POPULATION HEALTH ASSESSMENT

MHA | 2023 SURVEY RESULTS

Introduction

As the landscape in health care continues to shift from volume to value, hospitals and health systems are faced with mounting pressure to implement innovative care redesign strategies aimed at improving care delivery and lowering costs. The Centers for Medicare & Medicaid Services and other payers gradually are moving toward value-based care, where health outcomes will continue to play a significant role in the payment equation. These payment arrangements have made it necessary for hospitals and health systems to change from episodic care to a population health-based model that integrates preventive care while addressing social determinants of health, such as food, housing and transportation. On the same note, through mortality reviews, health outcomes data review and patient feedback, hospitals have learned that SDOH-related issues are the root cause of many lags and disparities in improving health. Integrating best practice population health improvement strategies that incorporate clinical and nonclinical factors will be important in shifting how care is delivered using a more holistic approach.

CHART 1

Population Health Assessment Survey Completion Among All Hospital Types by Year

Chart 1 shows that 120 Missouri hospitals participated in the 2023 Population Health Assessment Survey compared to 105 in 2020 and 81 in 2017. Compared to the 2017 and 2020 survey response rates of 58% and 75% respectively, the 2023 survey recorded the highest response rate of 86%.
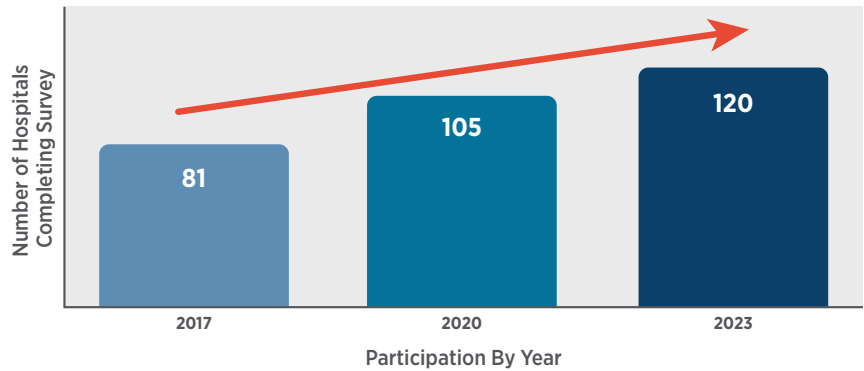
Number of Hospitals Completing Survey

| 2017 | 2020 | 2023 |
| 81 | 105 | 120 |

Participation By Year

CHART 2

Population Health Assessment Survey Completion Among Acute Care Hospitals by Year

Chart 2 shows the survey completion rate among the 68 acute care MHA-member hospitals, of which, 61 completed the 2023 triennial survey, which equates to a 90% response rate. Compared to 2020, there was a 12.9% increase in survey completion among acute care hospitals in 2023.
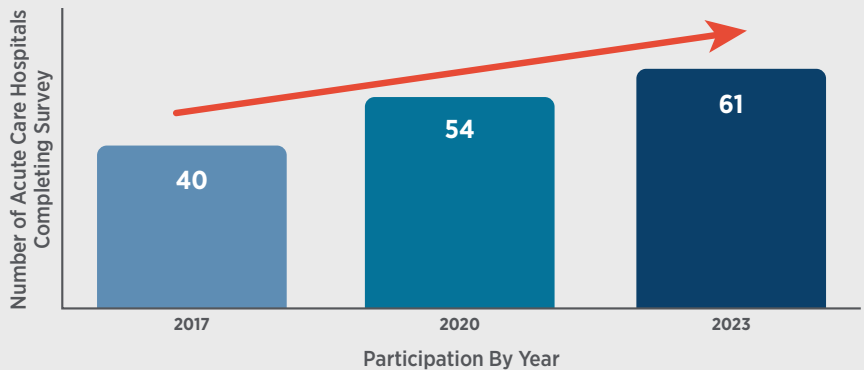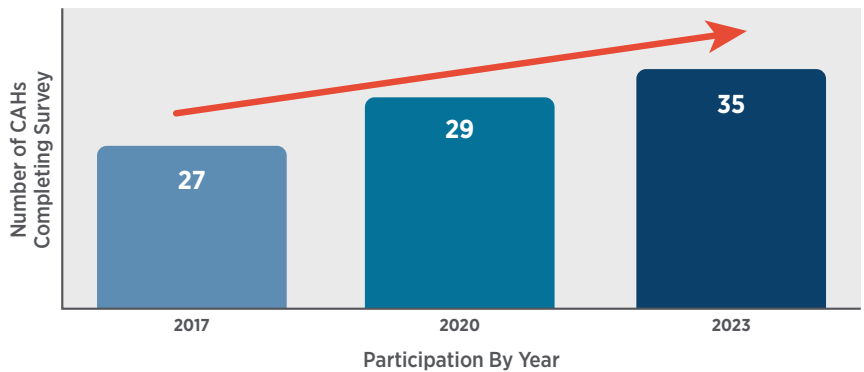
Number of Acute Care Hospitals Completing Survey

| 2017 | 2020 | 2023 |
| 40 | 54 | 61 |

Participation By Year

CHART 3

Population Health Assessment Survey Completion Among Critical Access Hospitals by Year

Chart 3 shows an increase in the number of critical access hospitals completing the survey over time. Out of the 35 CAHs in Missouri, 100% of them completed the survey compared to the 27 and 29 CAHs completing the survey in 2017 and 2020, respectively.
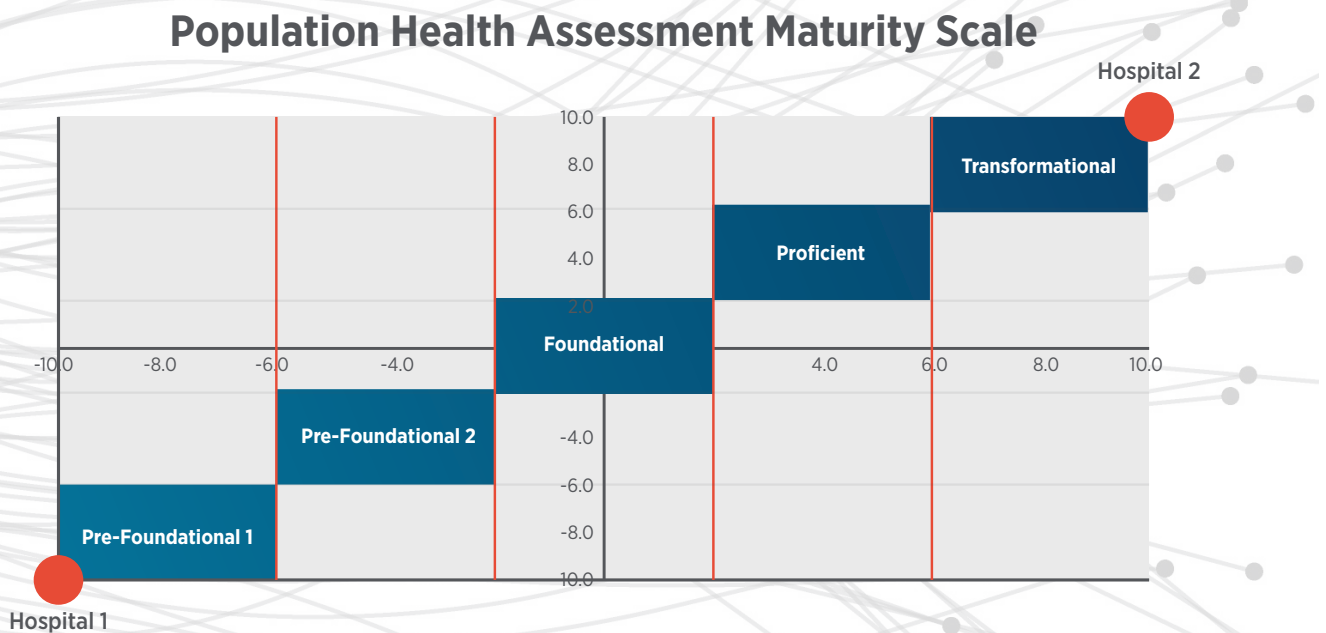
Number of CAHs Completing Survey

