensation is tied to panel size, and the remainder to individual production. Almost all of the bonus contingent on cost-savings under risk-based reimbursement is tied to meeting quality metrics, but a small portion is tied to patient satisfaction and citizenship. As a result, 25 percent of total compensation opportunity is based on using resources conservatively, and a physician in a group that generates savings by managing larger panels can earn 25 percent more than one in a group with a comparable production but with smaller panel size and a more traditional, more expensive practice style.

A highly integrated health system in the Southeast with a large multi-specialty group of employed physicians has only limited exposure to risk-based reimbursement, as payers in its region have not wanted to delegate risk management to providers. Nonetheless, it encourages its primary care physicians to accept larger panels and use advanced practice clinicians by rewarding them for handling larger panels, and by rewarding only those with larger panels for meeting clinical quality goals and for controlling practice expenses.

Pay per wRVU is below average, so physicians are strongly incented to take on larger panels, use advanced practice clinicians in their practices, and manage chronic diseases well. Physicians are incented to use advanced practice clinicians in their practices by setting panel size thresholds high enough that they cannot be managed without them.

Supervising advanced practitioners is rewarded through a production-based fee that rises with total advanced practitioner wRVUs when additional advanced practitioners are supervised. Above-average panel size is rewarded with a fixed stipend that rises as panel size reaches the 75th percentile and again at the 90th percentile. Better-than-average scores on managing chronic diseases are rewarded with a small bonus that doubles at the 75th percentile and triples at the 90th percentile. Better-than-average cost-effectiveness is rewarded with a fixed bonus that doubles at the 75th percentile and triples at the 90th. Better-than-average overall performance on a balanced scorecard with a variety of metrics is rewarded with a bonus that varies with the score.

As a result, a primary care physician with a large panel who also supervises two advanced practice clinicians, excels at meeting the quality metrics, and manages costs well can earn $60,000 more than one with the same production and equal productivity generated from a small panel of patients.

A large multi-hospital system in the Midwest with a large statewide network of primary care physicians has a Medicare shared savings plan and several risk-based commercial contracts. It has decided to encourage physicians to engage in population health management by tying a portion of physician pay to metrics rewarded by Medicare but also to metrics that represent

cost-effectiveness of care and providing care in the most appropriate setting.

It has designed a physician incentive plan that pays a fixed award for meeting a set of goals for patient satisfaction, clinical quality, and use of electronic medical records, and another fixed award for meeting goals for increasing panel size, improving timely access, decreasing readmissions, and decreasing emergency room visits. The awards for quality and population health management are tied to personal productivity, so the amount of the award rises stepwise with productivity. Award size doubles when productivity reaches median and triples when productivity reaches the 75th percentile.

As a result, a highly productive physician who excels on the quality measures and on population health management measures can earn $30,000 more than an equally productive physician who doesn't meet these goals.

A large integrated health system in the North Central region with seven hospitals, a large group of employed physicians, a large regional network of aligned physicians, and its own health plan has years of experience managing population health under risk-based contracts. When CMS introduced accountable care contracts, the system quickly decided to become one of the pioneers. Most of its commercial contracts are now value-based.

It has an electronic health record giving all affiliated providers ready access to patient information; it has built a reliable data base on its enrolled population and on patients covered by other payers; it has an analytical system for identifying people with chronic diseases and other elevated health risks; and it introduced disease management programs a number of years ago.

The health system has experimented with paying several cohorts of physicians fixed salaries to manage care for an assigned panel of patients. It has recently redesigned its compensation program for primary care physicians to tie 20 percent of compensation to clinical quality, patient satisfaction, and cost-effectiveness (measured as funds remaining at year-end under value-based contracts).

It has not yet redesigned its executive incentive compensation plan to align it with population health management except to change the metric for financial performance from operating surplus to cost per unit of service.

A midsized integrated health system in the Midwest with one large hospital, a large group of employed physicians, and a regional network of ambulatory sites has had a close working relationship with a major insurer for a number of years. This insurer has delegated most responsibility for care management to the health system. The system has asked for and received risk-based contracts from most of its other payers and now gets about 40 percent of its revenue under risk-based contracts.

With most of the physicians in its primary market employed by the system, it has been able to develop an electronic health record accessible to its entire medical staff. As almost the sole provider in a rural area, it has a stable population to manage and has been able over time to build a good database on many of the people in the population served, with a reasonably good list of people with chronic diseases and other health risks. The system has established medical homes, added advanced practitioners and care coordinators, and has even established a division focused on managing continuity of care at home and at the workplace. It has developed a model for engaging people in managing their own health, and a model for intervening to manage care of patients with chronic diseases.

It has identified metrics for managing population health and added them to its balanced scorecard (e.g., care coordination, chronic disease management, and total cost of care). It is now collecting baseline information and benchmarks to use in setting goals for disease management and cost of care. It is also redesigning its physician compensation program with incentives for managing population health and expects to introduce the metrics (for clinical quality, total cost of care, and chronic disease management) on a trial basis within a year or so before actually tying the metrics to pay. It has not yet tied pay for executives, either, to the metrics for managing population health, but expects to do so soon.

A large integrated health system in the Northeast region has committed to embracing population health management and accountable care. It has rapidly built a large regional network of employed physicians and a network of independent physicians aligned with the system's initiatives to accept value-based contracts, reduce the cost of care, and manage care for populations covered by value-based contracts. It has developed an accountable care organization to participate in a Medicare shared-savings contract. It has negotiated value-based contracts with its largest commercial payers, covering a large portion of its volume.

The health system is building a new electronic health record that will allow all affiliated providers easy access to patient information. It began its efforts to coordinate care with its employee population and redesigned its self-insured health plan to require all affiliated physicians to participate in helping manage the health of this population. It is introducing processes to coordinate care to its physician network, establishing medical homes, and introducing case managers, health coaches, and pharmacists to its network of medical homes. It has built a data mining system, identified high-risk patients with chronic diseases, begun monitoring their care and lab work and prescription refills, and set up a system for intervening as necessary to help manage their health.

It has added metrics for coordinating care to its balanced scorecard and introduced two measures to its executive incentive plans (number of lives attributed under value-based contracts and reducing cost of care for employees through chronic disease management and care coordination). It has not yet begun to redesign its physician compensation plans but intends to do so soon.

A large integrated health system in the Southeast region with six hospitals, several hundred employed physicians, and a large regional network of affiliated physicians has a joint venture in population health management with a major health insurer.

It has developed an electronic health record giving ready access to clinical information to all affiliated physicians. It has developed medical homes for the covered population, and built teams of care navigators and advanced practitioners to manage transitions and continuity of care. With the insurer, it has identified covered people with chronic diseases and introduced disease management programs.

The health system has added metrics supporting population health management (total cost of care for attributed lives, timely access to care, and avoiding acute care incidents for patients with diabetes and congestive heart failure) to its balanced scorecard but has not yet tied them to either executive or physician compensation, although it intends to do so eventually.

A large integrated health system in the Great Lakes region with six hospitals, several hundred employed physicians, and a regional network of affiliated physicians is developing its own health plan by working with the consulting arm of another health plan. It has established a division to manage care under value-based contracts, which is initially focusing on managing the health costs of the system's own employees, but is also pursuing opportunities for value-based contracts with commercial insurers.

It already has an electronic health record that allows all affiliated providers ready access to patient information. It is developing the systems needed to manage population health, with the

intent to contract directly with self-insured employers and offer an insured product to small employers.

The health system has developed separate scorecards for the new value-based division and the traditional volume-based division. It has linked pay for the executives in the value-based division directly to the metrics for managing population health (engagement of patients with complex conditions; quality of care of patients with diabetes and cancer care) as well as standard metrics for a health plan (member satisfaction, access, responsiveness, cost per member per month).

It has also redesigned its compensation program for physicians. Physicians get a draw equal to 85 percent of the previous year's clinical cash compensation; each physician is eligible for an incentive award up to 20 percent of that draw if the physician performs well on sets of quality and patient satisfaction measures and if the system as a whole meets its budgeted operating margin.

A large multi-specialty medical group on the West Coast has, for years, gotten most of its revenue through a large contract paying a capitated amount for physician services. Because of this, it has been using an electronic health record and has built a reliable database on the health status of its enrolled population. It has identified members with high risk of health issues, developed disease management programs, and has long been using advanced practitioners and social workers to help patients manage their own health.

