The changes underway in the U.S. health care system constitute a major shift in our national care delivery model. As each phase of the Affordable Care Act takes effect, health care providers make further progress transitioning from a fee-for-service approach to one based on value. Organizations are orienting around the Institute of Healthcare Improvement (IHI) Triple Aim to achieve the end goal: better quality for more people at an affordable cost. Hospitals and health systems are searching for effective and feasible ways to improve the outcomes and the satisfaction of their individual patients, while managing the overall health of the population more effectively and reducing the unnecessary costs inherent in the health care system. The good news is that opportunities to improve and engage in best practices are plentiful, regardless of the stage of adoption at which a health care provider is in their population health journey. However, where to begin and how to best ensure changes are impactful, executable and sustainable are the ongoing questions providers struggle to answer.

In this case study, we will discuss key areas of focus for U.S.-based hospitals and health systems that want to accelerate organizational adoption of a population health model, including the necessary information infrastructure. We will describe key building blocks of the population health journey — from redesigning the delivery of care to drive better outcomes to managing the cost and efficiency of the care that is provided. We will provide context for how to begin the journey, depending on where the health care organization is positioned today. This will include what has been accomplished to date and what assets are in place now, while aggressively moving toward substantive cultural and behavior change with the support and engagement of critical stakeholders, the physicians. We also will explore how this model, over time, will meet the goals of the Triple Aim and shift the foundation of our national health care system.

Key Components of Population Health: Care Continuum Connectivity and Infrastructure

Contrary to the siloed vision of the health care system of the past, progressive organizations have recognized that addressing population health is an organization-wide undertaking. Stakeholders across the care continuum need to view their roles in the context of the whole system, not just the facility or service line in which they manage and/or provide care. The following image displays a framework for meeting the population health needs of the key clinical and business stakeholders across the organization. From this framework, hospitals and health systems can begin to create the population health infrastructure — including technology, data and analytics — that is best suited to achieve the Triple Aim.
Enabling Delivery For Each Stakeholder

<table>
<thead>
<tr>
<th>Business Leaders</th>
<th>Clinical Leaders</th>
<th>Care Managers</th>
<th>Consumers</th>
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<td>Risk Management</td>
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<td>Population risk management</td>
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<td>Financial risk management</td>
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<td>Longitudinal, single-patient record</td>
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<td>Network leakage analysis</td>
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<td>Evidenced-based content and decision support</td>
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<td>Organizational and performance benchmarking</td>
<td>Condition focused — measures and reporting</td>
<td>Alerts, surveillance</td>
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<td>Gaps in care reporting</td>
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<td>Work lists</td>
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<td>Caregiver patient registry</td>
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A Connected Care Continuum

Appropriately sharing information with stakeholders across the continuum of care to drive the Triple Aim assumes access to an underlying set of data that combines clinical information captured at the patient interaction level, administrative data about the patient and the cost and utilization of services. Ultimately other data sources, including self-reported health data, socio-demographic data, provider organization contractual data and satisfaction data for both patients and providers should be added. Looking at this information in aggregate, such as a set of patients within a specific population or across a community, allows the organization to better manage care coordination and care transitions episodically and systemically; evaluate the effectiveness of care across the whole population; and understand the cost and utilization patterns of the community. Because this model allows hospitals and health systems to drill down to the patient-level data, it requires a thorough understanding of data integrity and security, including role-based access and audit logging to ensure a patient’s privacy. With appropriate controls in place, however, the ability to support multiple stakeholders’ informational needs from the same set of data affords a level of insight previously unattainable. This data infrastructure ensures the accuracy and consistency of the team's information sources when delivering care and evaluating the effectiveness of the care delivered. Taking the time to build a robust information foundation and the infrastructure to support its use efficiently and securely, enables hospitals and health systems to approach population health at the organizational level.

Operational Efficiencies and Risk Management

Business leaders responsible for strategic initiatives, such as adopting new types of delivery and payment models, need the ability to manage the risk and exposure their organization faces when straddling two payment systems — fee-for-service and value-based payments. Financial and utilization trend analysis, as well as the identification of care delivery risk, is essential to monitoring the organization’s fiscal health. Business leaders need to evaluate performance against risk contracts while seeking to create the most efficient and effective network to deliver the optimal care to their patient populations.