| 2017 | 2020 | 2023 |
| 27 | 29 | 35 |

Participation By Year

Source: MHA — Population Health Assessment Survey, 2017/2020/2023

It's worth noting that while 96 of the 120 hospitals that completed the survey comprised of acute care hospitals and CAHs, the remaining 24 hospital types included behavioral/rehabilitation, long-term acute care hospitals, children's/pediatric hospitals and federal/veteran affairs hospitals. On the same note, 100% of systems completed their 2023 surveys.

Statistical 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 classify the perception of each hospital's position in the five maturity scale categories shown in Figure 1.

Population Health Assessment Maturity Scale

Hospital 2

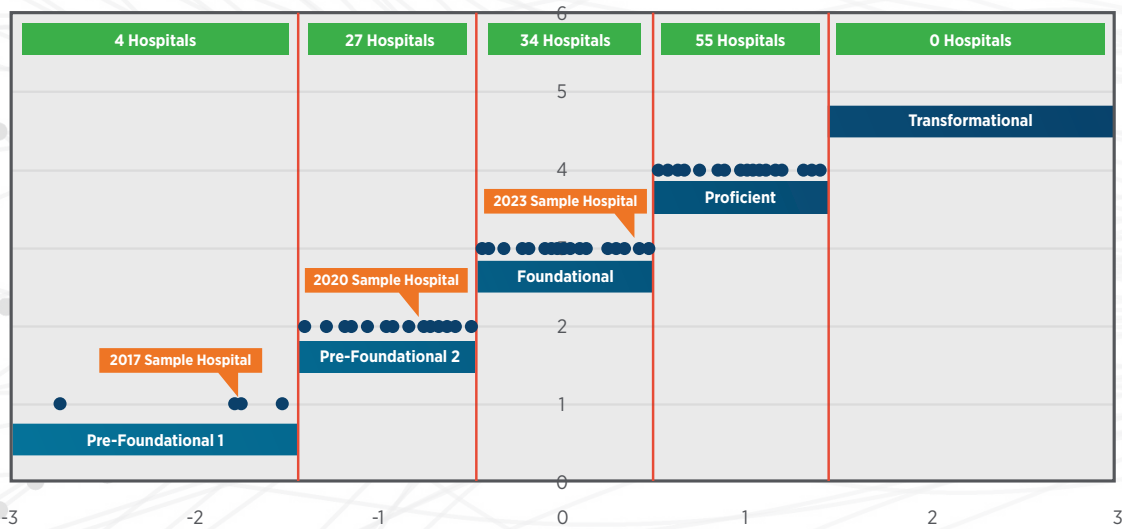| Category	
Transformational	
Proficient	
Foundational	
Pre-Foundational 2	
Pre-Foundational 1	

Hospital 1

To ensure the integrity and accuracy of the survey, Pearson's correlation was observed among the scales and subscales producing positive values, confirming the measurement of maturity as a single domain. Item scale analysis for each variable was completed using summary statistics, such as mean, standard deviation, sum, minimum and maximum. To measure internal consistency of the items within each of the nine domains, Cronbach's alpha was employed, revealing moderate

to high agreement for each of the nine domains measured. This confirmed that all were closely related, thus confirming the validity 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. A Z-transformation was conducted to normalize each of the nine domain's scores, as well as the overall score for each individual hospital.

CHART 4

Distribution of Hospitals by Maturity Level
(Wtd_Z_Cat and Wtd_Z_Score) — 2023

| 4 Hospitals | 27 Hospitals | 34 Hospitals | 55 Hospitals | 0 Hospitals |

Transformational

2023 Sample Hospital

Proficient

2020 Sample Hospital

Foundational

Pre-Foundational 2

2017 Sample Hospital

Pre-Foundational 1

Source: MHA — Population Health Assessment Survey, 2017/2020/2023

Chart 4 shows the position of each hospital on the maturity scale using the Weighted Z category versus Weighted Z-score, respectively. Approximately 28% of hospitals fell under the Foundational level, 46% in the Proficient level, 23% in the Pre-Foundational 2 level, 3% in the Pre-Foundational 1 level and 0% in the Transformational level. While there was a decrease in the number of hospitals in the Transformational level in 2023, there was a significant increase in the number of hospitals that fell in the Proficient category.

Chart 5 shows the distribution of hospitals in the five maturity level categories in2017, 2020 and 2023. Compared to the 2020 survey results, there was an 104% increase in the number of hospitals falling within the Proficient level. While the 2020 results showed a more symmetrical distribution, the 2023 results showed a negatively skewed graph as evidenced by the much longer left tail and a shorter right tail. Increased participation by hospitals in 2023 was a key factor in proportional increases observed in some maturity categories. It's worth noting that 74% of hospitals fell between the foundational and the proficient levels respectively.

CHART 5

Population Health Maturity Level Category by Year
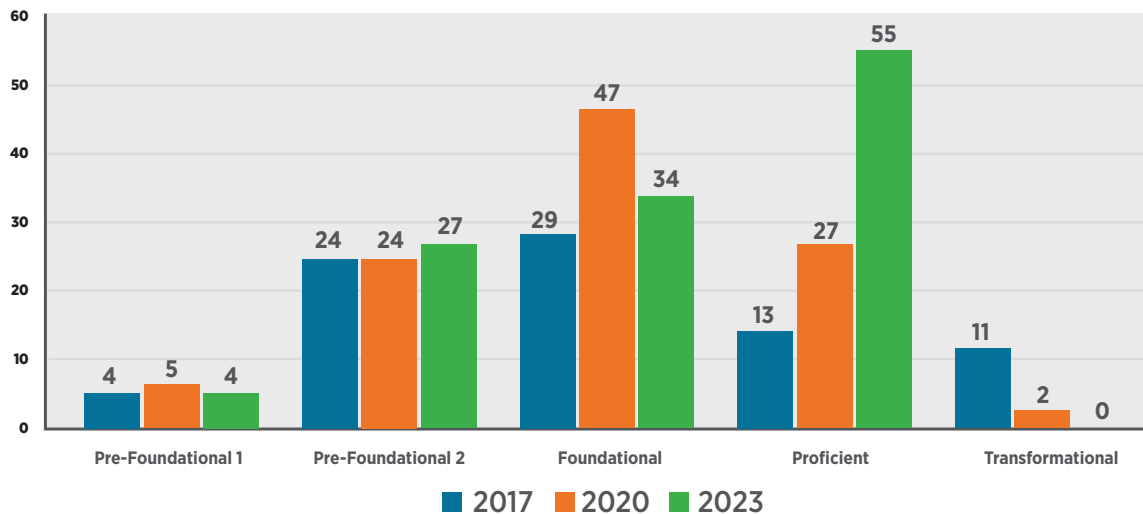
Source: MHA — Population Health Assessment Survey, 2017/2020/2023

Table 1 shows an increasing mean score in five categories, a decrease in two categories and a sustained score in two categories. Note: A comparison was done for the 2020 and 2023 survey periods.