It has also been measuring its performance for several years using metrics appropriate for managing the care of its enrolled population—both cost per member per month and the HEDIS measures for quality. These metrics for managing population health are linked to pay for physicians and executives, although only a small portion of compensation is tied to performance. Funding of any bonus for physicians or executives depends on keeping cost per member per month low enough to generate a healthy margin on the capitated contract, and the insurer contributes an additional amount if the group performs above average on the quality metrics. Incentives for physicians and executives use the same metrics, and both get modest rewards for keeping cost of care below the capitated revenue and for meeting or exceeding quality goals. Rewards are tied almost entirely to group performance, instead of individual performance.

A physician-owned multi-specialty "group without walls" in the Southeast consists of about 375 physicians and advanced practice clinicians. All the physicians are also shareholders of the company. These providers practice in some 90 locations throughout their service area.

As of 2012, all the primary care practices in this organization had achieved NCQA recognition as Level 3 patient-centered medical homes. With the specialists in the group, they now comprise a "medical neighborhood" and they have positioned themselves to transition from a primarily fee-for-service environment to one in which their payer contracts have a significant value-based reimbursement component. In July 2012, they became a Medicare Shared Savings ACO.

Relationships with the three hospitals the group uses were somewhat adversarial a few years ago because of the group's success in reducing inpatient care. However, things are more collaborative today—in part because reducing readmissions has helped the hospitals avoid Medicare penalties, and in part because of new leadership at one of the hospitals that recognizes the new roles that hospitals and physicians will need to play in a value-based payment environment.

Because of the payer dynamics in their market, the group operates almost exclusively in a fee-for-service (FFS) environment. But while insurer payments to the group have been almost exclusively FFS, the group has included a significant value-based component (largely driven by metrics of quality and patient access) in their physician compensation formula. In 2012, they began to participate in value-based commercial contracts (in addition to their Medicare ACO involvement). That necessitated new investments in data analytics and risk management tools to allow them to manage the risk that they plan to assume going forward. They partnered with three other organizations, one of which was a local hospital, to raise the capital that they needed for these investments. As of 2013, they received about $13 million in value-based payments from commercial insurers (compared with total revenues of about $200 million).

The group's Medicare ACO venture has been somewhat handicapped by the fact that they were already a low-cost provider prior to entering into the ACO agreement. Their Medicare annual expenditures are about $7,900 per capita (compared with a national average of almost $10,000). Accordingly, there is little room for further reductions that would trigger gainsharing. This is one of the main drivers for their plans to move into risk-bearing (capitated) arrangements in the near future. They intend to go directly to large employers with the risk-bearing product, rather than working through commercial insurers. Despite the group's clear track record of high quality and low cost, getting insurers to enter into any risk-bearing arrangements with them has been a major challenge. In the CEO's words, their biggest obstacle is "prying dollars out of the cold dead hands of the payers."

Their internal arrangements for physician compensation are not coupled directly with the mode of payment from the insurers. But physician compensation within the group is designed to incentivize group cohesiveness, population health, and financial performance. Base salaries are set at the 25th percentile of MGMA benchmarks for the specialty, so long as production is at or above the 35th percentile. Revenues for production above the 35th percentile (as well as non-production revenues such as EHR meaningful use payments, quality incentive payments, etc.) are allocated to a "value pool" (30 percent) and an "efficiency pool" (70 percent). Performance metrics are then used to make payments from the two pools to individual providers on a quarterly basis.

What Is Driving Change? Why Different Paces at Different Places?

The impetus for the change to population health management comes from two directions: the intentional pursuit of opportunity, and reaction to changes in the marketplace.

SOME ORGANIZATIONS DECIDED TO JOIN CMS'S PIONEER ACO project with shared savings and bundled payment contracts, and developed accountable care organizations to learn how to manage risk under these contracts or to take advantage of the opportunity for shared savings. Others pursued risk-based contracts with commercial insurers or with self-insured employers. A few large health systems decided to buy health insurance plans, while others decided to develop the capability of selling health insurance by hiring people from the managed care industry. Some organizations decided to explore joint ventures with payers or to affiliate with health systems that already had their own health plans.

Most provider organizations haven't actively pursued accountable-care or risk-based contracts and are reacting to commercial payers that want to explore ways of controlling cost or shifting risk to providers. And many payers have not shown much interest in offering risk-based contracts, or have decided to do so very selectively, only in some markets, and only with some providers.

But most provider organizations haven't actively pursued accountable-care or risk-based contracts and are reacting to commercial payers that want to explore ways of controlling cost or shifting risk to providers. And many payers have not shown much interest in offering risk-based contracts, or have decided to do so very selectively, only in some markets, and only with some providers.

Where reimbursement patterns aren't changing, or where risk-based contracts are only a minor portion of a provider's business, there isn't much need to embark on an ambitious move toward population health management.

Some providers are willing to embrace the change, because they see the change as inevitable and view it as an opportunity to get a jump on the competition. Some are actually eager to do so, because they are culturally and strategically ready, often because they already have the internal capability of managing care under risk-based contracts.

Most organizations are far from ready to embrace or pursue the change, because they don't have the capabilities needed to manage population health or insurance risk. Most small, independent hospitals can't afford to acquire or develop those capabilities on their own. Most large provider organizations don't have the capabilities and competencies required to manage population health and insurance risk, either, but they may be able to afford to acquire or develop those capabilities.

Few provider organizations and few health insurers have the full range of capabilities and competencies needed to manage population health effectively. Unless the organization as a whole is an ACO or a provider-based managed care organization, they need a separate business unit focused on population health management, a team of executives focused on it, a separate financial system (budgeting, reporting, decision support), the right group and number of physicians, medical homes with their own teams of advanced practitioners and care coordinators, electronic health records accessible by all providers, a system for integrating and analyzing clinical information from multiple databases, information about the age and health status of all members of the population covered by a contract, a list of all members with elevated health risks, disease management programs, a system providing real-time access to information about every encounter with a provider, a system for monitoring members' success at maintaining their health and prescribed regimens, capability of monitoring and diagnosing patients in remote locations (telemedicine), and a performance management system built on an explicit strategy with explicit goals and metrics and the capability of monitoring and evaluating performance on a real-time basis.

In addition, they need the cultural shift from volume-based to value-based thinking and the behavioral shift to implement the change, and time to learn how to manage population health well—how to engage patients in managing their own health, how to help people with chronic diseases access care when needed, how to help people afford the drugs they need and remember to take them, how to manage transitions and handoffs, how to modify self-destructive behavior, and how to get physicians to identify with the organization, not just with their own practices and patients.

A payer cannot, by itself, manage population health. It probably has a reasonably good database on members' health status, but it all comes from claims, not from knowing or understanding

the patients' total health status or ability to manage their own health; and it has next to no capability of intervening to treat a condition or prevent it from becoming worse. A payer can only manage the financial risk involved in health insurance. It can develop strategies and programs for managing chronic diseases and engaging enrollees in managing their own health. It can develop strategies for encouraging providers to manage care in a more cost-effective way. In the absence of its own captive provider network, though, it focuses more on choosing cost-effective providers and managing costs by imposing limits and copays and requiring pre-admission certification, rather than by actively managing the care its members need or obtain.

However, the payers that are acquiring providers, and maybe even those being acquired by providers, are positioning themselves to learn how to manage care and manage population health. Like health systems with their own health plans, payers with captive provider networks may surprise most providers by learning faster how to manage population health, thereby being able to capture market share with better pricing and eventually displacing providers that don't move quickly enough.

Learning How to Manage Financial Risk in Health Insurance and Capitation

As the industry evolves, providers are beginning to take steps to understand how to succeed under value-based payments. Just as in corporate America, where companies can beta test a new idea without needing to do a large-scale launch, healthcare organizations are adopting approaches to learn as they go, while the rewards for success are small but the penalties for failure are also small. Steps providers are taking include:

- Hiring people from the managed care industry
- Starting joint ventures with managed care industry partners
- Practicing on their own self-insured employee group

Hiring people from the managed care industry is akin to a make vs. buy decision in general industry. The fundamental question here is whether to attempt to learn and develop this business from the ground up, or to hire someone who is already experienced with it. It's a lesson many providers learned during the 1990s when they began hiring physicians and made the mistake of putting a hospital administrator in charge of the practice. Managing physician practices is fundamentally different from running a hospital. The same holds true for managing insurance risk and capitation—it is very different from operating in a fee-for-service world. In a fee-for-service world, volume is king and providers are paid more if they do more. Insurers, by contrast, seek to reduce the volume of services they have to pay for, especially under capitated contracts. These incentives are exact opposites. It stands to reason that it's a lot easier to be successful in managing insurance risk if you already have experience doing it.

