

Signature Leadership Series  
*Focus on Population Health*



# The Second Curve of Population Health

March 2014

**Resources:** For information related to population health, visit [www.hpoe.org](http://www.hpoe.org) and [www.healthycommunities.org](http://www.healthycommunities.org).

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## Table of Contents

Executive Summary.....	3
Driving the Change.....	4
First and Second Curves of Health Care .....	5
The Second Curve of Population Health .....	6
Bridging the Gap .....	9
Measuring Transformation to the Second Curve of Population Health.....	10
Conclusion.....	12
Case Example 1: Michigan Stroke Network .....	13
Case Example 2: Banner Health .....	14
Case Example 3: Yale New Haven Health System.....	15
Case Example 4: Mercy and Memorial Hospitals.....	16
Case Example 5: Sentara Healthcare.....	17
References.....	18
Endnotes.....	19

## Executive Summary

As hospitals and care systems transform, they are increasingly prioritizing population health as a platform to improve the health of patients and communities. Myriad forces are driving these health care organizations to actively address a broad array of socioeconomic and environmental factors and provide preventive care, particularly for populations who lack access to care or engage the system at the wrong place and time. Building on health care futurist Ian Morrison's idea of health care transformation as a shift from a fee-for-service first curve to a value-based second curve, the second curve of population health depicts an integrated approach to improving patient and community health. For many hospitals, thriving in the second-curve environment will necessitate making challenging organizational and cultural changes to support new goals and initiatives.

This guide builds upon prior American Hospital Association reports that outline a road map for hospitals and care systems to use as they transition to the second curve of population health. Though the rate and extent to which hospitals and care systems engage in population health initiatives may vary, a significant shift toward population health is anticipated in the next three to five years. The tactics described in this guide provide a framework for initiatives that hospitals and care systems could pursue to develop an institutional infrastructure that supports population health. These tactics are:

- Value-based reimbursement
- Seamless care across all settings
- Proactive and systematic patient education
- Workplace competencies and education on population health
- Integrated, comprehensive HIT that supports risk stratification of patients with real-time accessibility
- Mature community partnerships to collaborate on community-based solutions

Hospitals and care systems transitioning to the second curve of population health evaluate process and outcomes metrics to measure their progress in improving patient and community health. Aligning the needs and assets of the hospital and community with metrics allows for meaningful and significant analysis. Possible metrics include but are not limited to:

- Summary measures
- Inequality measures
- Health status
- Psychological state
- Ability to function
- Access to health care
- Clinical preventive services
- Cost of care

As established community stakeholders with extensive knowledge and resources, hospitals are in a unique position to lead population health transformation. Hospitals should challenge themselves to reach beyond their walls and partner with community organizations to implement innovative approaches that sustainably improve total population health.

## Driving the Change

As the U.S. health care system transforms, hospitals are expanding their scope to include population health as a model to improve the health of their patients and surrounding communities. Though population health is not traditionally considered a major focus of hospitals and care systems, myriad forces are driving these organizations to address both the medical and nonmedical factors that determine health status. Driving forces include:

- Shift in financial arrangements away from fee-for-service to value-based payments that incentivize positive outcomes
- Increase in provider accountability for the cost and quality of health care
- Increased access to care for underserved and vulnerable populations through the Affordable Care Act
- Constant demand to reduce fragmentation and improve efficiency by redesigning care delivery
- Increased transparency of financial, quality and community benefit data
- Economic and legislative pressures to curb increases in health care spending
- Demographic changes in the patient population that will increase demand for health care services, along with projected shortages of primary care providers
- Recognition that acute medical care is only one aspect of maintaining and improving health

Population health is commonly described as “the health outcomes of a group of individuals including the distribution of outcomes within the group.”<sup>1</sup> By integrating preventive principles into care delivery, the ultimate goal of population health is to improve the overall health of a given population while also reducing health disparities.<sup>2</sup> A population health approach aims to improve health outcomes, particularly for individuals who lack access to care or engage the system at the wrong place and time, and complements the Triple Aim goals of improving the patient experience of care, improving population health and reducing per capita cost.