Table 1

Mean Score Comparison of ALL Participating Hospitals			
	2017 Mean Score (n=81)	**2020 Mean Score (n=105)**	**2023 Mean Score (n=120)**	**Current Status**
Leadership	19	20	22	Increased
Patients and Family	56	53	63	Increased
Workforce	32	34	32	Decreased
Finance	3	8	9	Increased
Data and Technology	10	12	13	Increased
Operations	31	33	36	Increased
Legal/Regulatory	2	3	2	Decreased
Outcomes	33	35	35	Maintained
Policy and Advocacy	3	3	3	Maintained

Source: MHA — Population Health Assessment Survey, 2017/2020/2023

Demographics

In 2023, 40% of hospitals reported that they were part of an Accountable Care Organization compared to 25% in 2020. Of the hospitals/health systems completing the survey in 2023, 80% own primary care clinics, 27% are part of a clinically integrated network and only 26% own urgent care centers. About 45% of hospitals completing the survey stated that they serve a population of more than 80,000, while about 34% serve about 20,000 people in their respective primary service areas.

Chart 6 identifies the areas where population health is administratively based in hospitals/health systems responding to the 2023 survey.

CHART 6

Top Areas Where Population Health is Administratively Based

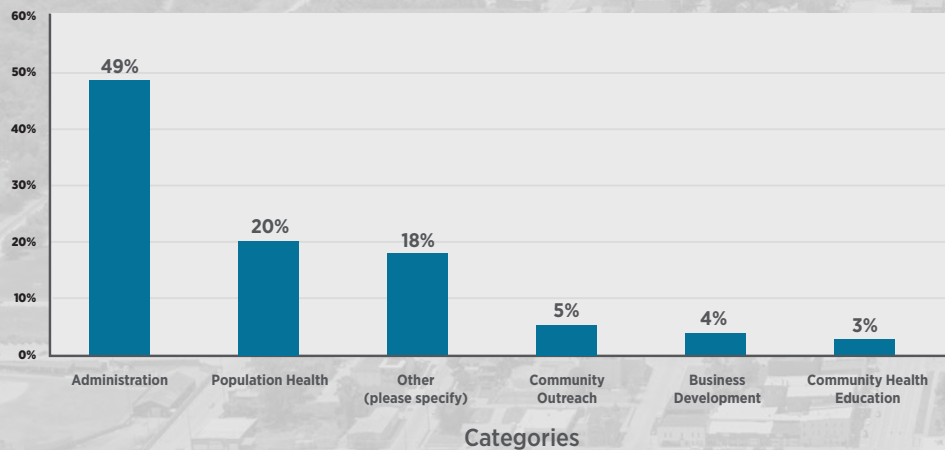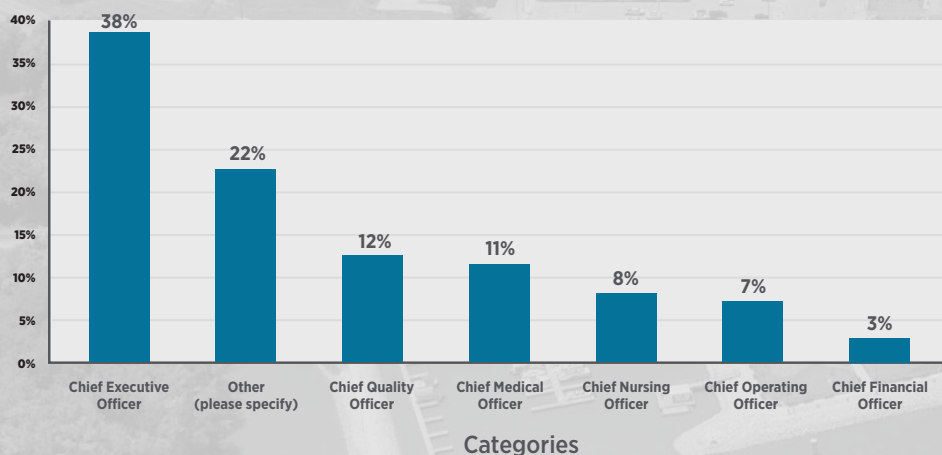| Category	Percentage
Administration	49%
Population Health	20%
Other (please specify)	18%
Community Outreach	5%
Business Development	4%
Community Health Education	3%

Categories

Chart 7 shows the positions that oversee population health efforts in hospitals/health systems responding to the 2023 survey. It's important to note that there was an almost 50/50 split when they were asked if they have a dedicated staff for population health.

CHART 7

Top Positions That Oversee Population Health Efforts Within Hospitals/Health Care Systems

Category	Percentage
Chief Executive Officer	38%
Other (please specify)	22%
Chief Quality Officer	12%
Chief Medical Officer	11%
Chief Nursing Officer	8%
Chief Operating Officer	7%
Chief Financial Officer	3%

Categories

Source: MHA — Population Health Assessment Survey, 2023

Leadership

According to the 2023 survey, more than 64% of the respondents indicated that board members, senior leadership, medical staff and managers agree that population health plays a critical role in value-based reimbursement and are focused on creating a culture to support population health initiatives. Slightly more than 64% of the respondents indicated that population health is embedded in their strategic planning process.

Table 2 shows the top five identified challenges in implementing population health management among all hospitals completing the survey.

Table 2

Major Challenges Identified in the 2023 Survey	Percent in Agreement (n=92)
Data aggregation and analysis	57%
Financial risk assessment	51%
Patient engagement	47%
Alignment with non-employed/independent providers	41%
Ability to staff population health	40%

Source: MHA — Population Health Assessment Survey, 2023
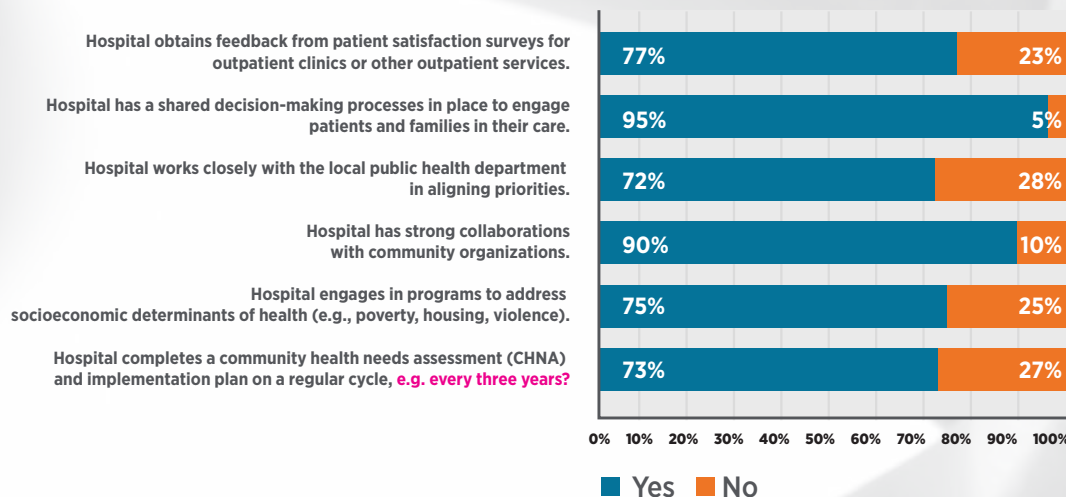
Effective leadership is critical to the success of any organization. A leader's ability to set expectations while ensuring all staff understand how their efforts contribute to the overall strategic goals is very important. Leaders must have a clear vision of where they want to take the organization, lead by example to build credibility and gain respect, show integrity by their daily actions, communicate effectively, and frequently and consistently recognize individuals "going above and beyond." While the aforementioned qualities are important, they are not exhaustive. Sharing data and information within the hospital is important for the overall success of any organization. Providing the required training, tools and resources is key to ensuring staff can meet the expectations of their job. It also is important that leaders create a conducive environment that makes everyone feel valued and appreciated.