Entering into a joint venture with a managed care industry partner is a variation on the make vs. buy decision. The basic rationale is that by combining talents and assigning responsibilities based on which party is best suited by experience to do it, a joint venture can succeed in a business that is new to both partners. On the face of it, this makes sense, but in reality it's relatively hard to pull off. Again, the incentives are exact opposites. Providers will seek to maximize volume while risk managers will seek to limit services, and the fact that they share a common employer will not prevent colleagues from pushing and pulling in opposite directions. There may be times when such an approach makes sense, but it requires courage, a firm commitment to shared goals, and the ability to listen to other views when the inevitable conflicts arise.

We don't want to encourage or reward ill-conceived ideas having little probability of success. But we do need to encourage experimentation and recognize that not every idea is going to be a success.

Practicing on the organization's own self-insured employee group is a learning exercise that many providers have pursued. It is basically a "toe in the water" approach wherein the provider organization, typically self-funded, enrolls its own employee group in a single managed care health plan. This is best done with assistance from the managed care executive and provides an opportunity for a health system to learn and understand insurance risk management on a relatively small scale. There are a couple of admonitions worth noting:

1. The provider's employee group will not mimic the service area population. It is skewed both by age and gender to younger female workers. Also, it may be more heavily weighted toward individuals who are health conscious, given the nature of their professions, and who are historically higher users of health services.
2. The size of the group is likely not large enough to carry the administrative overhead of the plan or to provide the skill required to adequately manage actuarial risk.

Despite these drawbacks, managing a self-insured employee group under population health management principles is a useful step in the learning process.

Healthcare provider compensation has typically not rewarded risk-taking; that needs to change quickly. Executives cannot be expected to experiment with recruitment, joint ventures, and employee insurance carve-outs if they are going to be penalized for less-than-stellar results. There is an art to this. We don't want to encourage or reward ill-conceived ideas having little probability of success. But we do need to encourage experimentation and recognize that not every idea is going to be a success.

Aligning Pay with Population Health Management

Incorporating population health management goals and objectives into physician and executive incentive plans is often a multi-year process that evolves as the organization learns how to do an effective job in meeting the needs of its local populace.

THE FIRST YEAR, THE QUESTION IS "WHAT CAN I MEASURE?" The second year, the focus shifts to "what are we doing about the problems? What interventions are we offering?" The third year, the organization can begin to ask, "what are the outcomes of our interventions?"

For a medical group with a history of managing care for an enrolled population under a capitated contract, pay is probably already aligned reasonably well with the goals of population health management and the task of aligning pay with the goals of population health management must seem easy. For a medical group or a health system without that experience, however, the task of aligning physician pay with population health management is a daunting challenge fraught with risks.

It is not that there is any mystery as to what the performance measures and goals should be. One could ask Kaiser or Health Partners or Group Health Cooperative and learn how they are doing it, or visit Mayo or Geisinger or Lovelace and see how they are doing it.

> The first problem is determining how to get from a compensation program based on individual physician productivity to one that rewards physicians based on group, departmental, or institutional success.

The first problem is that it is not clear how to get from here to there—how to get from a compensation program based strictly or largely on individual productivity to one that rewards physicians as much on managing care, the cost of care, and quality as on individual productivity; as much on group or departmental or institutional success as on individual productivity; or as much on system-wide success and service line success as on individual productivity. The second is that it is not clear when or how much to reduce the emphasis on individual productivity and tie a portion of physician compensation to cost-effectiveness, quality, and patient satisfaction.

It is far easier with executive compensation than with physician compensation, as executives are used to being told what the organization's goals are—by the CEO or the board or by CMS—and are used to having their pay tied to those goals. They are used to having their goals change from year to year, as circumstances and strategies and priorities change. They understand that their principal responsibility is to help the organization succeed in accomplishing its goals, whatever they are. They expect to be rewarded largely on the basis of the organization's success, not their own productivity or the success of their own projects or activities.

From what we learned in our interviews and from watching organizations move through the process of getting physicians and executives to embrace population health management, and then aligning their compensation to support it, there is a path that is reasonably likely to work well and better than more direct paths. The path has four essential elements:

1. Getting physicians (and executives and the workforce as a whole) to understand the compelling reasons for engaging in population health management
2. Getting physicians to decide what models and processes to adopt
3. Inviting physicians to participate (implicit in the invitation, of course, is the practical reality that physicians who choose not to participate may get left behind)
4. Helping participants learn how to succeed in the new model

The following list is a step-by-step approach to introducing population health metrics to physician compensation and engaging physicians in supporting the new model:

- Hold an education session with key physicians and executives to discuss population health management and accountable care, along with the necessity for change; the economics of value-based contracts, along with the need for change in the way healthcare is delivered, the way success is measured, and the way providers are rewarded; and medical homes and the need to use advanced practitioners to help manage care.
- Invite primary care physicians to participate in value-based ACO contracts.
- Develop a steering group of primary care physicians to decide how to manage medical homes, chronic diseases, referral costs, and specialty care in the new environment.
- Develop a compensation model for primary care physicians who participate in ACO contracts.
- Introduce the new PCP model in a dry run for six months to a year, while fine-tuning the model and showing participating physicians how the model will affect their pay, and while helping them adjust their practice mode to succeed under the new model.
- Move participating physicians onto the new compensation model only after they understand how it works and what they must do to succeed under the new model.

- Over time, increase weight on the measures most important to success under ACO contracts.
- Get a steering group of primary care physicians to develop a compensation model for rewarding specialists under value-based ACO contracts.
- Invite specialists to participate in the new compensation model.
- Develop a structure for managing service lines across the system, from ambulatory and inpatient care through the transitions to rehabilitation and home care, with physicians paired with administrators in dyads leading each service line.
- Develop a steering group in specialties to work with the leadership dyads in designing the model for managing care in service line, with protocols designed for each common disease and/or medical condition.
- Invite specialists to participate in managing care across service lines.
- Develop a new compensation model for rewarding specialists for helping manage care across service lines.
- Introduce the new compensation model for specialists in a dry run for six months to a year, while fine-tuning the model and showing participating specialists how the model will affect their pay, and while showing them how to manage cost and quality of care to optimize success of service line and practice.
- Move participating specialists onto new compensation model for their service line.
- Continue refining the model and, over time, increase weight on the measures most important to success under ACO contracts.

What Metrics Will Help Align Physician and Executive Compensation with the Goals of Population Health Management?

The metrics being used to align physician and executive compensation with the goals of population health management and accountable care and with the economics of value-based contracts fall into three general categories:

- Clinical quality
- Patient experience and satisfaction
- Cost-effectiveness

The metrics used most frequently are those linked to reimbursement, such as those used in Medicare's Hospital Value-Based Purchasing Program, the Hospital Readmissions Reduction Program, the Hospital-Acquired Condition Reduction Program, the Shared Savings Program, or the Bundled Payments for Care Improvement Initiative. Some are borrowed from measurement sets developed or endorsed by national organizations, such as the National Committee for Quality Assurance, with its Healthcare Effectiveness Data and Information Set (HEDIS) measures. Some are drawn from the performance measures specified in commercial ACO contracts. Others are internally developed to promote strategic initiatives chosen to improve quality, cost-effectiveness, chronic disease management, adoption of medical homes, integration of advanced practitioners, or improving community care.

Many of these metrics are more appropriate for primary care physicians, where they can be used to evaluate care for a particular group of patients affiliated with a particular physician. Others are more appropriate for specialists involved in managing care in a system-wide service line. Almost all of them are useful, though, in breaking away from the previously prevailing practice of paying physicians strictly in relation to billing and collections, or in relation to work RVUs.

Example Metrics to Use as a Starting Place for Tying Compensation to Performance

- HCAHPS scores
- FFS performance contracts (quality, satisfaction, and efficiency)
- FFS morbidity and mortality variations
- Traditional acute care indicators of quality and safety (e.g., patient falls, wrong site surgeries, incorrect medications) compared to best practices
- ACO formation and other efforts directed towards initial stages of population health management
- Keeping costs below payments under managed care contracts
- Comparisons to *Healthy People 2020* results[1]
- Comparisons to other providers managing population health well (e.g., Advocate Health Partners, Kaiser Permanente, Geisinger, Norton Healthcare), especially regarding chronic disease management

Many of the quality and patient satisfaction measures, of course, have no more to do with population health management than with the traditional model for physician–patient relationships. They could be part of a physician compensation program under fee-for-service medicine, and perhaps they should have been all along.