Meeting Clinical Imperatives and Improving Systemic Care Processes

As clinical leaders manage a changing health care delivery system, they are balancing the alignment and engagement of their physicians with the quality and safety objectives necessary to ensure increased value and better outcomes for the populations they serve.
Critical to their success is a flexible registry capability that allows them to identify high risk and high opportunity patient populations and appropriately allocate limited resources to provide effective and targeted interventions.

There will always be more opportunity than resources to intervene. Paramount to deciding which interventions will yield the most cost effectiveness and/or quality improvement is an organization’s method of population segmentation. There are many criteria by which to identify opportunite interventions, some of which include:

- gaps in care;
- high risk scores;
- chronic conditions that are ambulatory sensitive; and
- unnecessary readmissions.

Hospitals and health systems employing a stratified risk model for care intervention must consistently evaluate and evolve as new needs are identified and new care strategies emerge. A flexible registry capability should evolve with the organization as it matures in managing population health.

**Impacting Patient Outcomes with Point-of-Care Insight and Evidence**

As clinicians seek to improve patient outcomes and deliver optimal care and satisfaction to their patients, it is at the level of patient encounter and intervention that effective care is delivered; behavior is changed; and results are achieved. Providing the necessary patient-specific view for care managers and clinicians to assess and alter the delivery of care will ultimately impact the overall increase of quality and reduction of cost. At the core, the ability to view a patient’s data across the care continuum is a primary need in an environment of accountability. Clinicians will make better informed decisions, and care managers will more effectively manage gaps in care, transitions and the overall health of a patient with greater access to an aggregated and filtered view of all the data a patient generates. Providing that information in real time, at the point of care, allows for various types of surveillance, hot-spotting and alerting that help caregivers model and monitor risk at a condition-, department-, population- or patient-specific level, to determine what, if any, intervention is needed.

**Engagement Is Key to Patient Accountability and Satisfaction**

In addition to providing access to information, patient engagement is critical. The Triple Aim ultimately relies on a coordinated execution of effective care and patient engagement beyond the walls of the hospital or health system. Therefore, population health must occur in partnership with the patient and the community. Serving as a reliable, relevant and accessible source of information to the community is the first step in developing that partnership. Frequent communication, education and assistance before, during and after a patient encounter will help establish a patient-and-caregiver relationship that leads to greater satisfaction and augments patient adherence. Ongoing interaction with trained staff has shown positive results in reducing costly and painful complications and readmissions. The extent to which patients understand and are involved in the necessary and ongoing contribution to their wellness, recovery and long-term health determines, in large part, how healthy a population and community will be as a whole.

To involve patients in their own care and care plans effectively, organizations should engage the patient while he or she is within the care system and explore new methods by extending their reach to the community. Providing direct, secure communications
through multiple modalities and formats is necessary to address differing health literacy, technology use and information access appropriately across the broader community. Additionally, reducing the asymmetry of information, both on clinical conditions as well as an individual's own health, to ensure consumer and patient education is consistent with clinical practice and also is a critical success factor. Whether through more targeted, high-touch interventions or through modern communication tools, accounting for non-medical situations that affect a patient’s ability to follow a care plan must be considered.

Successfully implementing and optimizing all of these capabilities within hospitals and health systems is no small feat, and no organization can begin all of them at once and be successful. With a phased approach, organizations can achieve an integrated population health management program that links common goals. The journey will require changes in the business and operational model, as well as within the organization’s cultural model, especially physician alignment. Engaging physicians will ultimately move the organization from providing “sick care” to providing the “well care” necessary to manage a population’s health.