Patients and Community

Chart 8 shows the distribution of key patient and community measures.

Distribution of Hospitals in Key Areas Relating to Patients and Community Processes 2023 Survey Results

Measure	Yes	No
Hospital obtains feedback from patient satisfaction surveys for outpatient clinics or other outpatient services.	77%	23%
Hospital has a shared decision-making processes in place to engage patients and families in their care.	95%	5%
Hospital works closely with the local public health department in aligning priorities.	72%	28%
Hospital has strong collaborations with community organizations.	90%	10%
Hospital engages in programs to address socioeconomic determinants of health (e.g., poverty, housing, violence).	75%	25%
Hospital completes a community health needs assessment (CHNA) and implementation plan on a regular cycle, e.g. every three years?	73%	27%

Source: MHA — Population Health Assessment Survey, 2023

Information gathered is critical in identifying gaps and opportunities for improvement, thus paving the way for performance improvement.

According to the Agency for Healthcare Research and Quality, it is imperative that hospitals and health systems involve patients and their families in the coordination of care and decision-making process because it results in better health outcomes, an improved patient and family experience, and better employee satisfaction. The first step in this process involves seeking to understand the patient and family perspective, providing timely information to guide decision-making, and respecting their choices. This approach should be incorporated into patient care planning and delivery. Implementing a patient and family advisory council is an important step in this process as it brings needed input from the end user's standpoint.

According to the Patient Protection and Affordable Care Act of 2010, it is recommended that hospitals and health systems collaborate with local partners when completing a community health needs assessment and implementation plan to leverage resources and share expertise. Improving the health of communities requires a multifaceted approach because no one entity can undertake this task by itself. Hospital-community partnerships should focus on developing programs based on prioritized needs through the CHNA process, as required by the PPACA. Integrating strategies that address health equity to reduce health disparities ensures that everyone has a just opportunity to live a healthy lifestyle irrespective of race, ethnicity, ZIP code or socioeconomic status.

Workforce

According to the 2023 survey, 52% of hospitals/health systems indicated that providers and staff were aware of their hospital's population health initiatives. On the same note, 58% reported that they have formalized employee health programs with annual health risk assessments and wellness programs, 66% have health programs with incentives for staff, 44% track their employee's wellness, and 92% have employee assistance programs.

It is recommended that hospitals and health systems use best practice programs and activities that seek to reduce health risks while improving health outcomes of their workforce. Organizations that implement efficient and effective wellness programs can positively influence health care costs, absenteeism, productivity, and employee morale.

Finance

Compared to the 2020 survey results, 2023 saw a 20% increase in the number of hospitals indicating they participate with CMS or other payers in shared savings or shared risk models for reimbursement. Among survey respondents in 2020, approximately 42% indicated their compensation and incentive programs were aligned with quality metrics for providers compared to 52% in 2023. In 2023, only about 30% of hospitals/health systems reported that they participate in bundled payments compared to 34% in 2020.

As the landscape in health care shifts from volume to value, health care organizations are faced with immense pressure to improve health outcomes, quality of care and patient satisfaction at a lower cost. This makes it important for hospitals to focus on improving and achieving optimal outcomes for patients to avoid financial penalties or optimizing financial initiatives, such as Medicare's Inpatient Prospective Payment System Value-Based Purchasing Program. Assessing pay-for-performance programs and emphasizing measures tied to payments is the first step in performing well within a population health environment. Creating accountability by aligning performance and overall appraisal is important to sustain financial success. Programs such as the Medicare Access and CHIP Reauthorization Act of 2015 brought about changes in how Medicare rewards providers for value over volume. Providers' performance is calculated by weighing performance in quality, cost, improvement activities and promoting interoperability and then used as the basis to determine Medicare Part B payment adjustments in future years. Additionally, Advanced Alternative Payment Models reward practices that take on added risks when treating patients, as well as giving providers incentive payments based on their performance in key areas.
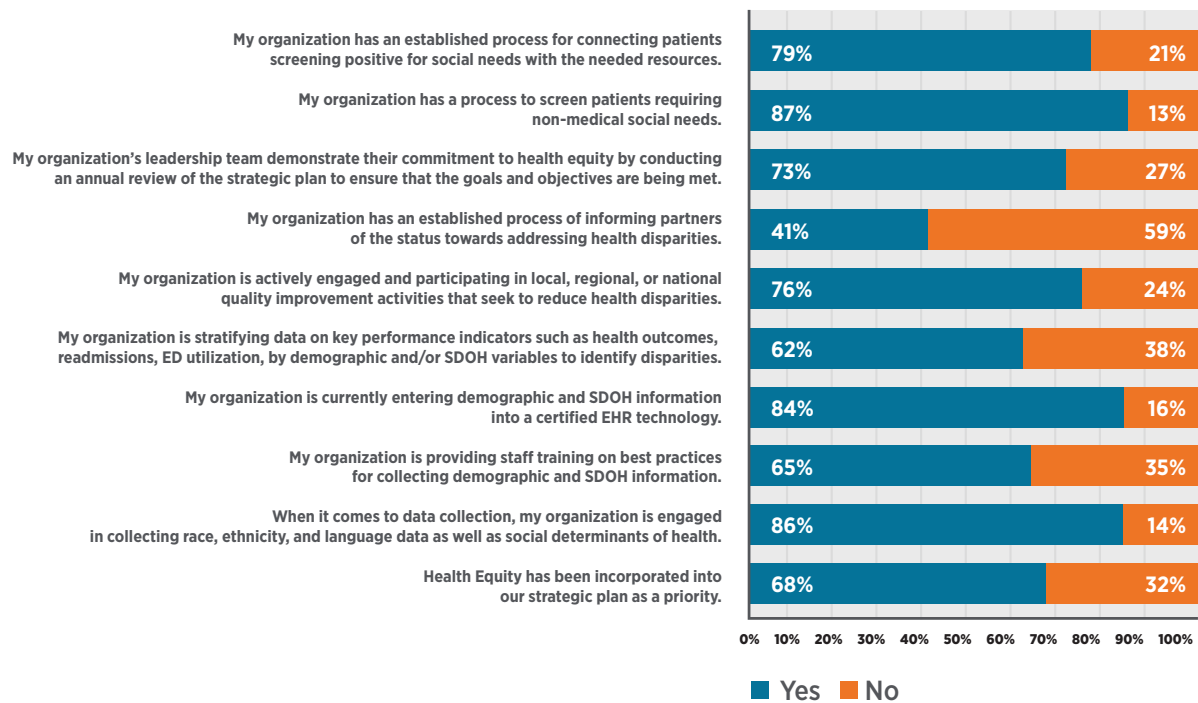
Data and Technology

The 2020 survey results showed that only 65% of hospitals reported having a clinical data system that integrates patient records across both hospital and outpatient clinics compared to 77% in 2023. Current survey results reveal an increase in the number of hospitals reporting that staff are educated on electronic health record capabilities for managing population health.