The measures that get to the heart of population health management have to do with overall cost of care for an assigned population, wellness or health status of a population (particularly a population with a chronic disease), and care coordination or health maintenance—meaning overall outcomes for a patient over time. The financial versions of these measures are often used, whether through shared savings (a version of profit-sharing not unlike a withhold under a managed care contract) or through fixed payments for a panel or capitation for each patient or through any incentive plan that rewards cost-effectiveness measured as cost per member per month. Wellness and care coordination are difficult to measure, so instead many provider organizations are using metrics that presumably help maintain or improve wellness or care coordination, such as working in medical homes and using advanced practitioners to better manage continuity of care.

1 The *Healthy People* objectives are the foundation for many federal prevention initiatives. See www.healthypeople.gov for more information.

What Are Organizations Doing to Learn How to Manage Population Health?

While most organizations have not yet begun to implement population health management techniques and strategies, let alone incorporate population health metrics in executive and physician incentive plans, many are using this time to learn how to do it, and to put the people and systems in place to enable them to move toward population health management as reimbursement methodologies change.

CERTAINLY THE MOVE BY HOSPITALS TO EMPLOY PHYSICIANS, and primary care physicians in particular, is a step in this direction, since primary care physicians will be key in managing population health. Setting up patient-centered medical homes, whether certified or not, represents another way to begin population health management efforts, by putting in place extensive networks to provide comprehensive medical care to patients using in-house resources or through partnerships with outside providers.

Having a large group of physicians using the hospital's electronic health record creates a treasure trove of data that can be aggregated, organized, and mined to identify where the opportunities for improvement may be found. Hospitals often begin by figuring out what can be measured. Examples of useful clinical data might include:

- Colorectal cancer screenings
- Drug class utilization
- Physician visits within seven days of discharge
- Pneumococcal vaccine compliance
- Body mass index in children
- Blood pressure control

Useful clinical data could also include outpatient cost per patient, which is a potential metric for executive and physician incentive plans, just as cost per discharge is today.

Insurance industry benchmarks and information gleaned from claims data can also be useful in identifying opportunities to improve population health. Many hospitals are partnering with insurers to build ACOs as a means of gaining access to data and know-how for risk management. Other organizations are gaining that know-how by hiring talent from the insurance industry to manage risk. Still, insurance companies are adept at managing risk, but only providers are in a position to manage health.

Many hospitals are partnering with insurers to build ACOs as a means of gaining access to data and know-how for risk management. Other organizations are gaining that know-how by hiring talent from the insurance industry to manage risk. Still, insurance companies are adept at managing risk, but only providers are in a position to manage health.

Many organizations are using their self-insured medical plans as a proving ground for population health management techniques. Some third-party payers are asking what organizations are doing with their own employee population as a part of their due diligence process before entering into ACO partnerships. Serving an employee population well can be a valuable way to learn how to manage the health of a more diverse group of people.

Many organizations begin experimenting with population health management in a small way for their Medicare patients, because of the shared savings model of reimbursement available.

Population health management means monitoring and encouraging patient compliance with treatment regimens. People fail to comply for any number of reasons. For example, one fragile diabetic often failed to take his medication, leading to emergency admissions. The root cause of the problem was his difficulty getting to the pharmacy to pick up his prescriptions. Once his physician helped him identify a pharmacy with delivery service, his health improved.

Emergency department "frequent flyers" can be costly to treat, but understanding why people seek treatment from the

emergency room can lead to creative solutions. For example, one woman with COPD had sought emergency room treatment 100 times over two years. She always left the hospital feeling well, but repeatedly returned after a few days at home. A home visit by a social worker identified the problem—her house was very dusty. When the hospital hired a monthly cleaning service, she no longer needed emergency treatment. The hospital was able to obtain ongoing housekeeping services for her through a social service agency.

Effective population health management will likely require working with non-traditional partners. A patient-centered medical home or "neighborhood" may need to include chiropractors, pharmacists, dentists, and social workers, as well as physicians and advanced practitioners. It will definitely need to include home health agencies. It also will require locating or developing services that are sorely lacking in many communities.

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Effective population health management also will require locating or developing services that are sorely lacking in many communities. Hospitals need to have a place to send people for post-acute care when they are not yet ready to go home. Some patients will need nursing home care, while others will need rehabilitative care or skilled nursing for an extended period of time. Similarly, some patients will need behavioral health treatment on a short-term or long-term basis. Most hospitals have eliminated their behavioral health service lines, but if those services are not available in the community, or if local providers have insufficient capacity, then hospitals will need to redevelop them.

Board Oversight of Population Health Management

Boards that are exploring population health management will need to begin paying more attention to community needs and ask what the health system should do to meet those needs. Instead of focusing on inpatient statistics and budgets, they need to pay attention to anecdotal stories, like the story of the woman with the dusty house, or the man who couldn't pick up his prescriptions. They need to think about a broad range of issues that might not have been on their radar a year or two ago.

Examples of Board Questions Related to Population Health

- How prevalent are obesity, diabetes, asthma, high blood pressure, and other chronic health issues in our community?
- How are we managing the healthcare needs of the frail elderly?
- What resources are available locally for treatment of behavioral health issues?
- What are the transportation needs of our patients?
- How many of our patients have difficulty maintaining their treatment plan or affording their drugs?
- Are our facilities doing a good job of antimicrobial stewardship?
- Are there alcoholic treatment programs available locally?
- What smoking cessation programs are we offering?
- Are our patients getting seamless service across the continuum of care from all the providers in our network?

If boards decide to embrace population health management, they will need to adopt metrics of success at population health management and promote the changes needed to succeed. They will need to consider tying physician and executive compensation to those metrics of success.

The steps detailed below serve as a starting point for organizations looking to connect compensation of both physicians and executives to population health metrics.

The first step is to create policy statements on executive and physician compensation, ones that clearly redefine what will be rewarded or at least hints at it. These policies should be developed in conversation with the organization's counsel to ensure that they adhere to various CMS, IRS, and other legal and regulatory standards, federal, state, and local (in the case of public entities).

The second step is to charge the board's compensation committee with finding the best ways to modify physician and executive compensation programs to support population health management and to determine the best timeline for making these changes. The committee should be charged with obtaining advice from an independent consultant to ensure that physician and executive compensation are set at fair market value.

Other steps the board can take to help accelerate this effort include:

- Having board members attend and participate in educational sessions focused on population health in general and linking compensation to outcomes
- Implementing a Lean Six Sigma approach to performance improvement
- Establishing an "ACO" for self-insured employees as a test group prior to expanding into the greater community
- Developing an effective approach to implementing a patient-centered medical home model (compared to standards established by the National Committee for Quality Assurance)
- Establishing a policy whereby all employed clinicians are practicing at "the top of their licenses" insofar as federal and state laws/regulations allow
- Requiring all clinicians (employed and independent) to use proven clinical protocols
- Requiring all clinicians (employed and independent) to participate with their colleagues, the organization, and others to effectively use the electronic health record
- Seeking to meet Meaningful Use criteria (outlined in the American Recovery and Reimbursement Act of 2009) to obtain financial assistance in implementing the electronic health record
- Beginning to work with payers (many of whom are largely uneducated about wellness and prevention, since their primary focus has been marketing and claims management) to develop an interim approach towards comprehensive management of population health
- Developing a targeted approach to managing emergency room visits for "frequent flyers"
- Introducing comparative measures to gauge access, such as:
  - » Emergency department visits
  - » Emergency department wait times
  - » Emergency department case mix
  - » Utilization of urgent care centers
  - » Utilization of "Minute Clinics," or equivalent

Population health management is a new and evolving field, and no one can predict today what the term will mean for health systems in 10 or 15 years. As the field evolves, organizations throughout the country are watching to see where and how it is done most effectively. For now, since reimbursement hasn't caught up with the leaders in the field, most organizations will view population health management as a way to control costs, not as a way to increase revenues. If and when reimbursement changes, population health management has the potential to dramatically transform the way care is delivered.

But before compensation can be linked to population health metrics, organizations need to learn how to manage population health. The remainder of this white paper focuses on this broader challenge.

