



Trajectories

Aim For Excellence

MAY 2018 ■ Advancing Population Health: Assessment and Action in Missouri Hospitals



Population health

is defined as “health outcomes of a group of individuals, including the distribution of such outcomes within the group.”¹

Population health management

is an integrated, coordinated, iterative process that positively affects patient experience; provider engagement; and clinical, operational and financial outcomes, through various care continuums.



Background

Nationally, hospitals are working to adapt to value-based reimbursement as pay-for-performance programs expand throughout the health care delivery system. At the same time, hospitals are investing in community and population health improvement efforts that focus on groups of individuals within a community. Not all hospitals are similarly positioned to undertake population health management.

In July 2017, the Missouri Hospital Association’s Strategic Quality Advisory Committee recommended that a population health task force be created to evaluate Missouri

hospitals’ readiness and to advance population health. Once an assessment of the readiness was complete, the task force would provide guidance to identify resources and priorities, and recommend targeted initiatives to support hospitals in population health improvement.

To assess the readiness of hospitals, a survey was conducted to identify strengths and gaps in hospitals’ community health delivery systems.

Introduction

A growing number of hospitals have experience with value-based care models. These include bundled payment models, Accountable Care Organizations, Patient-Centered Medical Homes and other programs modeled on coordination of care throughout the care continuum. Many of these models began as pilot projects through the Centers for Medicare & Medicaid Services, and are now increasingly viewed as the model of the future for health care systems across the country.

More recently, CMS launched a pilot Accountable Health Communities program creating a model to bridge the gap between patient-centered care and community health. While ACOs and PCMHs have focused primarily on care coordination and improvement strategies organizationally, AHCs envision a system where the health-related social needs of Medicare and Medicaid beneficiaries are addressed by connecting patients and providers with community-based resources. Through screening, referral and community navigation services, AHCs would reduce health care costs and utilization by addressing gaps between clinical care and community services.

The AHC model provides new opportunity to link care delivery and hospitals' community health needs assessment efforts. In addition, they represent a strong statement by CMS that population health will be an increasingly important component of value in CMS' payment policies.

Evidence suggests CMS will grow its role as an active purchaser rather than as a passive payer in the health care system.ⁱⁱ In January 2017, the National Association of Medicaid Directors report, "Value-Based Purchasing Snapshot," stated that, "Medicare and Medicaid programs are moving along parallel tracks to transform the health care system."ⁱⁱⁱ In addition, U.S. Secretary of Health and Human Services Alex Azar recently outlined four areas of emphasis for future health policy.

- establish greater consumer control over health information technology
- encourage price and quality transparency
- drive value and quality through Medicare and Medicaid
- remove government burden that impedes value-based transformation^{iv}

Azar recently underscored the importance of Medicare and Medicaid in systemwide transformation stating, "If we are serious about transforming our health care system toward paying for value, Medicare and Medicaid will play a key role. Only Medicare and Medicaid have the heft, the market concentration, to drive this kind of change, to be a first mover." CMS will continue to influence the behavior of commercial-managed care plans. Moreover, employers continue to use incentives to steer patients toward lower cost settings of care. Cumulatively, payers are moving toward prevention and health management to reduce consumption and costs while improving outcomes.

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— Alex Azar

To deliver improved value and mitigate the financial risks of pay-for-performance systems, hospitals must be ready to coordinate care more effectively at the patient and population level. Understanding where hospitals are positioned to implement population health management and recognizing the necessary steps to achieve readiness is the goal of the first half of this brief. The second half includes two targeted initiatives to implement population health management.

Missouri Hospitals: Assessing Population Health Readiness and Maturity

The September 2017 *Trajectories* identified nine pillars to guide population health strategy and programs: leadership; patients and community; workforce; finance; data and technology; operations; legal and regulatory; policy and advocacy; and outcomes.^v These pillars, which were based on the Baldrige model, incorporate policy and advocacy, as well as additional application-based components to the domain areas for the assessment tool with each being weighted and scored.

To assess the readiness of hospitals to engage in population health and community health improvement projects, a survey was designed based on components from the American Hospital Association and the National Rural Health Resource Center with a five-point Likert scale.



To estimate program maturity, a model was adapted from the *Journal of Health Information Management*.^{vi} The model identified four levels of implementation and integration: foundational, aspirational, proficient and transformed. However, the MHA task force recognized some hospitals may score below "foundational" indicating a need for basic education and infrastructure. Therefore, the five phases of the maturity scale developed for use in Missouri was pre-foundational 1, pre-foundational 2, foundational, proficient and transformational. Each phase includes defined key characteristics and recommended steps. See Table 1.