Chart 9 demonstrates the current data capture in key areas important in driving population health strategies. While most hospitals reported they have the necessary infrastructure to collect Race, Ethnicity and Language (REaL) data, as well as actively documenting ICD-10 Z codes, a lower number is stratifying it to identify where disparities exist. On the same note, it's evident that most of them lack an established process of informing partners of the status toward addressing health disparities.

CHART 9

Hospitals/Health Systems Health Equity Journey — 2023

Statement	Yes	No
My organization has an established process for connecting patients screening positive for social needs with the needed resources.	79%	21%
My organization has a process to screen patients requiring non-medical social needs.	87%	13%
My organization's leadership team demonstrate their commitment to health equity by conducting an annual review of the strategic plan to ensure that the goals and objectives are being met.	73%	27%
My organization has an established process of informing partners of the status towards addressing health disparities.	41%	59%
My organization is actively engaged and participating in local, regional, or national quality improvement activities that seek to reduce health disparities.	76%	24%
My organization is stratifying data on key performance indicators such as health outcomes, readmissions, ED utilization, by demographic and/or SDOH variables to identify disparities.	62%	38%
My organization is currently entering demographic and SDOH information into a certified EHR technology.	84%	16%
My organization is providing staff training on best practices for collecting demographic and SDOH information.	65%	35%
When it comes to data collection, my organization is engaged in collecting race, ethnicity, and language data as well as social determinants of health.	86%	14%
Health Equity has been incorporated into our strategic plan as a priority.	68%	32%

■ Yes ■ No

**Source:** MHA — Population Health Assessment Survey, 2023

The following are key strategies important in addressing these identified gaps.

- » providing education on how to ask REaL questions (audience may be nurses, front-line admission staff, quality leaders)
- » documenting and reporting SDOH data
- » implementing a robust interoperability infrastructure may result in improved care coordination, a better patient experience, improved patient safety, better privacy, increased security for patients, higher productivity and reduced costs
- » coding related to SDOH and use of ICD-10 Z codes
- » applying social referral platforms

Data is power and having the right infrastructure for data collection, aggregation and dissemination is important in ensuring that hospitals and health systems deliver care effectively. Using predictive and prescriptive analytics to identify patient risks in real time is critical in helping to focus attention and resources with precision. Deploying analytical tools and techniques to process key predictors from claims data, electronic health records, census and SDOH data can provide different dimensions that affect individuals, communities and population health, thereby helping care providers use a holistic approach to deliver care. The ability to capture and use data at individual and community levels is an important step in identifying health disparities, thus helping hospitals and community-based organizations target interventions with specificity. Poor health outcomes and root causes are known, and data analysis of this information helps target programs, interventions and resources.

Having the right technology is critical in care delivery. Interoperability is critical in ensuring that providers and the entire care team have all the information needed to meet each patient's unique needs. Using this technology, providers understand the different layers of clinical and nonclinical barriers to health. From a business standpoint, interoperability lowers costs by improving efficiencies, such as reducing the potential for redundant patient tests.
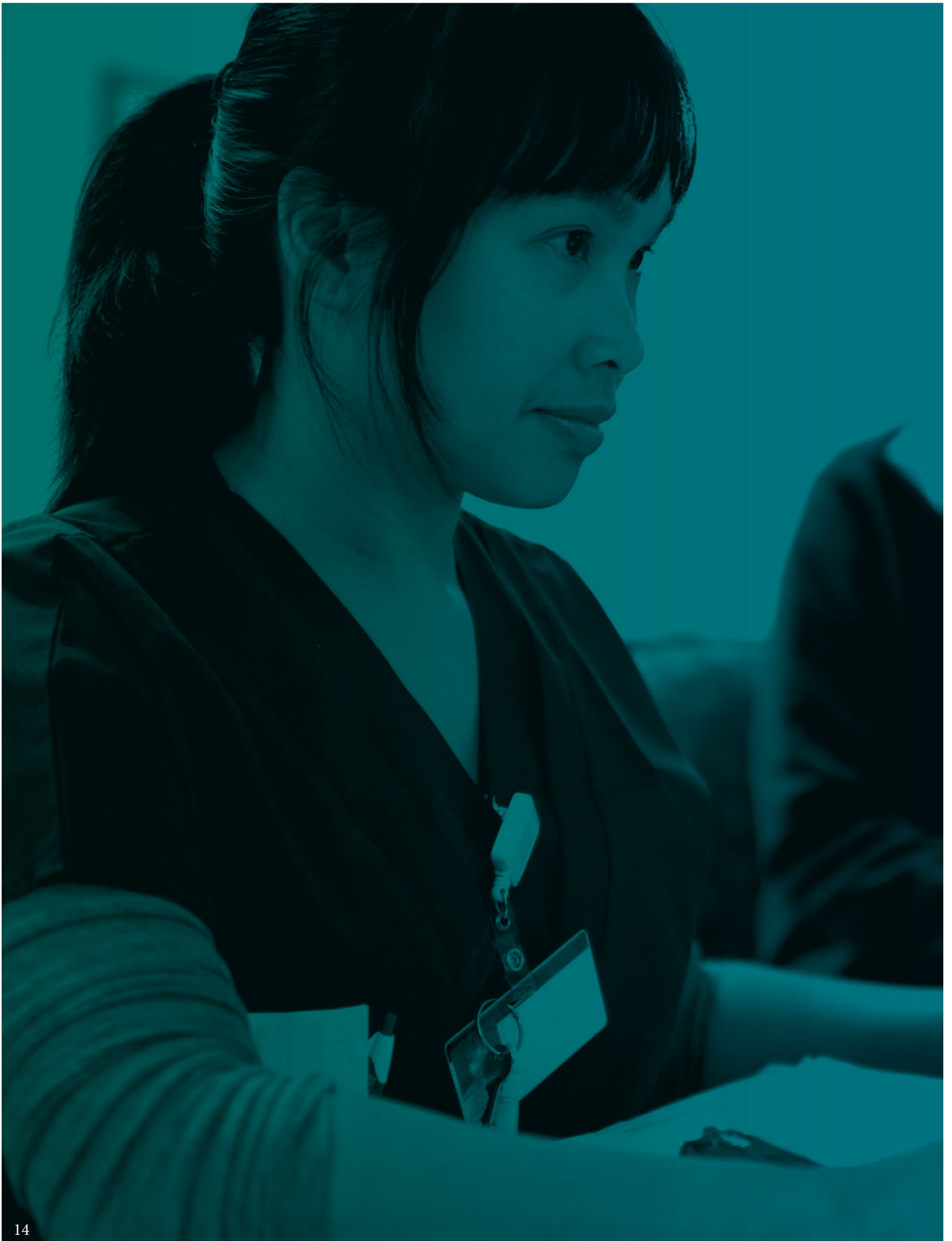
Operations

According to the 2023 survey, 81% of hospitals reported they have a documented process for exchanging information across care settings compared to 75% in 2020. In 2023, 61% of hospitals/health systems reported having chronic care management processes or programs in place to manage patients with chronic conditions. About 68% of hospitals completing the 2023 survey reported that they have processes in place for smooth transitions of care across all settings, including clean handoffs that are documented and tracked. This was slightly lower than the 69% reported in 2020 but higher than the 64% reported in 2017.