The American Hospital Association published two guides, “Managing Population Health: The Hospital’s Role” (available at <http://www.hpoe.org/population-health>) and “The Role of Small and Rural Hospitals and Care Systems in Effective Population Health Partnerships” (available at <http://www.hpoe.org/small-rural-partnerships>), that outline how population health can serve as a strategic platform to improve health outcomes by focusing on three interrelated approaches:

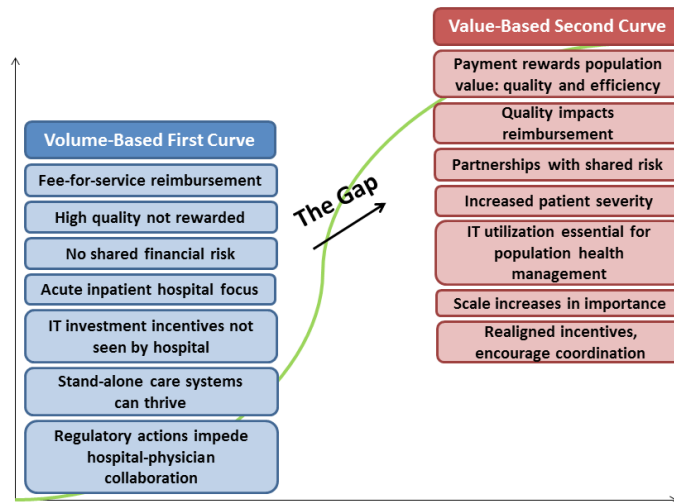
1. Identifying and analyzing the distribution of specific health statuses and outcomes within a population
2. Identifying and evaluating factors that cause the health outcomes
3. Identifying and implementing interventions that modify determinants of health outcomes

Population health resides at the intersection of three distinct health care mechanisms: (1) increasing the prevalence of evidence-based preventive health services and behaviors, (2) improving care quality and patient safety and (3) advancing care coordination across the health care continuum. Health status is influenced by personal behaviors, environmental and social forces, and family history and genetics, while only a small percentage of health status is attributable to medical care.<sup>3</sup> This ecological model of health points to the importance of proactively addressing the upstream factors that affect health to sustainably improve the health of any population. Achieving improved population health will ultimately decrease medical costs and allow hospitals to invest in prevention.

## First and Second Curves of Health Care

Economic futurist Ian Morrison suggests that as payment incentives shift, health care providers will modify their core models for business and service delivery. He calls this a first curve to second curve shift.<sup>4</sup> Morrison describes the *first curve* as an economic paradigm driven by the volume of services provided and fee-for-service reimbursement. The *second curve* is concerned with value: the cost and quantity of care necessary to produce desired health outcomes within a particular population. Figure 1 details the first and second curves of health care.

Figure 1. First Curve to Second Curve of Health Care



Source: Adapted from Ian Morrison, 2011.

As hospitals and care systems shift from the volume-based first curve to the value-based second curve, they must transform their business and health care delivery models to balance quality, cost, patient preferences and health status to achieve real value and improved health outcomes. Hospitals and care systems moving to the second curve use performance metrics to identify clinical, financial and process improvements; incorporate the appropriate incentives; and evaluate results. The AHA “Hospitals and Care Systems of the Future” report (available at <http://www.aha.org/about/org/hospitals-care-systems-future.shtml>) outlines 10 must-do strategies to be successful in the transformation from the first curve to the second curve:

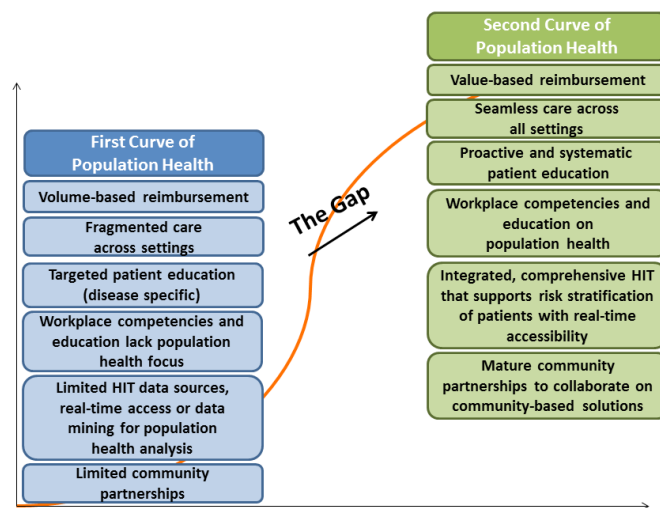
1. Aligning hospitals, physicians and other clinical providers across the continuum of care
2. Utilizing evidence-based practices to improve quality and patient safety
3. Improving efficiency through productivity and financial management
4. Developing integrated information systems
5. Joining and growing integrated provider networks and care systems
6. Educating and engaging employees and physicians to create leaders
7. Strengthening finances to facilitate reinvestment and innovation
8. Partnering with payers
9. Advancing an organization through scenario-based strategic, financial and operational planning
10. Seeking population health improvement through pursuit of the Triple Aim

## The Second Curve of Population Health

As health care organizations transition to the second curve, population health approaches must also change to align with new goals and processes aimed at improving patient and community health. Applying the curve concept to population health provides a road map to guide hospitals and care systems as they integrate population health into their organizations.

Adopting a second-curve population health approach will require hospitals and care systems to make major systemic and cultural shifts. They will need to develop a formalized care delivery system that addresses disease prevention and management of the patient population and reaches outside hospital walls to improve community health (see Figure 2).

Figure 2. Second Curve of Population Health



Source: Health Research & Educational Trust, 2014.

The rate and extent of transitioning to the second curve may be dependent on each hospital's or care system's marketplace and influence, other hospitals and care systems in the community, other providers and available resources. Significant transformation across the field is expected to occur in the next three to five years. Some markets are moving more quickly toward the second curve, based on payer, competitor and other market pressures, while others remain in a fee-for-service model.

The tactics described here contribute to an organizational infrastructure that supports population health and the 10 must-do strategies for transitioning to the second curve of health care. Each organization should select the tactics that are best aligned with its mission, goals and resources.

### Value-based reimbursement:

- Hospitals and care systems deliver defined services to a specific population at a predetermined price and quality level.
- Large hospitals and care systems provide or contract for a full continuum of services across acuity levels for regional populations.
- Providers link payment contracts and compensation models to performance results.
- Hospitals and care systems participate in an accountable care organization or patient-centered medical home model across a significant population.

- Smaller providers deliver specified services to target populations, working under contract or in partnership within networks that are managed by larger entities functioning as population health managers.
- Care delivery systems align with the Triple Aim to improve the patient experience of care, improve population health and reduce per capita cost.

#### *Seamless care across all settings:*

- Preventive services are integrated into all care settings.
- Care transition programs support seamless patient handoffs and excellent communication to reduce readmissions or complications, ensure treatment compliance and engage patients and families as they transition to new settings of care.
- Care teams or navigators are widely used to assist in managing complicated patient cases across the care continuum.
- Hospitals and care systems provide care or develop partnerships for care delivery in a community-based setting, such as community clinics or patients' homes.
- Small and rural hospitals may utilize telemedicine to connect with remote patients and remote specialty or emergency services.

#### *Proactive and systematic patient education:*

- All patients receive holistic education about disease management and prevention.
- Education and chronic disease management initiatives target at-risk groups and include medical and behavioral approaches to preventing illness.
- Multidisciplinary teams of case managers, health coaches and nurses coordinate chronic disease cases, set goals and track progress, and follow up after transitions.
- Providers use patient-engagement strategies, such as shared decision-making aids, shift-change reports at the bedside, patient and family advisory councils, and health and wellness programs.
- Providers regularly measure or report on patient and family engagement, with positive results.
- Hospitals lead community outreach screening or health education programs.