Table 1

Population Health Maturity Scale				
				TRANSFORMATIONAL
			PROFICIENT	
		FOUNDATIONAL		
	PRE-FOUNDATIONAL 2			
PRE-FOUNDATIONAL 1				
Key Characteristics	Key Characteristics	Key Characteristics	Key Characteristics	Key Characteristics
<ul style="list-style-type: none"> absence of board and medical staff education, engagement and support high degree of challenge with medical staff alignment related to employed and independent physicians major gaps in clinical processes and care coordination inability to obtain meaningful data and reports community health needs assessment is not utilized to engage external partners 	<ul style="list-style-type: none"> limited board and medical staff education, engagement and support high degree of variability with care transitions fragmented data and reporting with lack of meaningful reports to end users limited engagement with external partners 	<ul style="list-style-type: none"> ongoing education with internal stakeholders, including staff basic protocols exist related to care transition handoffs from outpatient to inpatient and vice versa ability to obtain aggregate data and provide meaningful reporting to internal and external stakeholders 	<ul style="list-style-type: none"> high level of engagement with board and medical staff ongoing aggressive efforts with systematic measuring of community health improvement ability to obtain risk stratified data by population groups, subgroups and reporting have limited value-based contracts with payers, but possess the capability to pursue 	<ul style="list-style-type: none"> ACO, Patient-Centered Medical Home recognition for outpatient clinics; shared savings arrangements senior-level compensation and physician compensation include quality- or value-based metrics organizational scorecard includes community benefit metrics and/or outreach that correlate to improving community health care coordination with external partners, such as Federally Qualified Health Centers innovative approaches to care coordination and access, such as utilization of community health workers or community-based programs; online scheduling and access to telehealth
Recommended Steps	Recommended Steps	Recommended Steps	Recommended Steps	Recommended Steps
<ul style="list-style-type: none"> educate board, leadership team and other appropriate staff on population health concepts, terminology, current landscape and value-based models evaluate operational and clinical process with care gaps and transitions utilize community health needs assessment data to develop short- and long- term health care needs 	<ul style="list-style-type: none"> all of foundational, as well as process flow mapping patient flow assessments from outpatient to inpatient setting and vice versa evaluate ability to gather, analyze and report meaningful data positioning toward value-based performance 	<ul style="list-style-type: none"> evaluate community health needs assessment data and correlate to impact on improvement and outcomes evaluate medical home recognition for clinics improve data aggregation with risk stratification 	<ul style="list-style-type: none"> increase movement towards value-based payment models coordinate care with FQHCs and non-owned entities increase education in high reliability and LEAN Six Sigma approaches to reduce redundancies/ duplication 	<ul style="list-style-type: none"> transparent with internal quality review, care transitions and referral management techniques innovative solutions for patient access increased alignment with quality mechanisms and provider- and executive-level compensation increased community, as well as local and state advocacy efforts to reduce socio-economic disparities

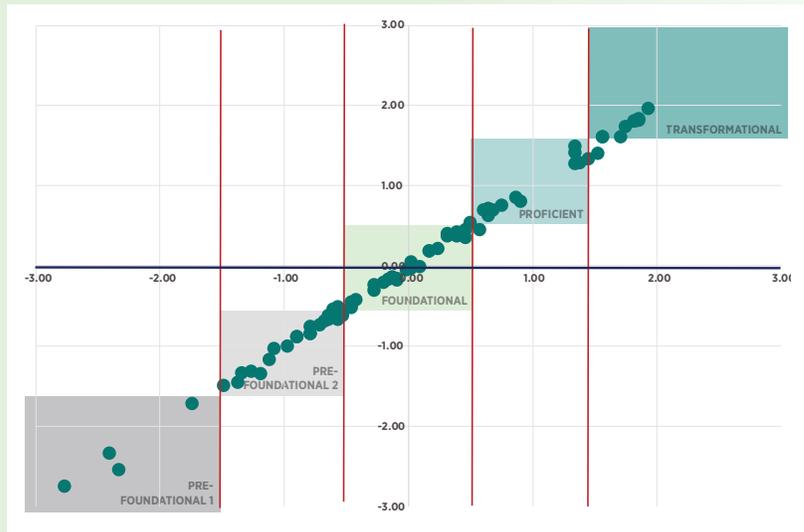
Methodology

Each component of the nine domains of the assessment tool was comprised of a five-point bipolar Likert scale. This psychometric scale was used to measure the perception of each hospital's position on the five maturity scale phases. The correlation of the assessment tool domain components to the maturity scale was statistically tested and the methodology outlined.