Slightly more than 50% of hospitals surveyed in 2020 reported that they have processes in place for risk assessment and risk stratification of patient populations compared to the 62% reported in 2023. Overall, 66% of hospitals reported they participate in the Merit-based Incentive Payment System compared to about 31% that participate in the Advanced Alternative Payment Model of the Quality Payment Program.

Streamlining operations to create needed efficiencies is key to driving results. The gradual transition from fee-for-service to a value-based model has made it necessary for health care organizations to align their operations to remain relevant and competitive in the market. Adopting an integrated system to capture and disseminate information to providers, leadership and staff is an important part of the value equation as it helps organizations make decisions that influence health outcomes.

Legal/Regulatory

Hospitals/health systems continue to report that they have the necessary structures in place to receive and distribute payments to participating providers of care.

Outcomes

In 2023, 92% of hospitals publicly reported their quality data, compared to 92% in 2017 and 93% in 2020. Compared to 2017, results from 2020 and 2023 of about 85% showed a slightly higher number of hospitals utilizing a balanced scorecard that tracks patient satisfaction, workforce metrics, quality measures, community impact and financial metrics. Approximately 99% of hospitals completing the 2023 survey reported that they engage in an ongoing cycle of performance improvement compared to 98% in 2020 and 95% in 2017. Compared to 2020, the 2023 survey recorded an increase in the number of hospitals identifying opportunities for improvement, including bringing together providers and stakeholders to collaborate on population health improvement initiatives. About 98% of hospitals completing the survey in 2023 indicated that they review their quality assurance and performance improvement plan on an annual basis compared to 94% in 2020.

It is imperative for hospitals and health systems to focus on activities that seek to improve health outcomes to be successful under a value-based model. Promoting a well-informed diagnosis for each patient is key to ensuring that providers and the entire care team make the right decisions that result in better outcomes. Identifying and addressing clinical and nonclinical factors of health is an important consideration to make in determining a unique approach for individual patients as it may have a significant impact on their outcome. Data transparency at all levels of an organization is key to driving health outcomes. Integrating technology and streamlining processes throughout the continuum of care is important in ensuring that each patient receives the right care, in the right place, at the right time — resulting in improved health outcomes.

Policy and Advocacy

According to the 2023 survey, 52% of hospitals indicated they would advocate for adjustments based on SDOH and risk with value-based performance measures compared to 43% in 2020.

Chart 10 demonstrates how the COVID-19 pandemic altered the population health strategy for hospitals completing the 2023 survey. Most reported that it had no effect or have revised it. It is worth noting that these results are somewhat similar to the 2020 results.

CHART 10

How COVID-19 Altered Participating Hospitals' Population Health Strategy

Percent of Hospitals

- No effect: 30%
- Revised: 29%
- Suspended: 24%
- Accelerated: 16%

Status of Population Health Strategy
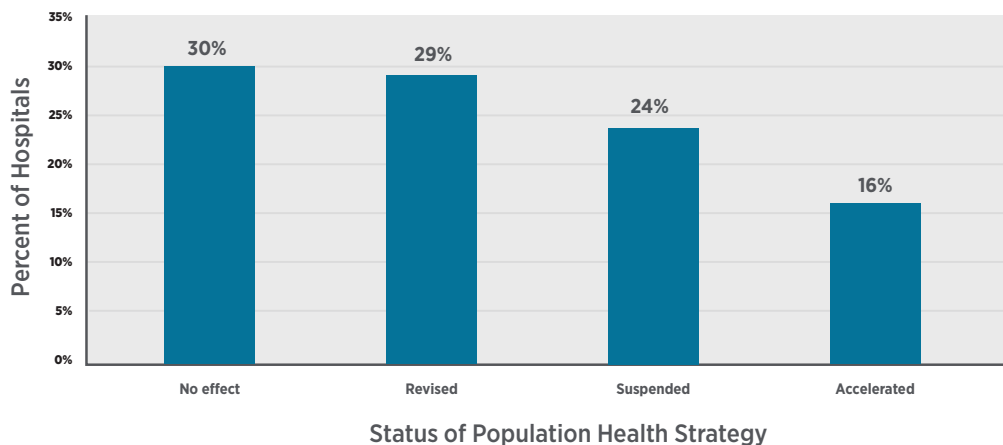
Source: MHA — Population Health Assessment Survey, 2023

Adopting policies that promote health and well-being is vital to improving the health of patients and the communities served because it creates the environment necessary to stay healthy. Differences in policies at the local level influence health factors that, in turn, result in differences in health outcomes for geographically disparate populations in terms of how well and how long they live. Advocating for policies that promote health equity is key to ensuring everyone has a fair chance of living a healthy life.
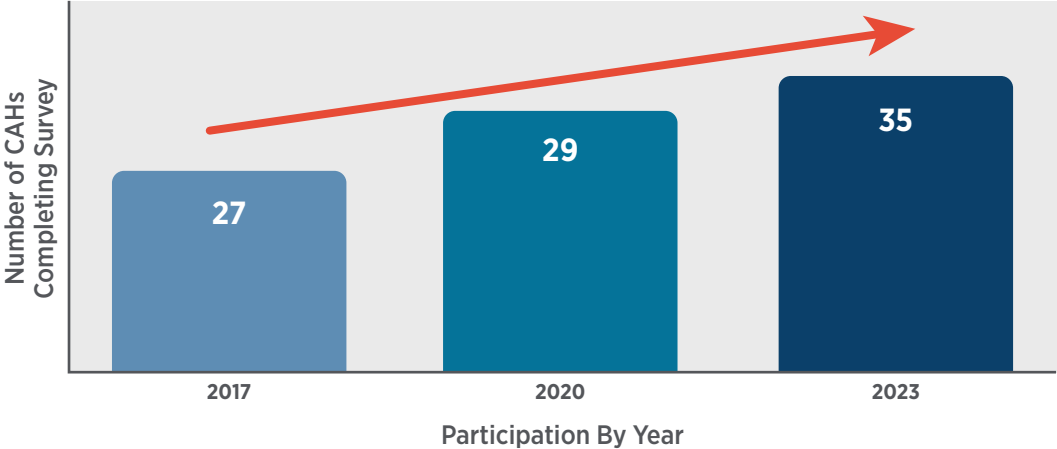
CRITICAL ACCESS HOSPITALS

Chart 11 shows that the 2023 Population Health Assessment Survey response rate for critical access hospitals was 100% compared to 83% in 2020 and 77% in 2017.

CHART 3

Population Health Assessment Survey
Completion Among Critical Access Hospitals by Year

Source: MHA — Population Health Assessment Survey, 2017/2020/2023

Table 3 shows the change in mean score for CAHs over time.