Why Are Providers Reluctant to Begin Making Changes?

Before any organization initiates efforts toward more effective management of population health, it needs to ask and answer the question, why are we doing this?

SOME ORGANIZATIONS WILL CONCLUDE THAT, REGARDLESS of the financial, cultural, and organizational barriers, managing and improving the health of the people they serve is just the right thing to do—it is their *raison d'être*. But if that is the sole rationale, the board, management team, and physicians must be prepared for a difficult road ahead. There is an array of forces that will make any population health management initiative difficult. Even though there is little doubt that population health management *is* the right thing to do, it is unlikely to be successful in significantly improving community health if there is not a strong business case to be made for it.

A second and probably more common reason for launching a population health management initiative is because the market served by the organization is making, has made, or is expected to make a transition from payment-for-volume to payment-for-value. Better quality, safer, and more efficient care, with higher levels of patient satisfaction *is* high-value care. And in a value-based payment system, a reputation for providing high-value care creates a strategic advantage for the system.

Yet a third potential reason for starting work on population health management is because of plans to enter into arrangements with payers or employers whereby the organization agrees to accept significant financial risk for the health of a population. Whether through its own health plan, a joint venture with an insurer, or simply entering into bundled payment or pay-for-performance agreements, entry into risk-bearing arrangements makes population health management absolutely essential.

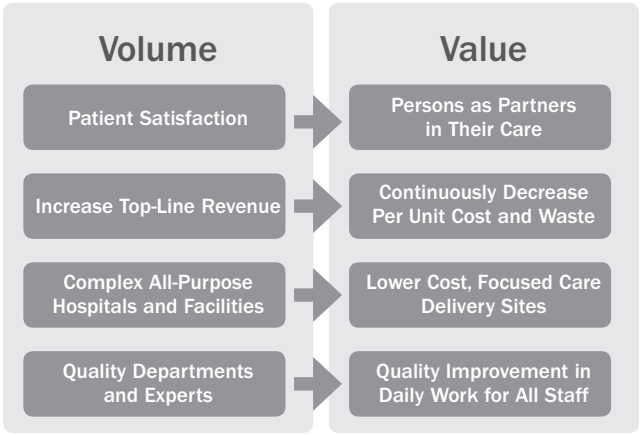
But even in an organization that has carefully identified its strategies and goals for population health management and has taken the time to get buy-in to those goals from physicians, management, staff, and the board, the process is not likely to be an easy one. Perhaps the shortest and most accurate answer to the question posed in this chapter, "why are providers reluctant to make needed changes," is that culture always trumps strategy.

Culture change is a slow and difficult process. Hospital managers and board members often see the brick-and-mortar facilities erected during their tenure as their greatest legacy and contribution to the health of their communities. Changing to a mindset focused on avoiding hospital admissions and emergency room visits, making those facilities largely obsolete, is extremely difficult.

Our culture in hospitals and health systems has long been driven by the goal of increasing volume. More patients, more procedures, and higher occupancy rates all are widely accepted goals and measures of an organization's success. And that culture is, of course, constantly reinforced by a healthcare payment system that bases the organization's revenues almost exclusively on those same metrics—numbers of patients, volume of tests and procedures performed, and pace of throughput. Indeed, implementing an aggressive population health management initiative in a market that is still dominated by volume-driven, fee-for-service payments can be seen as an organizational death wish.

The Institute for Healthcare Improvement has developed a useful graphic (see **Exhibit 1**) that depicts the change in mindset essential to the success of population health management.

Exhibit 1. New Mental Models: How Leaders Think About Challenges and Solutions



Source: S. Swensen, M. Pugh, C. McMullan, and A. Kabcenell, *High-Impact Leadership: Improve Care, Improve the Health of Populations, and Reduce Costs,* Institute for Healthcare Improvement, 2013.

While tools such as this are useful in depicting the changes needed, accomplishing those changes has proven to be difficult, as we learned through our interviews. One organization noted that while it has the infrastructure in place, the payers have not kept up. For example, they can only provide performance metrics at a regional level, inappropriately grouping this organization with far less complex organizations that do not treat the same level of high-risk patients and whose wage index may be quite different.

In addition to culture and the payment system, perhaps one of the greatest deterrents to change is organizational inertia. Change is always difficult, especially when there is uncertainty about whether the change is necessary. In our interviews, we learned that the vast majority of organizations are still in markets where payment rates are high (one organization reported

physician payment rates from commercial insurers averaging 180–200 percent of the Medicare rates) and are heavily based on volume. Where physicians and hospitals are paid well for continuing to focus on volume, there is little reason to embrace population health management.

The vast majority of organizations we interviewed are still in markets where payment rates are high and are heavily based on volume. Where physicians and hospitals are paid well for continuing to focus on volume, there is little reason to embrace population health management.

Another factor driving the reluctance to change is the lack of accountability for performance that is still a pervasive characteristic of healthcare in our country. As physician subspecialization has become more extensive, and hospital staff more diverse in their skill sets, it has become more and more difficult to identify who—or what part of the delivery system—is actually responsible and accountable for the quality, safety, efficiency, and patient satisfaction measures that are used to assess performance. Even in organizations that are aggressively measuring and monitoring those performance metrics, attribution of the results to specific individuals or even to specific care teams is difficult. This complexity also makes it difficult to coordinate care between and among different physicians and sites of care.

Before launching a population health management initiative, directors should ask the management team and physician leaders to respond to several questions:

- Why do we want to launch a population health management initiative? What is our objective?
- What capital investment is needed?
- When can we expect to see a return on investment?
- To what extent are payers willing to reward us for value?
- How do we stack up on value metrics?
- How well-integrated are our physicians?
- How good is our care coordination across sites and among physicians?
- What is our plan for the interim when some of our revenue is value-driven and some is volume-driven?
- Do we have a good understanding of the costs of care across the entire continuum of care?

Asking and answering these questions can help organizations avoid many of the pitfalls that can otherwise derail a well-intentioned effort to manage population health.

Obstacles and Challenges: What Gets in the Way?

Healthcare organizations that wish to embark on population health initiatives will find it necessary to transform their culture from one that focuses on diagnosing and treating illness to one that is single-mindedly aimed at improving the health of a defined population and preventing illness among that population to the greatest degree possible.

BUT EVEN THAT CULTURAL TRANSFORMATION WILL NOT, IN and of itself, be sufficient to improve population health. The health of a community is multi-factorial, and involves many elements outside the healthcare system. Education, socioeconomic status, and the environment are among the many factors outside the healthcare system that have a profound influence on the health of the public. And many of those factors are the subject of intense disagreements as to the role of the public and private sectors in acting to improve health.

Nonetheless, healthcare organizations can still make significant inroads into lessening the burden of disease among the people and communities they serve, so long as they can overcome a number of obstacles along the way. In this section, we will explore seven obstacles that emerged from our interviews and some of the steps that may be needed to overcome them.

Lack of Resources

Effective population health management requires organizations to make substantial investments in a variety of areas, including:

- Data and information systems
- New care delivery models
- Community outreach
- New jobs and new personnel
- New facilities

Effective population health management makes heavy use of non-medical personnel such as nutritionists, health educators, and care managers. In general, none of these new personnel can bill payers for their services in a fee-for-service system, so their salaries constitute significant new expenses without corresponding revenue. If and when the predominant payment system is based on value, these individuals will demonstrate their monetary value. Initially, they are pure expense.

New care delivery models, such as intensive case management for patients with chronic diseases, or the use of patient-centered medical homes in primary care, require significant investment. These models require people, information systems, and sometimes new facilities. They may also result in lower physician productivity, as measured by patient volume, throughput, and use of tests and procedures. As a consequence, expenses will rise and revenues may decline.

Most hospitals and health systems already have community outreach programs as part of their mission, part of their marketing and community relations effort, part of their effort to justify their tax exemption, or as their response to laws and regulations requiring it. Health fairs, screening programs, educational activities, and similar events require personnel time and potentially other resources, with little or no revenue created as a result. Some organizations have launched community-wide smoking cessation or weight reduction programs, all of which can have a positive impact on health. What is required to succeed at population health management, though, is far more extensive and intensive, and such programs generate new expenses without accompanying revenues.