#### *Workplace competencies and education on population health:*

- Hospitals have leadership and staff dedicated to population health.
- Existing staff and clinicians are trained in population health competencies, including working across sectors, aggregating data and identifying systemic issues, and developing policy and environmental solutions.<sup>5</sup>
- Staff have defined roles within the population health management process.
- Staff receive ongoing training on population health as it relates to their specific job duties.
- Hospitals employ care coordinators, community health workers and health educators and augment population health staff as necessary.



*Integrated, comprehensive HIT that supports risk stratification of patients with real-time accessibility:*

- HIT possesses capacity for sophisticated analytics for prospective and predictive modeling to support clinical and business decisions.
- Data warehouse is fully integrated and interoperable, incorporating multiple data types for a variety of care settings (e.g., clinical, financial, demographic, patient experience, participating and nonparticipating providers).
- Data from multiple community partners are combined in regional health information exchanges and data registries to comprehensively address the needs of patients and communities.
- Timely and local data that identify the health issues in a community are accessible by clinical staff in real time to guide the care of individuals.

*Mature community partnerships to collaborate on community-based solutions:*

- Hospitals and care systems engage the community by exchanging resources, sharing knowledge and developing relationships and skills to manage communitywide challenges and leverage collective advantages.
- Extensive and diverse partnerships between hospitals and local organizations use collective impact approaches to address specific and general health needs of the community.
- Hospitals and care systems partner with the community and public health departments to address gaps and limitations in health care delivery and to target community health needs.
- Hospitals and care systems provide balanced leadership that recognizes the resources and contributions of community partners, and they include community representatives in their leadership structure.
- Hospital-led initiatives address community issues such as environmental hazards, poverty, unemployment, housing and other socioeconomic factors.
- Community partners collaborate to develop relevant health metrics to measure progress and community needs.

## Bridging the Gap

Every hospital and care system approaches population health differently depending on organizational priorities, resources and population needs. A survey by the American Hospital Association and the Association for Community Health Improvement confirmed anecdotal evidence that implementation of population health initiatives varies widely across hospitals.<sup>6</sup> To move to the second curve of population health, hospitals and care systems will need to align their mission, organizational culture and services with a population health approach that addresses the needs of the community. Each organization's alignment is unique because the hospital's or care system's structure and resources, along with the surrounding community, influence and shape the transformation.

Many hospitals and care systems are taking steps toward the second curve by incorporating population health initiatives into their operations. A common impetus for initially engaging in population health is community benefit regulations that require not-for-profit hospitals to demonstrate their positive impact. Hospitals can achieve their community benefit requirement through community health promotion, education, charity care or other activities.

Part of this regulation mandates hospitals to conduct community health needs assessments at least once every three years and develop implementation plans to address identified needs in the population. By bringing together stakeholders from across the health care system and local community, the community health needs assessment process encourages collaboration between organizations to address the health issues unique to their community.

Some hospitals and care systems take a narrow approach to population health by focusing improvement efforts on their patient population. Many are developing accountable care organizations and patient-centered medical homes to manage care across the continuum for a specific population of patients. While these pilot programs are showing promising results for patient health and cost savings, these approaches do not address the needs of the greater community, particularly those individuals who do not have access to care.

Second-curve organizations go beyond community benefit regulations and accountable care organizations to develop a culture that integrates a population health approach into all facets of the organization. Because hospitals and care systems have different care services and organizational structures, leaders should define the target population and associated health goals. As health care moves to the second curve, hospitals and care systems may be challenged to expand their defined population into the broader community to address growing health issues.

As established stakeholders and leaders, hospitals and care systems should play a significant role in population health transformation. Hospitals can leverage their clinical expertise and extensive resources to promote wellness and support a variety of external collaborative relationships to achieve their population health goals. As the public health and provider sectors become better aligned, hospitals will need to engage in challenging but necessary changes to improve the health of the patient and community population as well as the organization's financial bottom line.