Table 3

Mean Score Comparison for Critical Access Hospitals Over Time				
	2017 Mean Score (n=27)	2020 Mean Score (n=29)	Mean Score (n=35)	Current Status
Leadership	20	18	22	Increased
Patients and Family	58	47	70	Increased
Workforce	24	23	30	Increased
Finance	1	-4	12	Increased
Data and Technology	10	9	15	Increased
Operations	36	25	30	Increased
Legal/Regulatory	2	3	2	Decreased
Outcomes	31	29	33	Increased
Policy and Advocacy	2	1	3	Increased

Chart 12 shows a comparison of the distribution of CAHs in the five categories of the population health maturity scale by year. Out of 35 CAHs completing the 2023 survey, approximately 19% fell within the Pre-Foundational 1 and 2 category while 81% fell within the Foundational and Proficient categories, respectively. There were no CAHs in the Transformational category.

CHART 12

Distribution of CAHs by Maturity Level and Year
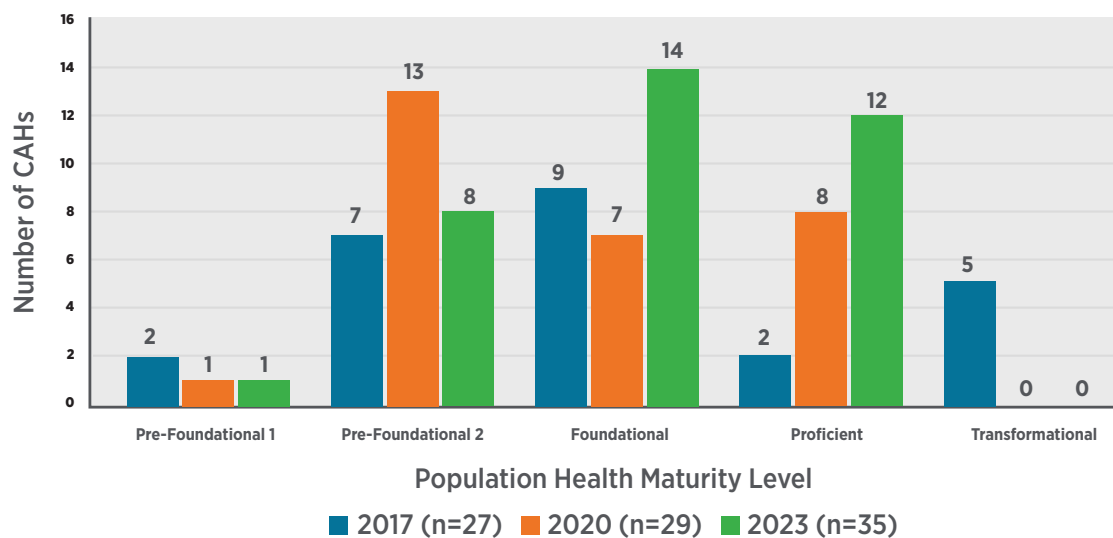
Source: MHA — Population Health Assessment Survey, 2017/2020/2023

HOSPITALS WITH 26-150 STAFFED BEDS

Table 4 shows that hospitals with 26-150 staffed beds in 2023 had a higher mean score in eight of nine population health assessment domain areas compared to 2017 and 2020.
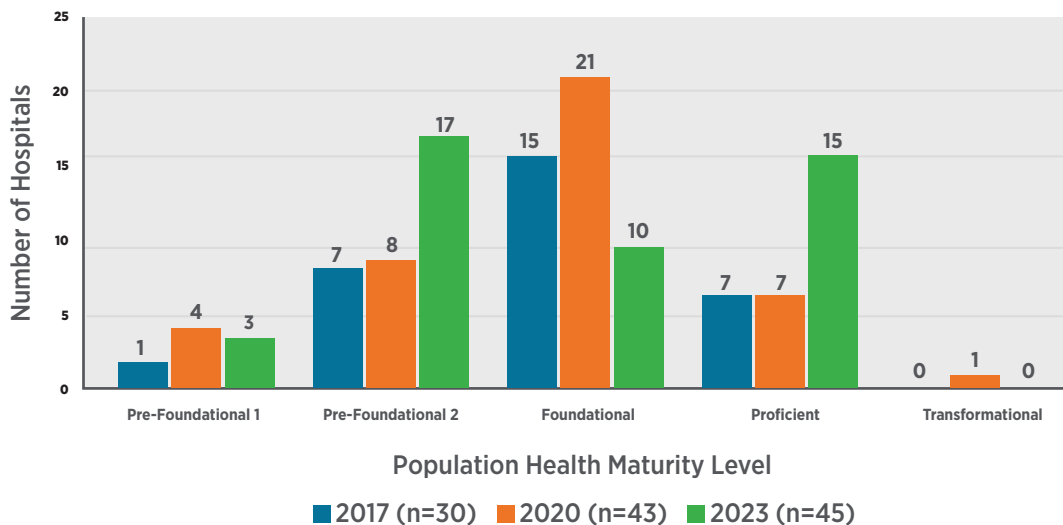
Table 4

Mean Score Comparison for Hospitals with 26-150 Staffed Beds				
	2017 Mean Score (n=30)	**2020 Mean Score (n=43)**	**2023 Mean Score (n=45)**	**Current Status**
Leadership	10	16	24	Increased
Patients and Family	29	50	59	Increased
Workforce	16	30	32	Increased
Finance	1	5	7	Increased
Data and Technology	6	10	12	Increased
Operations	14	28	37	Increased
Legal/Regulatory	1	3	2	Decreased
Outcomes	17	35	37	Increased
Policy and Advocacy	1	3	3	Increased

Source: MHA — Population Health Assessment Survey, 2017/2020/2023

Compared to 2017 and 2020, Chart 13 shows there was a significantly higher number of hospitals under the Proficient and Pre-Foundational category. The Foundational category saw a decline in the number of hospitals compared to 2020.

CHART 13

Distribution of Hospitals with 26 to 150 Staffed Beds by Maturity Level and Year

Source: MHA — Population Health Assessment Survey, 2017/2020/2023

HOSPITALS WITH MORE THAN 150 STAFFED BEDS

Table 5 shows an increased mean score on all measures in 2023 compared to 2020 and 2017.
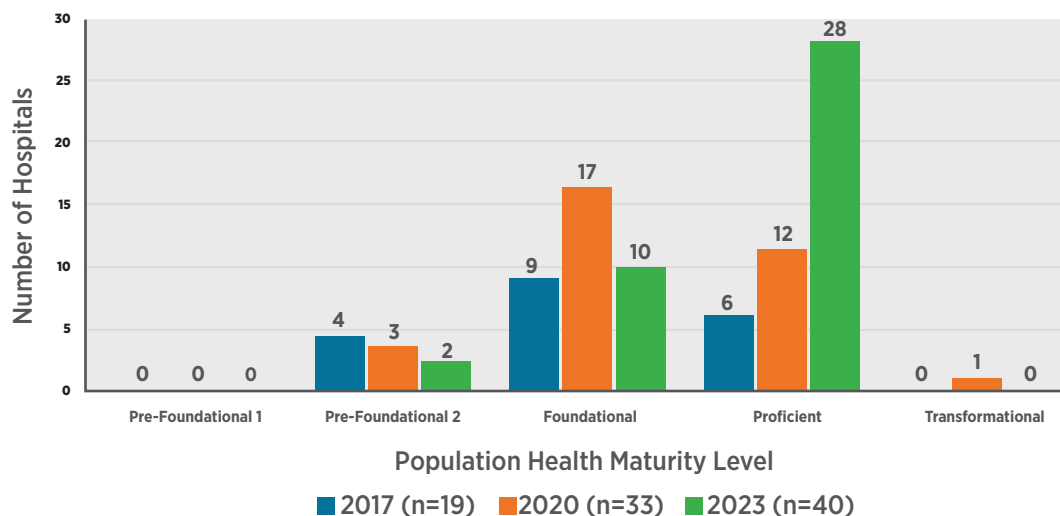
Table 5

Mean Score Comparison of Hospitals with More Than 150 Staffed Beds				
	2017 Mean Score (n=19)	**2020 Mean Score (n=33)**	**2023 Mean Score (n=40)**	**Current Status**
Leadership	22	28	37	Increased
Patients and Family	61	62	95	Increased
Workforce	46	45	47	Increased
Finance	16	19	24	Increased
Data and Technology	11	16	21	Increased
Operations	36	46	55	Increased
Legal/Regulatory	3	4	5	Increased
Outcomes	33	37	42	Increased
Policy and Advocacy	4	4	5	Increased

Source: MHA — Population Health Assessment Survey, 2017/2020/2023

Compared to 2017 and 2020, Chart 13 shows there was a significantly higher number of hospitals under the Proficient category. The Foundational category saw a decline in the number of hospitals compared to 2020.