Lastly, some organizations are finding that population health management may require retrofitting existing facilities to transition them from inpatient to outpatient use, or constructing completely new facilities. One Tennessee health plan constructed a senior day facility for its Medicare Advantage enrollees, complete with fireplace, game room, fitness center, and lounge area. That facility also serves as the location for its patient-centered medical home practice for Medicare patients, while providing a venue for socialization, health education, health screening, fitness, and other population health improvement activities.

Most small and midsized organizations cannot afford to make these investments on their own. Organizations with strong capital reserves may be able to fund the necessary investment from those reserves, with the full expectation that it may be some years before they begin to see a return on that investment.

Partnering with other hospitals, health systems, or health plans may be the best approach for many organizations to access the required capital to manage population health.

Lack of Risk Management Expertise

Healthcare organizations generally have little or no expertise in managing the financial risks involved with assuming responsibility for the health of a population. Many learned that lesson in the 1990s when they started their own health plans, only to find themselves losing significant amounts of money on those ventures. Effective financial risk management requires extensive actuarial expertise, as well as in-depth information about

the demographics, health habits, illness burden, prior health services utilization, and other characteristics of the population being managed. While health plans generally have in-depth expertise in these areas, hospitals and health systems typically do not. Accordingly, partnering with a health plan may offer the best opportunity for overcoming this barrier.

Partnering with a health plan may offer the best opportunity for gaining risk management expertise.

Lack of Needed Data and Information Systems

Population health management requires extensive data about the population being managed. Some data may come from existing databases or from electronic health records systems, but there will always be a need for additional data from health insurance claims, community surveys, disease registries, and a variety of other sources. In addition to the challenges of acquiring access to such data, there are complex issues associated with linking the data to form useful profiles of individual and population health, of the potential for future services utilization, and of the health risks that may require intervention and management. One South Carolina organization has seen its internal data analytics staff grow from four to 30 people over the last six years as it has begun to mine multiple data sources to develop information than can permit better management of cost, clinical quality, patient service, and population health management.

In addition to new data, databases, and analytic tools, organizations also will require a variety of new information management systems, as well as comprehensive electronic health records. For example, online systems for remote patient visits or consultation can greatly improve patient access and reduce visit frequency. "Information therapy" using online patient education tools can be valuable in helping patients with chronic illnesses manage their conditions. And there are a rapidly growing number of smartphone applications for everything from fitness to diabetes management that can be part of the population health management armamentarium.

In addition to new data, databases, and analytic tools, organizations also will require a variety of new information management systems, as well as comprehensive electronic health records.

Difficulty Managing the "Straddle" between Volume- and Value-Based Payment

Without question, markets will not shift from volume-driven to value-driven payment systems overnight. Rather, the shift is likely to be gradual, with some payers and some large employers making the transition earlier, and others remaining in the traditional fee-for-service model. Conceivably, some payers may even operate both volume- and value-driven systems simultaneously.

As a result, there is likely to be an extended period of time in which there are conflicting financial incentives at play in most markets. For some patients and some payers, there will be incentives to maximize quality, focus on prevention, avoid expensive inpatient care, and minimize expenses in order to create value and generate revenues in excess of expenses. For others, the path to positive margins may still be driven largely by maximizing the numbers of patients treated and the number of tests and procedures performed.

While there is no magic bullet that will help organizations overcome those conflicting incentives, it is essential that they be recognized and proactively managed.

One approach some organizations are taking is to identify the tipping point at which the migration to value-based payment seems to be inevitable and, once it is reached, to then aggressively pursue value-based contracts from all other payers in their market.

Over-Specialization and Lack of Care Coordination

With each passing day, medicine and allied health professions become more and more subspecialized. As a result, many more providers are now involved in the care of each patient than in the past. And with the increase in the number of providers involved, challenges of communication and care coordination are multiplied.

One major consequence of increased physician specialization and subspecialization is that it may be unclear who, if anyone, is responsible for overall care coordination. This dilemma is further compounded by the fact that payers generally do not pay for care coordination.

While the ultimate solution to this problem will require reforms in medical and allied health education programs, there are a number of steps organizations can take to minimize the impact of over-specialization and increase care coordination. The patient-centered medical home is one specific tool that is

being widely used by organizations involved in population health management. The "medical neighborhood," a patient-centered medical home with a small group of specialists to whom virtually all referrals are made, is a second promising tool. Use of care coordinators and navigators is another. These care coordination initiatives are heavily dependent upon a common electronic health record platform, disease registries, and extensive home health services.

Steps to minimize the impact of over-specialization and increase care coordination include:

- Patient-centered medical homes
- Specialist "medical neighborhoods"
- Use of care coordinators and navigators

These are heavily dependent upon a common electronic health record platform, disease registries, and extensive home health services.

Poor or Inappropriate End-of-Life Care

It has long been known that the majority of healthcare costs are generated in the last six months of life. Unfortunately, many individuals receive care they do not want, and that is ultimately futile, simply because of the lack of advance planning or lack of access to end-of-life directives. While this is a complex social issue and an uncomfortable topic for many physicians, patients, and families, it is wasteful to apply scarce resources unnecessarily, or in opposition to the wishes of the individual receiving that care.

Frank discussion of end-of-life wishes, clear documentation of patient wishes in electronic health records, and clear communication of those wishes to family members are essential to effective population health management.

Misaligned Compensation

"You get what you pay for" is an oft-repeated adage. Physicians are generally paid on par with their individual production, whether measured by billings or collections or "relative value

units"—for volume of activities or procedures that translate into revenue—since that matches the way most third-party payers pay for physicians' clinical services. Executives, too, are rewarded in relation to a payment system based on volume and activity. So long as doctors and executives are rewarded, in essence, for maximizing revenue, they will do what they can do to maximize revenue. This is antithetical, of course, to population health management.

Most healthcare organizations base a portion of compensation for executives, and increasingly for employed physicians, on measures of quality, safety, cost-effectiveness, and patient satisfaction. In a value-based payment system with improved population health as its goal, it is likely that an increasing portion of physician and executive compensation will be based on such measures.

Before launching a population health management initiative, directors should ask the management team and physician leaders to respond to several questions:

- What additional resources do we need for our population health management activities, and where will we get them?
- How will we get the data, analytics, and expertise to manage the financial risk we will assume through our population health management activities?
- What additional information systems will we need and what will they cost?
- How are we ensuring that patient wishes for end-of-life care are known, documented, and easily accessible to our caregivers?
- What more should we do to align our compensation policies with our population health management goals?

Why Start Now?

While there are many questions organizations have to answer as they analyze the impact of the Affordable Care Act and the movement to population health management, two key questions continually come to the fore: Why should we do anything now when our payers are still paying fee-for-service? And what would we gain by moving ahead now?

THE ANSWERS TO THOSE QUESTIONS ARE FAR FROM SIMPLE, but they are compelling. First, the number of people enrolled in ACOs is growing rapidly. The best estimates indicate that anywhere from 14 to 17 percent of Americans, or slightly more than 40 million people, receive their care from ACOs today. While most of the current enrollees are in Medicare ACOs, estimates are that commercial ACOs will increase dramatically to cover as many as 150 to 200 million Americans as early as 2016. So it is fair to say that ACOs are going to be a part of the future of the healthcare delivery system.

Equally important is the fact that the amount of payment at risk is rising rapidly. Today the primary payment model under an accountable-care or risk-based contract is a classic fee-for-service model that has a risk-sharing component, payable at year-end, based on the cost of care provided. While the risk sharing or shared savings for managing costs under population health management is relatively small today (at 3 to 5 percent of total payments), experts predict that the shared-risk payments could be anywhere from 30 to 50 percent within the next five years.

The kinds of activities reimbursed under a pay-for-value model and the current fee-for-service model, even with a small risk-sharing component, are very different. And moving from a volume-based system of rewards into a population health management model can put revenues at risk if you move before payers change their reimbursement methodologies. Yet, the type of process improvement required under population health management takes time and will not happen overnight. That makes it important to begin changing the organization's structure and culture today, and begin changing incentives to reward the kinds of structural, operational, and behavioral changes needed to make population health management effective in the future.

For example, most organizations are going to need new skills to be successful in the world of population health management. Most hospitals have never had the skills needed to manage the types of risks associated with population health and never expected to need them. Whether an organization acquires those skills by hiring experienced outsiders, or attempts to develop the skills internally, there is a substantial learning curve to figure out how to manage population health instead of simply responding to health issues when they become acute.