To ensure the integrity and accuracy of the survey, Pearson correlations were computed among the scales and subscales. The observed positive values helped confirm the measurement of maturity as a single dimension. Item scale analysis for each variable was completed using simple statistics, such as mean, standard deviation, sum, minimum and maximum.

To measure internal consistency of the items within each of the nine domains, a Cronbach's coefficient was employed, revealing moderate-to-high alpha values for each of the nine domains measured. These results further confirmed the validity and reliability of the assessment tool from both a scientific and statistical standpoint. Once results were gathered from the survey, each hospital's score was recorded, organized and analyzed. Initial raw data revealed a skewed distribution, as the measures of central tendency were evidently further to the right. For that reason, a z-score was computed to normalize the results. A z-score is a numerical measurement of a values relationship to the mean in a group of values, and this test was performed on each of the nine domains and on the overall score for each individual hospital.

A total of 81 hospitals participated in the statewide survey — a 56 percent response rate.



Assessment Tool Results

Assessment results indicate that Missouri hospitals are positioned throughout the five phases of maturity. With 36 percent of the hospitals in the foundational phase, 34 percent fall below and 30 percent above the foundational phase. Table 2 shows the breakdown by hospital type, as well as organizational state with regard to population health maturity phase.

Table 2

Maturity Scale	Acute Care	Critical Access	Behavioral/ Rehab.	Long-term Acute Care	TOTAL
PRE-FOUNDATIONAL 1	0	2	1	1	4
PRE-FOUNDATIONAL 2	5	10	7	2	24
FOUNDATIONAL	20	8	1	0	29
PROFICIENT	11	2	0	0	13
TRANSFORMATIONAL	6	5	0	0	11

Table 3: Key Findings

ORGANIZATIONAL DEMOGRAPHICS	
Accountable Care Organization/ CIN/Patient-Centered Medical Homes	50%
Employed Physicians	4,766 primary care/6,873 specialists
Urgent Care Centers	159
Retail Pharmacies	30
Quality Incentives in Physician Contracts	41%
Participation in Quality Payment Program	56%
POPULATION HEALTH OVERSIGHT	
Oversight of Population Health	80% under administration
Dedicated Population Health Manager and Staff	25%
Budgeting for Population Health Initiatives	50%
DATA AND TECHNOLOGY	
Ability to Integrate Clinical Data Between Inpatient and Outpatient Clinics	54%
Education of Staff on EHR Capabilities for Managing Population Health	46%
ACCESS TO CARE	
Ability to Request Appointments Online	54%
Ability to Schedule Appointments Online	36%
EMPLOYEE HEALTH	
Self-funded Health Insurance	68%
Annual Health Risk Assessments/Wellness Programs	75%
Incentives	68%
Staff Assistance for Burn-out	43%
Direct-contract with Local Employers	36%
OUTCOMES	
Tracking of Measurable Program Outcomes for Diabetes, Congestive Heart Failure, Chronic Obstructive Pulmonary Disease	50%
Utilization of Transitional Care Management and Chronic Care Management Codes	47%
Advocacy for Risk Adjustment on Social Determinants	84%
CHALLENGE AREAS IDENTIFIED	
Alignment with Employed Providers	74%
Alignment with Non-employed/Independent Providers	88%
Multiple EHRs Within the Organization	68%
Data Aggregation and Analysis	89%
Ability to Staff Population Health Management	83%
MACRA/QPP	75%
Financial Risk Assessment	80%
Patient Engagement	81%

Population Health Assessment Tool Limitations and Future Recommendations

Collection of baseline data was successful, but gaps in the assessment tool were identified during the survey process. The differing nature of the behavioral, rehabilitation and long-term acute care hospitals established that the tool was ill-designed to accurately reflect the readiness for these types of hospitals. In addition, the survey was not designed to account for health systems with multiple hospitals in a market that have aggregated and centralized community health systems within their organizations. Finally, a lack of consistent terminology for individuals and structures within the emerging field — including terms such as “care coordinators” versus “case managers,” and “urgent care” versus “convenience clinics” — could influence results. A clear set of definitions is necessary to accurately define roles and assets.

Strategic Application of Survey Results

Population health management programs allow hospitals to build systems to address high-risk, high-value patient populations to improve individual and population health. Aligning these priorities and implementing targeted programs to address conditions identified through hospitals’ community health needs assessments is the ultimate goal. Efforts to refine the survey instrument to address these gaps will be ongoing with its continued use in future years.