## Measuring Transformation to the Second Curve of Population Health

Hospitals and care systems that move toward the second curve of population health should evaluate process metrics but prioritize outcomes measures. For example, success is not the number of people who attend a wellness event; rather, success is the impact that the wellness event has on specific health outcomes.

Hospital and care system leaders can collaborate with their clinical staff and community leaders to develop metrics that are mutually acceptable and attainable. Aligning the needs and assets of the hospital and community with the metrics allows for more significant analysis. Choosing the appropriate metrics to measure transformation to the second the curve of population health involves identifying metrics that are:

- Simple, robust, credible, impartial, actionable and reflective of community values
- Valid and reliable, easily understood, and accepted by those using them and being measured by them
- Useful over time and for specific geographic, membership or demographically defined populations
- Verifiable, independently from the entity being measured
- Responsive to factors that may influence population health during the time that inducement is offered
- Sensitive to the level and distribution of disease in a population

Table I outlines possible outcome metrics for assessing the impact of population health initiatives. The metrics can be applied at the patient or community level.

Table 1. Sample Population Health Metrics

Metric Area	Description
Summary measures	<ul style="list-style-type: none"> <li>• Health-adjusted life expectancy at birth (years)</li> <li>• Quality-adjusted life expectancy</li> <li>• Years of healthy life</li> <li>• Disability-adjusted life years</li> <li>• Quality-adjusted years</li> </ul>
Inequality measures	<ul style="list-style-type: none"> <li>• Geographic variation in age-adjusted mortality rate (AAMR) among counties in a state (standard deviation of county AAMR/state AAMR)</li> <li>• Mortality rate stratified by sex, ethnicity, income, education level, social class or wealth</li> <li>• Life expectancy stratified by sex, ethnicity, income, education level, social class or wealth</li> </ul>
Health status	<ul style="list-style-type: none"> <li>• Percentage of adults who self-report fair or poor health</li> <li>• Percentage of children reported by their parents to be in fair or poor health</li> <li>• Percentage of children aged 3–11 years exposed to secondhand smoke</li> </ul>
Psychological state	<ul style="list-style-type: none"> <li>• Percentage of adults with serious psychological distress (score <math>\geq 13</math> on the K6 scale)</li> <li>• Percentage of adults who report joint pain during the past 30 days (adults self-report)</li> <li>• Percentage of adults who are satisfied with their lives</li> </ul>
Ability to function	<ul style="list-style-type: none"> <li>• Percentage of adults who report a disability (for example, limitations of vision or hearing, cognitive impairment, lack of mobility)</li> <li>• Mean number of days in the past 30 days with limited activity due to poor mental or physical health (adults self-report)</li> </ul>
Access to health care	<ul style="list-style-type: none"> <li>• Percentage of population that is insured</li> <li>• Percentage of the population that has a designated primary care physician</li> </ul>
Clinical preventive services	<ul style="list-style-type: none"> <li>• Adults who receive a cancer screening based on the most recent guidelines</li> <li>• Adults with hypertension whose blood pressure is under control</li> <li>• Adult diabetic population with controlled hemoglobin A1c values</li> <li>• Children aged 19–35 months who receive the recommended vaccines</li> </ul>
Cost of care	<ul style="list-style-type: none"> <li>• Percentage of unnecessary ER visits</li> <li>• Percentage decrease in ER costs</li> <li>• Percentage decrease in cost of care per patient, per year</li> </ul>

Source: Adapted from R. Gibson Parrish, 2010 and Healthy People 2020, 2013.