Changing the behavior of physicians will also take some time. Managing population health requires physicians to think about their patients in entirely new ways, and care for them in new ways. It may also require them to supervise advanced practice clinicians and other staff, adhere to practice protocols, control costs, participate in committee work, and communicate with other providers in making smooth transitions. Any contracts with physicians that include an incentive plan structure will need to be modified. Changing how physicians are paid, how productivity is measured, what incentives are in place for providing additional services versus controlling costs, and whether they are rewarded for these other activities will be particularly difficult given that physician contracts typically have terms of more than one year.

The process improvement required under population health management takes time and will not happen overnight. It is important to begin changing the organization's structure and culture today, and begin changing incentives to reward the kinds of structural, operational, and behavioral changes needed to make population health management effective in the future.

In addition, the changes that are required with information technology and data systems can easily take three years or more for organizations that have not already started integrating and updating IT and EHR platforms.

There is a real benefit to starting now with a small population and relatively little pay at risk, before having a larger population and more pay at risk overwhelms your capacity to learn. For this reason, many hospitals have begun the transition to some form of population health management. This allows a hospital and medical staff to start small and test its systems and ability to implement these programs when the economic impact is not as dramatic as it might be in the future. That is why almost all hospitals have started putting their employees into their own insurance plan and have begun testing their performance under population health metrics.

Paths to Success

- Partner with a payer that knows how to manage population health.
- Partner with a system that already knows how to do it (e.g., has a health plan).
- Partner with other systems to share the cost and learn from each other.
- Begin with your own self-insured employees.
- Focus on disease management.
- Build infrastructure for managing health (medical homes, care navigators, nurse practitioners, and physician assistants).

There are many things an organization can do now, quickly and easily, to see where it is on the population health continuum and begin identifying issues that need to be addressed, without risking lost revenue:

1. Test your IT infrastructure and see how many EHRs you have in your medical staff. Do they all "talk"? Can you integrate data? This will be critical for effective population health management efforts.
2. Set some benchmarks and start measuring now to figure out where the problems are.
3. Establish physician clinical integration committees to work through the issues that you will undoubtedly encounter around data and clinical care management.
4. Assess the current level of engagement of both staff and physicians and determine whether you have the right people to manage through the change that will be required.

There are also a number of critical strategic initiatives that organizations can be pursuing to prepare for population health management without having to make the full transition today:

1. Make sure you have enough primary care physicians and, if not, begin developing recruitment plans to bring more primary care physicians into the community.
2. Conduct an assessment of specialists to see if you have too many of them and if so, be cautious and manage growth in those areas.
3. Ensure you have the right talent to manage risk and determine what clinical positions you might need to add in the future, such as nurse navigators, health coaches, and the like. It will be critical to have a people plan in place to actually manage population health.

You may be asking, "What should we focus on first?" Most organizations start with disease management and the development and monitoring of clinical protocols. These are easily measured and probably in most of your contracts in some form today. Consider moving your employees into a self-insured health plan that measures and rewards population health improvement. This is a great laboratory to test your ability to perform under population health management. Lastly, focus on information technology systems. Under any reimbursement methodology, there is no question that the collection, interpretation, and management of data will be critical in the future.

Conclusion: Practical Steps to Get Started

The length of time it will take the U.S. healthcare industry to transition away from traditional payment models to population health management remains an open question.

WHEN ASKED WHY STARBUCKS CONTINUED TO PAY FOR employee healthcare benefits when many companies were shying away, CEO Howard Schultz replied, "Because it's the right thing to do for our employees, therefore the right thing to do for our customers and the right thing to do for our stockholders." The same holds true for population health management: it's the right thing to do for our patients, and therefore the right thing to do for our providers and the right thing to do for our business.

Outlined below are a number of initiatives healthcare leaders should take now to begin the transition to population health management. Many of these initiatives will be beneficial to communities, patients, and providers even while fee-for-service remains predominant. In all cases, these are practical steps that can be taken to link executive and physician compensation to progress on population health management goals:

- Begin tying physician and executive compensation to new metrics.
- Begin introducing advanced practice clinicians or expanding their use in primary care practices.
- Introduce patient-centered medical homes staffed to manage care of people with chronic diseases.
- Develop IT capabilities for pinpointing care needs and begin tying physician pay to use of electronic health records.
- Begin adopting e-health apps.
- Introduce access to care as a metric for primary care compensation.

Begin Tying Physician and Executive Compensation to New Metrics that Work as Well under Pay-for-Volume as under Pay-for-Value

Define productivity as caring for more patients instead of doing as much as possible for a small number of patients. Introduce metrics that reward cost-effectiveness of care. Reward physicians for keeping people with chronic diseases out of the hospital, while taking on more patients with chronic diseases. Reward outcomes, not inputs.

Consider linking some of these comparative indicators to compensation:

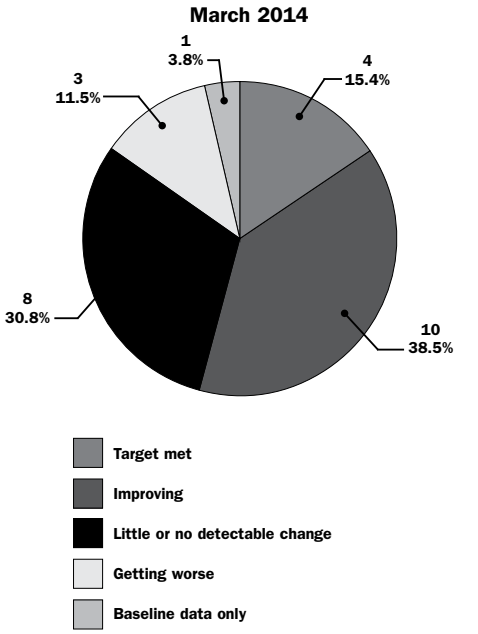
- Actual versus risk-adjusted mortality, the single best indicator of quality outcomes
- Market share on a specialty-by-specialty basis, and for key subspecialties
- Clinical outcomes compared to best practices
- Expense management compared to peer organizations
- Patient, physician, and employee satisfaction
- Physician and employee engagement

Physician compensation must follow common-sense principles. It must reflect reimbursement patterns. And while productivity will remain a component of any compensation package, other components should include quality, satisfaction, and efficiency outcomes, adherence to best practices and proven clinical protocols, utilization of the electronic health record, and citizenship.

The Department of Health and Human Services *Healthy People 2020* initiative has identified over 1,200 objectives for population health improvement and summarizes progress in 26 bundled leading health indicators (see **Exhibit 2**). If an organization wants to improve the health of its community, standards have been established. Measuring them and linking compensation to them should be relatively easy. (See Appendix 1 for an example of *Healthy People 2020* metrics in order to begin developing a baseline to link compensation.)

Traditionally, service lines have been developed in key specialty areas—cardiology, orthopedics, behavioral health, women and children, neurosciences—and have focused on market share, income, and promotion. Compensation should be linked to such service line goals as quality improvement, care across the continuum, readmissions, and wellness and prevention.

Exhibit 2: Status of the 26 *Healthy People 2020* Leading Health Indicators



Begin Introducing Advanced Practice Clinicians or Expanding Their Use in Primary Care Practices

There is a well-documented shortage of physicians in the U.S. with great variability among states. Shortages are particularly acute for primary care physicians. Reversing or alleviating these shortages may be beyond the ability of any hospital or health system. However, there is great promise in expanding the role of advanced practice registered nurses and other advanced practice clinicians.

Evidence strongly supports the premise that both access and quality improve when advanced practice clinicians are permitted to practice at the top of their license; that is, when they are allowed to write prescriptions and function as a patient's primary care provider. Scope of practice is determined by state regulations and many states are too restrictive, largely because their medical societies have powerful lobbies that fight license expansion. And yet, physicians can leverage their economics by working with advanced practice clinicians. For example, a family practitioner in Vermont employs six advanced practice clinicians, improving patient access and quality as well as his own income.

Introduce Patient-Centered Medical Homes Staffed to Manage Chronic Diseases

We often think population health management is a misnomer; it really should be called chronic disease management and improvement. Eighty (80) percent of the cost of healthcare in the U.S. is related to these six chronic diseases:

- Diabetes
- Asthma
- Congestive heart failure
- Coronary artery disease
- Depression
- Obesity

If we want to improve the health of a given population, we must focus on the areas of greatest opportunity. One answer is the patient-centered medical home, for which the National Committee for Quality Assurance has established criteria.[2] While patient-centered medical home payment varies by payer, a number of insurance companies do provide payment either on a per patient, per month basis or on a block basis (e.g., $2,500 per primary care physician depending on the size of the patient panel).