Two challenges that are common to all hospitals are preventable emergency department utilization and preventable inpatient admissions for various chronic conditions. MHA’s Strategic Quality Advisory Committee’s population health task force recommended program development around these

The November 2017 edition of *HIDI HealthStats* states that “During fiscal year 2016 in Missouri, 20,655 patients with 10 or more ED and inpatient visits accounted for 1.6 percent of patients. Nine out of 10 patients were diagnosed with chronic disease during the year, and 71 percent had multiple chronic conditions.”^{vii} ED super-utilizers are defined in this research and for this project as those patients that **have 10 or more ED visits per year and are high-need, high-cost patients that have complex post-discharge needs.** Increased attention is being paid to this group of patients by payers and employers, as this population accounts for disproportionately high utilization of health care resources. These patients usually do not receive the right care at the right time or with the appropriate provider. Some of the criteria to identify super-utilizers are level of acuity, risk stratification, social determinants, patient/family engagement and lack of a primary care provider.

challenges to advance population health management maturity and enable innovation.

Transitional Care Management in the Emergency Department

To reduce excess and unnecessary ED utilization, hospitals must identify and address the demographic differences, clinical characteristics and socioeconomic conditions present among the population. Programs to improve care management of super-utilizers should be tailored to the specific needs of the different subgroups of these patients. Best practices, such as techniques related to scheduling and coordinating care with a primary care physician or specialist, use of care coordinators and community health workers, and new patient care management competencies are necessary to enable wide deployment.

An emerging tool for hospitals is a new admit, discharge, transfer alerting system from the Hospital Industry Data Institute. The ADT alerting system will improve monitoring of super-utilizers to improve care coordination. While it currently is being field tested, when fully implemented, participating hospitals will benefit from risk-stratified data and gain the capacity to organize patients by population groups and sub-groups.

Goals for the ED utilization management initiative include the following.

- implement, educate and use the HIDI ADT alerting system
- implement changes in care transitions using best practices, tools and innovation
- decrease the percentage of super-utilizers by 10 percent by December 2020, based on fiscal year 2016 baseline of 20,655 patients

Three sequential actions will underpin the ED utilization management initiative. These three strategies will inform resource development and create new opportunities for evidence-based best practices in ED population health management.

- 1 **Population determination.** HIDI data will identify target populations and illuminate patient subgroups that are most likely affected by complex care management. Hospital- and health system-specific data, including detailed demographics, clinical data and patient assessments — including social support, housing, food and any other environmental factors — will be considered. HIDI predictive modeling within the ADT alerting system will then assist with inclusion and exclusion criteria for subgroups among super-utilizers.

2

Care teams and care management interventions. Hospitals and health systems will establish care teams to coordinate the following.

- timely outpatient follow-up post discharge
- linkage to a primary care provider that will serve as a medical home
- goal setting and care plan development
- health education and coaching
- patient and caregiver self-management education
- instruction on medications and medication reconciliation
- management of chronic conditions
- linkage to housing, substance abuse and other community resources when applicable

In addition, care teams assess resources and support for patients' basic needs, including housing, food insecurity and environmental factors. An advanced model of transitional care will ensure social services are incorporated early in the care of a high-risk patient. Innovative post-discharge services may consist of nonclinical personnel, including community health workers for patient support.

3

Program integration and maintenance. A long-term commitment by hospital and health system leadership is essential to success in population health management and oversight. Population health management programs seldom produce immediate results — return on investment often takes 18 to 24 months for demonstrable progress. Demonstrating positive cost savings and improved outcomes is the primary sustainability strategy for this initiative, in alignment with Medicare, Medicaid and managed care plans ED utilization reduction initiatives.

Effective Management of Preventable Admissions for Patients with a Primary Diagnosis of Diabetes

Diabetes continues to be a top health issue identified in community health needs assessments. Prevention and improved management of diabetes are population health strategies that align community and organizational missions. As reported in the July 2016 edition of *Trajectories*, “Missouri continues to experience an increasingly high rate of diabetes diagnosis as compared to the nation — from approximately 5.8 to 10 percent.”^{viii}

The three-year goals for this population health initiative include the following.