## Conclusion

To improve the health of a population, hospitals and care systems need to provide high-quality patient care and proactively address the environmental and social factors that affect health status. Hospitals and care systems have the opportunity to redesign their care delivery models to achieve long-term outcomes and cut costs. While most hospitals and care systems do not have the resources or desire to assume all of the health needs of their community, they can leverage their resources and influence to lead community health transformation. Some hospitals are well situated to lead transformation in their communities by strengthening their mission to improve health and investing in capital and collaborations that bind them to their communities.<sup>7</sup>

Specific tactics to operate in the second curve of population health are:

- Value-based reimbursement
- Seamless care across all settings
- Proactive and systematic patient education
- Workplace competencies and education on population health
- Integrated, comprehensive HIT that supports risk stratification of patients with real-time accessibility
- Mature community partnerships to collaborate on community-based solutions

Measuring and evaluating the process and outcomes of population health initiatives are critical to identify gaps and opportunities for improvement. Each tactic can be measured with metrics that allow a hospital or care system to assess its progress to the second curve of population health.

Moving to the second curve of population health will require challenging cultural and systemic shifts alongside buy-in and commitment from hospital leadership. Transformation will not occur over night; forward-thinking hospitals and care systems should engage their leadership, staff and community to develop a road map to the second curve that is congruent with the hospital's and community's needs, resources and priorities. Innovative approaches can be implemented not only to address rising costs and an increased demand for health services, but also to improve the patient experience of care and improve population health.

## Case Example I: Michigan Stroke Network

**Background:** While many of Michigan's hospitals have neuroendovascular specialists on staff, others cannot support a dedicated stroke expert available around the clock. St. Joseph Mercy Oakland is the first Certified Primary Stroke Center in Michigan.

**Intervention:** Addressing the need to increase access, in October 2006 Trinity Health launched the Michigan Stroke Network, a collaborative of 30 hospitals. Member hospitals have around-the-clock access to telemedicine services and stroke specialists.

Using Remote Presence™ Robotics, a remotely controlled mobile teleconferencing system, the Michigan Stroke Network ensures that every hospital has the ability to offer all patients the most advanced stroke care available. Initially, the Michigan Stroke Network deployed nearly two dozen RP-7 robots to hospitals throughout the state. The Michigan Stroke Network is funded by SJMO, so participating hospitals received the remote presence robots at minimal cost.

Participating hospitals pay no fee to join the network and there are no additional consultation fees. Stroke patients who are transferred to SJMO receive treatment and are returned to the member hospital for further care. Along with clinical support, the Michigan Stroke Network reaches out to member hospitals and surrounding communities to educate them about identifying strokes. Network representatives visit health fairs and conduct preventive screenings.

**Results:** As a result of the Michigan Stroke Network, remote presence robots are deployed across Michigan. Since 2006, network staff has seen a considerable increase in calls from partner hospitals requesting a referral for treatment. Additionally, patients who are referred to SJMO for stroke intervention have seen improvement in their NIH stroke assessment score. For example, patients who are admitted with a stroke assessment score between 11–14 are transferred back to their community hospital after treatment with an assessment score of 6–9.

**Lessons Learned:** Key learnings from the Michigan Stroke Network's experience include:

- Set up electronic communication and reporting between member hospitals and a primary stroke center at the beginning of the project to facilitate transfer of information
- Incorporate a community-based approach to enhance outreach and preventive services

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## Case Example 2: Banner Health

**Background:** Banner Health, a large nonprofit health care organization based in Phoenix, provides care for patients in Alaska, Arizona, California, Colorado, Nebraska, Nevada and Wyoming. Banner Health is driven by its mission: “to make a difference in people’s lives through excellent patient care.”

**Intervention:** In 2011 Banner Health redefined the aim of its care delivery process by transforming its organizational culture toward population health management. This redefinition began with formation of the Banner Health Network, an organization comprising Banner Health, Arizona Integrated Physicians, Banner Medical Group and Banner Health Physician Hospital Organization.

Banner Health Network is a comprehensive care system that is responsible for the continuum of patient care and accepts financial accountability for those served by the network. By bringing together Banner Health-affiliated physicians, 13 acute-care Banner hospitals and other Banner services in Arizona, Banner Health Network offers patients convenient access to a full range of high-quality health care services, such as acute care, home care, nursing registries and residential care through an accountable care organization model. It is one of a few networks in Arizona serving patients in a population health management model.