Develop IT Capabilities for Pinpointing Care Needs and Begin Tying Physician Pay to Use of Electronic Health Records

Implementing information technology systems and incorporating them in everyday operations is a difficult endeavor that challenges even the strongest cultures. Still, we know that in time, these systems will simultaneously improve quality, safety, satisfaction, and efficiency, and therefore population health.

IT implementation is just the first step. If healthcare leaders are to monitor improvement, they must also oversee progress in IT utilization. Fortunately, the Health Information Management Systems Society has provided a tool known as the HIMSS EMR Adoption Model (see Appendix 2), which establishes standards for eight stages of adoption. Boards, through their executives, need to work with their medical staffs to establish an approach for reaching the highest stage.

Boards should also require, as a condition of privileging, that physicians utilize an electronic health record that is interoperable with the system and other physicians. This assumes, of course, that the system itself is operating on an appropriate platform. The American Recovery and Reinvestment Act specifically permits systems to fund up to 85 percent of an individual physician's transition to an appropriate platform without a Stark violation. The exemption expires in 2018.

Begin Adopting e-Health Apps

It is estimated that there are more apps being developed for healthcare than for any other purpose, and patients want to use them. One example is an app that allows a diabetic patient to get a tattoo, scan it with a smartphone, and transmit readings to their electronic health record, eliminating the need for a finger prick. The list of similar opportunities is long and will only increase.

Adopting e-health apps as a strategy sounds good but is potentially overwhelming. We suggest picking a small number of apps and linking compensation to them as a way to begin the journey.

Introduce Access to Care as a Metric for Primary Care Compensation

In 2006, Massachusetts became the first state to pass universal coverage, an approach that became the template for the Affordable Care Act. However, access to healthcare in Massachusetts still remained a problem in 2014, with the average wait time for an adult primary care visit being well over a month. Not surprisingly, emergency room visits have gone up every year since 2006 and costs continue to escalate faster than the GDP of the Commonwealth. Widespread reporting on long wait times in the VA health system has also drawn the public's attention to the issue.

Healthy People 2020 establishes an access goal, and compensation should be linked to it.

If healthcare leaders take on these initiatives now to begin the transition to population health management, the industry will make major steps to benefit communities and patients, and be well-positioned for a smooth transition to value-based care. Once these initiatives are underway, tying physician and executive compensation to population health metrics will help accelerate progress on population health management goals.

2 See www.ncqa.org.

Appendix 1: *Healthy People 2020* Metrics

Healthy People 2020 provides a comprehensive set of 10-year, national goals and objectives for improving the health of all Americans. *Healthy People 2020* contains 42 topic areas with over 1,200 objectives. A smaller set of *Healthy People 2020* objectives, called Leading Health Indicators, has been selected to communicate high-priority health issues and actions that can be taken to address them.

GREAT STRIDES HAVE BEEN MADE OVER THE PAST DECADE: LIFE EXPECTANCY AT birth increased; rates of death from coronary heart disease and stroke decreased. Nonetheless, public health challenges remain, and significant health disparities persist.

The *Healthy People 2020* Leading Health Indicators place renewed emphasis on overcoming these challenges as they track progress over the course of the decade. The indicators will be used to assess the health of the nation, facilitate collaboration across sectors, and motivate action at the national, state, and community levels to improve the health of the U.S. population.

The *Healthy People 2020* Leading Health Indicators are composed of 26 indicators organized under 12 topics:

- Access to health services
- Clinical preventive services
- Environmental quality
- Injury and violence
- Maternal, infant, and child health
- Mental health
- Nutrition, physical activity, and obesity
- Oral health
- Reproductive and sexual health
- Social determinants
- Substance abuse
- Tobacco

Source: Leading Health Indicators, Office of Disease Prevention and Health Promotion (available at www.healthypeople.gov/2020/Leading-Health-Indicators).

Appendix 2: HIMSS EMR Adoption Model

EMR Adoption Model℠	
Stage	**Cumulative Capabilities**
Stage 7	Complete EMR; CCD transactions to share data; data warehousing; data continuity with ED, ambulatory
Stage 6	Physician documentation (structured templates), full CDSS (variance and compliance), full R-PACS
Stage 5	Closed loop medication administration
Stage 4	CPOE, CDSS (clinical protocols)
Stage 3	Nursing/clinical documentation (flow sheets), CDSS (error checking), PACS available outside radiology
Stage 2	CDR, controlled medical vocabulary, CDS, may have document imaging, HIE capable
Stage 1	Ancillaries—laboratory, radiology, pharmacy—all installed
Stage 0	All three ancillaries not installed

Understanding the level of electronic medical record (EMR) capabilities in hospitals is a challenge in the U.S. healthcare IT market today. HIMSS Analytics™ has created an EMR Adoption Model that identifies the levels of EMR capabilities ranging from limited ancillary department systems through a paperless EMR environment.

HIMSS ANALYTICS HAS DEVELOPED A METHODOLOGY AND algorithms to automatically score more than 5,000 U.S. and approximately 700 Canadian hospitals in its database relative to their IT-enabled clinical transformation status, to provide peer comparisons for hospital organizations as they strategize their path to a complete EMR and participation in an electronic health record (EHR). The stages of the model are as follows:

- **Stage 0:** The organization has not installed all of the three key ancillary department systems (laboratory, pharmacy, and radiology).
- **Stage 1:** All three major ancillary clinical systems are installed (i.e., pharmacy, laboratory, and radiology).
- **Stage 2:** Major ancillary clinical systems feed data to a clinical data repository (CDR) that provides physician access for reviewing all orders and results. The CDR contains a controlled medical vocabulary, and the clinical decision support/rules engine (CDS) for rudimentary conflict checking. Information from document imaging systems may be linked to the CDR at this stage. The hospital may be health information exchange (HIE) capable at this stage and can share whatever information it has in the CDR with other patient care stakeholders.
- **Stage 3:** Nursing/clinical documentation (e.g., vital signs, flow sheets, nursing notes, eMAR) is required and is implemented and integrated with the CDR for at least one inpatient service in the hospital; care plan charting is scored with extra points. The Electronic Medication Administration Record application (eMAR) is implemented. The first level of clinical decision support is implemented to conduct error checking with order entry (i.e., drug/drug, drug/food, drug/lab conflict checking normally found in the pharmacy information system). Medical image access from picture archive and communication systems (PACS) is available for access by physicians outside the radiology department via the organization's intranet.
- **Stage 4:** Computerized Practitioner Order Entry (CPOE) for use by any clinician licensed to create orders is added to the nursing and CDR environment along with the second level of clinical decision support capabilities related to evidence-based medicine protocols. If one inpatient service area has implemented CPOE with physicians entering orders and completed the previous stages, then this stage has been achieved.
- **Stage 5:** The closed loop medication administration with bar coded unit dose medications environment is fully implemented. The eMAR and bar coding or other auto identification technology, such as radio frequency identification (RFID), are implemented and integrated with CPOE and pharmacy to maximize point of care patient safety processes for medication administration. The "five rights" of medication administration are verified at the bedside with scanning of the bar code on the unit that does medication and the patient ID.

- **Stage 6:** Full physician documentation with structured templates and discrete data is implemented for at least one inpatient care service area for progress notes, consult notes, discharge summaries, or problem list and diagnosis list maintenance. Level three of clinical decision support provides guidance for all clinician activities related to protocols and outcomes in the form of variance and compliance alerts. A full complement of radiology PACS systems provides medical images to physicians via an intranet and displaces all film-based images. Cardiology PACS and document imaging are scored with extra points.
- **Stage 7:** The hospital no longer uses paper charts to deliver and manage patient care and has a mixture of discrete data, document images, and medical images within its EMR environment. Data warehousing is being used to analyze patterns of clinical data to improve quality of care and patient safety and care delivery efficiency. Clinical information can be readily shared via standardized electronic transactions (i.e., CCD) with all entities that are authorized to treat the patient, or a health information exchange (i.e., other non-associated hospitals, ambulatory clinics, subacute environments, employers, payers, and patients in a data sharing environment). The hospital demonstrates summary data continuity for all hospital services (e.g., inpatient, outpatient, ED, and with any owned or managed ambulatory clinics).

Source: HIMSS Analytics, 2011 (available at www.himssanalytics.org/docs/HA_EMRAM_Overview_ENG.pdf).