- decrease preventable admissions for all patients with a primary diagnosis of diabetes by 5 percent by December 2020
- implement evidence-based best practices for care coordination for patients with diabetes
- align with the Missouri Department of Health and Social Services to scale and sustain the National Diabetes Prevention Program

The recent decision by CMS to reimburse for diabetes prevention will support evidence-based programs, such as the Diabetes Prevention Program, and provide an opportunity for hospitals to align diabetes community health activities with CMS' vision for patient- and community-centered care. Moreover, a growing body of pilot programs provide a framework for community-partner development. A recent case study from Montefiore Health System — a large integrated delivery system in New York — established a model program with the YMCA that allowed integration throughout the health system. The pilot demonstrates how partnering with community external

organizations can ease the burden of implementing DPP.^{ix}

Reducing preventable admissions related to diabetes care requires investment in executive and clinical leadership, data analysis, technology implementation, and staff and partner training.

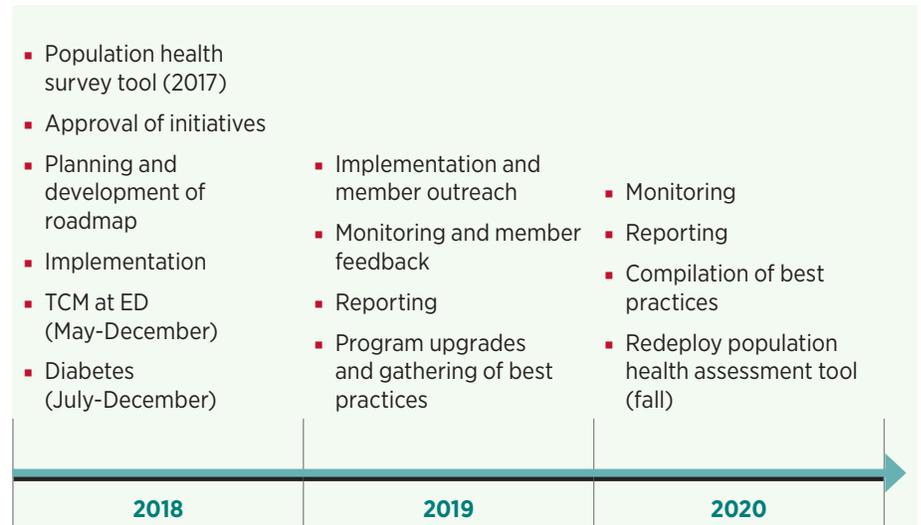
A comprehensive strategy to reduce preventable hospitalizations includes the following.

- Aggregate data to identify population subgroups with diabetes as a primary diagnosis. Among this population, a patient assessment must occur to collect social and caregiver support information, food and dietary conditions, transportation, housing, and access to primary care.
- Develop improved processes for diabetes patients in the inpatient setting for medicine-based and surgical-based care for all patients. Actions include medication reconciliation, follow-up laboratory and other testing, post-discharge activities, and discharge summaries to primary care providers for the diabetes population.
- Hospitals and skilled nursing facilities must partner to avoid rehospitalizations. Hospitals must provide discharge summaries with notes to facilities, medication management and coordination of care with primary care provider/nursing home personnel.
- Transitional care teams must provide enhanced post-hospital services to patients at high risk for readmission for clinical or social reasons.
- Palliative care, when appropriate, should be used to better manage recurrent symptoms as alternatives to hospitalization — with referrals to hospice when warranted.

- Hospitals should work with the Missouri Diabetes Shared Learning Network to provide further guidance and be a resource with focused activity in the bootheel region of Missouri.
- The exploreMOhealth.org website can offer ZIP code-based rankings to assist in targeted resources and support within communities with high rates of diabetes.

The two initiatives recommended by the task force will be carried out in phases. Outcomes will be reported to respective stakeholders. Community partners, primary care providers and post-acute care providers are critical to the achievement of improved health outcomes and will be engaged during the process — building trust and capacity for future endeavors. Outcomes and ongoing reporting will be provided to internal stakeholders. The timeline for the strategic application of these key initiatives are included in Figure 1.

Figure 1: Key Initiatives Timeline



Conclusion

Although Missouri hospitals are at various levels of readiness and maturity to adopt population health initiatives, implementing an evidence-based program in a high-value population health area can help move hospitals toward greater maturity. Health care systems continue to invest in systems to reduce waste and variation, and to cooperate with nontraditional partners in care transitions with the goal of becoming high reliability organizations.

In the latest “State of Population Health: Third Annual Numerof Survey Report,” nearly all of the 400 C-suite health care executives responded that their organization will have some revenue in models with upside or downside risk in two years. The report finds that “organizations that go down the path to population health will be building capacity to effectively manage their operations under the next health care paradigm.”⁸ It is clear that Missouri hospitals must continue the journey to becoming transformational change agents in the communities they serve and in the health care delivery system.

Suggested Citation

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