**Results:** Banner Health Network is one of the top five performing Pioneer ACOs in performance year one in terms of shared savings, with more than \$19 million saved. Additionally, BHN had the following results in performance year one:

- 8.9 percent fewer hospital admissions
- 14.4 percent reduction in average length of hospital stay
- 6 percent fewer hospital readmissions
- 6.7 percent drop in use of X-rays, MRIs or other imaging services
- 2.5 percent drop in Medicare payments per beneficiary

**Lessons Learned:** Critical to the success of BHN were:

- Aligning incentive payments with the physicians, e.g., using a software program to determine claims data and patient volume
- Providing robust support and organization for the primary care team
- Engaging the community with a variety of methods, including community representation on BHN boards

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## Case Example 3: Yale New Haven Health System

**Background:** Yale New Haven Health System, based in New Haven, Connecticut, comprises four delivery networks: Yale-New Haven Hospital, Bridgeport Hospital, Greenwich Hospital, and Northeast Medical Group, a physician foundation. YNHHS is an academic medical center affiliated with the Yale University School of Medicine.

**Intervention:** Over the last five years, YNHHS has progressed quickly in its population health approach. At first, YNHHS used clinic settings to provide basic health care services to the community. Community health needs assessments provided the data to develop targeted community health programs such as Project Access, which connects uninsured community members to local social services and health resources. An early intervention was the development of an onsite care management program for YNHHS employees living with chronic disease. This interview-based program provides care coordination, navigation, coaching and goal setting to employees and their adult dependents.

Recognizing the growing need for population health initiatives, YNHHS developed a set of core competencies for its organizational model that includes primary care access, clinical integration, care management, financial management/direct contracting and data analysis. A leadership group was formed to develop an accountable care organization to support population health initiatives. Working with a variety of health care partners, YNHHS is currently developing a clinically integrated health network.

**Results:** Within one year, the employee health program improved compliance with evidence-based care by 10 percent, brought risk-adjusted, per-member per-month spending in line with the general employee population, resulted in zero readmissions and avoidable admissions and consistently had 95 percent or higher participant satisfaction ratings.

**Lessons Learned:** As its population health approach has evolved, YNHHS identified several key factors that contributed to its success:

- An electronic medical record that provides data warehousing, actionable analytics and care management support
- Patient engagement and activation
- Local innovation when scaling small programs to the larger community

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## Case Example 4: Mercy and Memorial Hospitals

**Background:** Mercy Hospital Downtown, Mercy Hospital Southwest and Memorial Hospital, the three Dignity Health hospitals in Bakersfield, California, are the largest health care providers in the southern San Joaquin Valley and serve a diverse population of urban and rural residents. The hospitals' missions are to provide high-quality, compassionate health care to their patients and advocate on behalf of the poor. Created in 1991, the Department of Special Needs and Community Outreach was formed to take hospital resources beyond the walls of the three hospitals and help create a healthier community.

**Intervention:** Mercy and Memorial Hospitals have greatly expanded their population health initiatives over the last 10 years. They coordinate more than 45 outreach programs and collaborate with several hundred different partners in the community. A central component of the population health effort has been addressing access to care, preventive care, job training, chronic disease management, nutrition services and youth interventions. The programs are expanding with increased hospital support, grant funding and donations. Mercy and Memorial Hospitals continue to coordinate their population health programs through three outreach centers located in the most vulnerable areas of Bakersfield. These centers have become the hub of resources for the underserved. Residents have come to trust the employees, who provide a variety of health- and nonhealth-related services, including:

- Art for Healing
- Breakfast Club
- Breast health program
- Car seat program
- Community fitness classes
- Community Health Initiative
- Dinner Bell program
- Emergency food baskets
- Empowerment (chronic disease self management)
- Health education seminars and classes
- Health screenings
- Healthy Kids in Healthy Homes
- Homemaker Care job training
- In-home health education
- Operation Back to School
- Referrals for basic needs