CHART 14

Distribution of Hospitals More Than 150 Beds by Maturity Scale and Year

Source: MHA — Population Health Assessment Survey, 2017/2020/2023

SAMPLE CUSTOMIZED RESULTS FOR HOSPITALS THAT COMPLETED THE SURVEY

Table 1 shows your hospital's current population health maturity level compared to your 2017, 2020 and 2023 survey results.
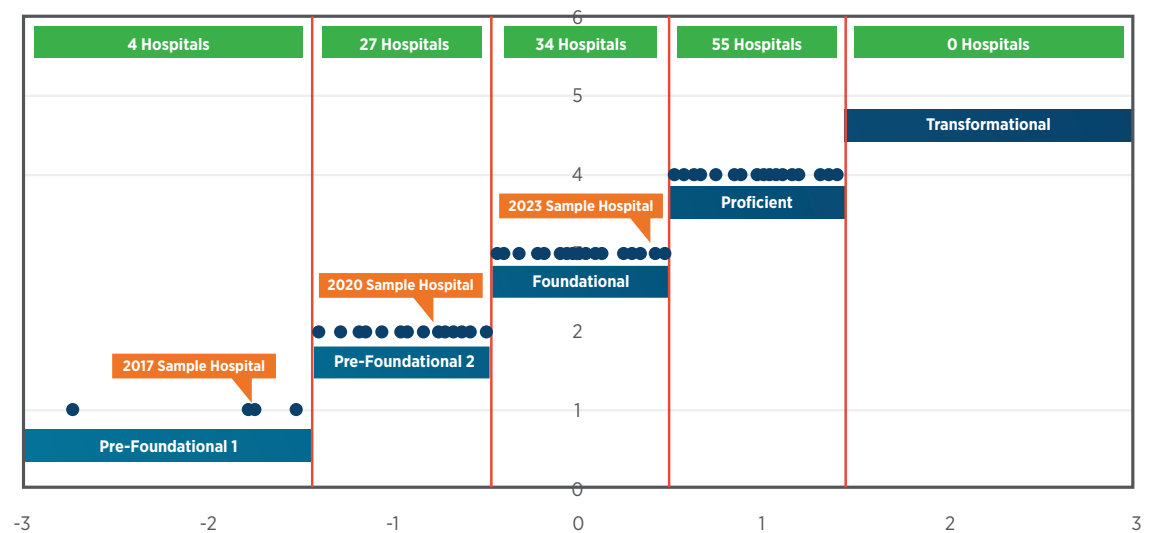
Table 1

Maturity Level Status by Year		
2017	**2020**	**2023**
Pre-Foundational 1	Pre-Foundational 2	Foundational

Comparing Performance

Chart 1 shows your hospital's position on the population health maturity scale. There was a improvement in 2023.

CHART 1

Distribution of Hospitals by Maturity Level
(Wtd_Z_Cat and Wtd_Z_Score) — 2023

Source: MHA — Population Health Assessment Survey, 2017/2020/2023

Table 2 shows a comparison of your hospital's performance by domain measure and year. The last column shows the direction of change.

Table 2

NAME OF HOSPITAL				
Measure Domain	**Total Score 2017**	**Total Score 2020**	**Total Score 2023**	**Current Status**
Leadership	55	59	65	Increased
Patients/Community	60	75	80	Increased
Workforce	50	65	70	Increased
Finance	15	15	15	Sustained
Data and Technology	25	30	40	Increased
Operations	45	45	50	Increased
Legal/Regulatory	10	10	10	Sustained
Outcomes	40	49	50	Increased
Policy/Advocacy	5	5	5	Sustained

Source: MHA — Population Health Assessment Survey, 2017/2020/2023

Chart 2 shows your hospital's performance in 2020 and 2023 with reference to the maximum possible score per measure domain.

CHART 2

Population Health Maturity Scale - Name of Hospital
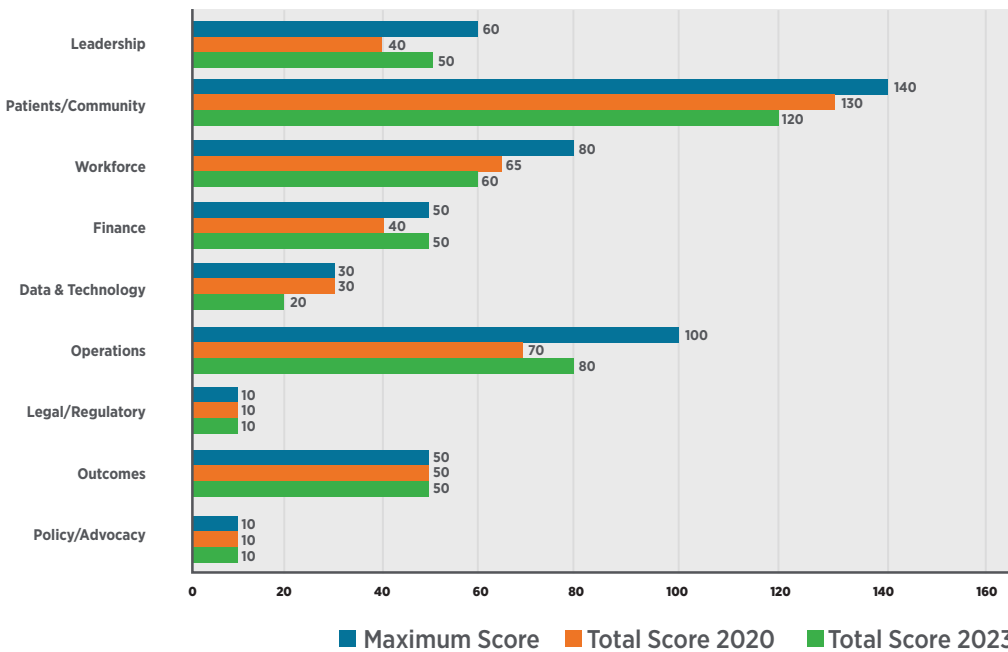
Source: MHA — Population Health Assessment Survey, 2017/2020/2023

Completion of the 2023 Population Health Assessment Survey was an important step in helping hospitals and health systems understand their population health maturity level. It is important for each hospital to assess their performance in each domain area and develop a customized approach to address any identified gaps.

Finally, using lessons learned to reconfigure and redesign programs and services offered will be key to responding to the changing landscape in health care.