Creating a Culture of Engaged Physicians to Support Population Health
Creating a culture of physician engagement within your broader organization is critical to supporting population health efforts. Those who deliver care are the face to the outside community and are critical to executing a strategy to deliver high quality and cost-effective care. Embedding opportunities for physicians to influence a cultural shift in their organization is important. The following are some of the non-clinical areas physicians can provide the cultural support needed to differentiate between an enterprise-wide solution that is widely adopted and a struggle within the system to commonly define population health and deliver it effectively:

Governance — Physician leadership is important in a shared governance model. Open discussion between administrators and physicians, as well as using streamlined data and analytics across the care continuum, can help the organization attain a common vision focused on improving community health. Trust takes time to build, but this model will help enhance trust.

Infrastructure — Local leadership in each location of a hospital system is important in achieving a properly functioning infrastructure, especially among smaller, aligned physician practices. A large part of this effort is supporting physicians with advanced technology. Better technology means that physicians are able to add efficiencies to their workdays. In addition, it is critical to offer coaching and training to ensure that new technologies are implemented and adopted effectively.

Information Technology (IT) Solutions — As described above, infrastructure and access to robust data fuel population health enablement. There are a number of different IT applications that help physicians execute strategies for population health management. Physicians benefit from systems that can easily identify higher risk or special needs populations. In addition, there are applications that assist in care management workflow and patient documentation. This allows doctors to immediately measure the impact of care. A cloud-based data warehouse and reporting structure also allow for enhanced predictive modeling. Advanced registries create new efficiencies and enhance care quality.
Value-Added Services for Physicians — While the Affordable Care Act has eliminated the worry involved in smaller practices providing group health and dental insurance, there are still some important value-added services that should be provided for physicians as part of an engagement initiative. These include:

- banking services and financial counseling;
- office supplies, equipment and furniture;
- medical and surgical supplies;
- immunizations;
- life insurance; and
- professional liability insurance.

Incentive Funds — Physicians’ incentives can be aligned with various outcomes, such as reducing readmissions or length of stay. These types of incentives evolve over time based on organizational goals and can be assessed on an individual or group basis and at varying levels of care. Incentives can be based on improvements or reaching absolute targets, and there are situations where unearned funds can roll over to the next time period, increasing the value for physicians who achieve goals that have evaded peers in prior years. Non-physician clinicians also can be incented for these types of performance achievements. These incentives can ensure that all clinicians are involved in cases of chronic disease, because it keeps focus on evidence-based standards of care that achieve the best outcomes for the patient.

Feedback Loop — Comparing physicians’ performance within the same network specialties via a monthly practice dashboard is a proven way to identify outliers and improve performance. The dashboard can identify specific patients or visit statistics and lead to staff training to enact process improvements. The dialogue and inquiry generated by the dashboard is critical to driving improvement.

Conclusion

There is no universal approach to begin the population health journey. It is clear, however, that a foundational shift of the health care system is occurring, but the degree to which a capitated model will be ubiquitous is unclear. Most likely there will be a mixed model of volume- and value-based reimbursement for the foreseeable future. Forward-thinking organizations acknowledge the need to respond to this shift in the health care market and are carefully taking steps to optimize existing models and avoid being penalized later. The level of alignment within the hospital or health system and the focus on common goals to achieve system transformation in the specific market an organization serves is at the heart of successful groups. Hospital and health care system leaders should start based on where the organization is today, but, there are predictable components of information infrastructure that are necessary to achieve population health management success. Regardless of where the organization starts and how it defines its progression, a common end goal with achievable milestones that reach across the organization are paramount to success.
Sources


ONC HIT paper: Connecting Health and Care for the Nation: A 10-Year Vision to Achieve and Interoperable Health IT Infrastructure


HCIT: What we talk about when we talk about Population Health


2014 National Scorecard on Payment Reform


“Best Care at Lower Cost: The path to continuously learning health care in America,” Institute of Medicine of the National Academies. iom.edu, September 2012

HealthLeaders Media and McKesson: How Care Management Evolved with Population Management

2013 National eHealth Collaborative Stakeholder Survey

“Utilization of Trained Volunteers Decreases 30-Day Readmissions for Heart Failure,” Journal of Cardiac Failure, Volume 19, Issue 12, December 2013

A Reengineered Hospital Discharge Program to Decrease Rehospitalization: A Randomized Trial. Annals of Internal Medicine, Vol 150, No. 3, February 2009
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