**Results:** Of the patients who enter the empowerment seminars for chronic disease and diabetes self-management, 93 percent avoided admissions to the hospital or emergency department for six months following their participation. In the Homemaker Care job training program, 66 percent of participants have gained employment within six months. In 2013, the Community Health Initiative of Kern County enrolled 9,519 children in health insurance programs. The Art for Healing program has become a popular destination for community caseworkers to bring clients suffering from mental illness.

### Lessons Learned:

- Collaboration with other providers and partners enables Mercy and Memorial Hospitals to create a network of community members to enroll residents into health insurance programs.
- By offering evidence-based chronic disease management programs, Mercy and Memorial Hospitals are effective in avoiding hospital admissions and readmissions.
- Many program participants become volunteers, leaders and, in some cases, employees.

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## Case Example 5: Sentara Healthcare

**Background:** Sentara Healthcare operates more than 100 sites of care, including 11 acute care hospitals in Virginia and North Carolina. Through its insurance plan, Optima Health, Sentara Healthcare provides health insurance to about 450,000 people.

**Intervention:** To advance its population health efforts, Sentara Healthcare developed core population health competencies for its leaders and staff from existing small-scale population health programs. To strengthen the population health model, primary care delivery was redesigned, a pilot patient-centered medical home was initiated and clinical and technological capabilities were developed. A group of Sentara senior leaders oversaw the transformation process. Sentara leveraged its insurance plan and created new care delivery processes focused on what is best for the patient. For example, care managers were introduced to focus on high-risk and high-utilization patients.

Sentara Healthcare conducted community health needs assessments, which provided a picture of the health status of community residents and helped direct Sentara in developing and providing health services. Through collaboration with community partners, such as health departments, free clinics and community health centers, Sentara works to improve the health of its community. In 2012, Sentara provided more than \$282.2 million in community benefits.

**Results:** The pilot health programs have met their goals and showed great promise for Sentara Healthcare. Pilot programs resulted in:

- 44 percent decrease in average emergency department visits
- 46 percent decrease in hospital all-cause admissions
- 18 percent decrease in hospital all-cause 30 day readmissions
- 87 percent increase in seven day follow-up visits
- 17 percent reduction payments by Sentara's insurance company, Optima Health

Additionally, the various population health programs have reported high patient satisfaction scores.

**Lessons Learned:** With a more deliberate approach to the development of its population health initiatives, Sentara learned:

- Using multidisciplinary teams for the leadership group and other project groups helped create a comprehensive and flexible program.
- Taking time to determine the exact significance of the results of small-scaled programs is important before expanding programs to the greater population.
- Breaking down silos and having continuity are critical to improving patient outcomes.

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<http://www.sentara.com>

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## Endnotes

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### About HRET

Founded in 1944, the Health Research & Educational Trust (HRET) is the not-for-profit research and education affiliate of the American Hospital Association (AHA). HRET's mission is to transform health care through research and education. HRET's applied research seeks to create new knowledge, tools and assistance in improving the delivery of health care by providers and practitioners within the communities they serve.

### About HPOE

Hospitals in Pursuit of Excellence (HPOE) is the American Hospital Association's strategic platform to accelerate performance improvement and support delivery system transformation in the nation's hospitals and health systems. HPOE shares best practices, synthesizes evidence for application, and engages leaders in the health industry through education, research tools and guides, leadership development programs and national engagement projects.

### About ACHI

The Association for Community Health Improvement (ACHI) is a personal membership group of the American Hospital Association. ACHI provides education, professional development, resources and engagement opportunities to its members in the fields of population health, community health and community benefit. ACHI is working to cultivate a society of professionals who apply their specialized knowledge and expertise to effectively educate and collaborate with their communities in achieving the highest potential health for community residents.