



A collaboration between University of Minnesota, University of Minnesota Physicians and Fairview Health Services.

Quality & Accountability Performance: An Innovative Health System Approach

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LEARNING OBJECTIVES

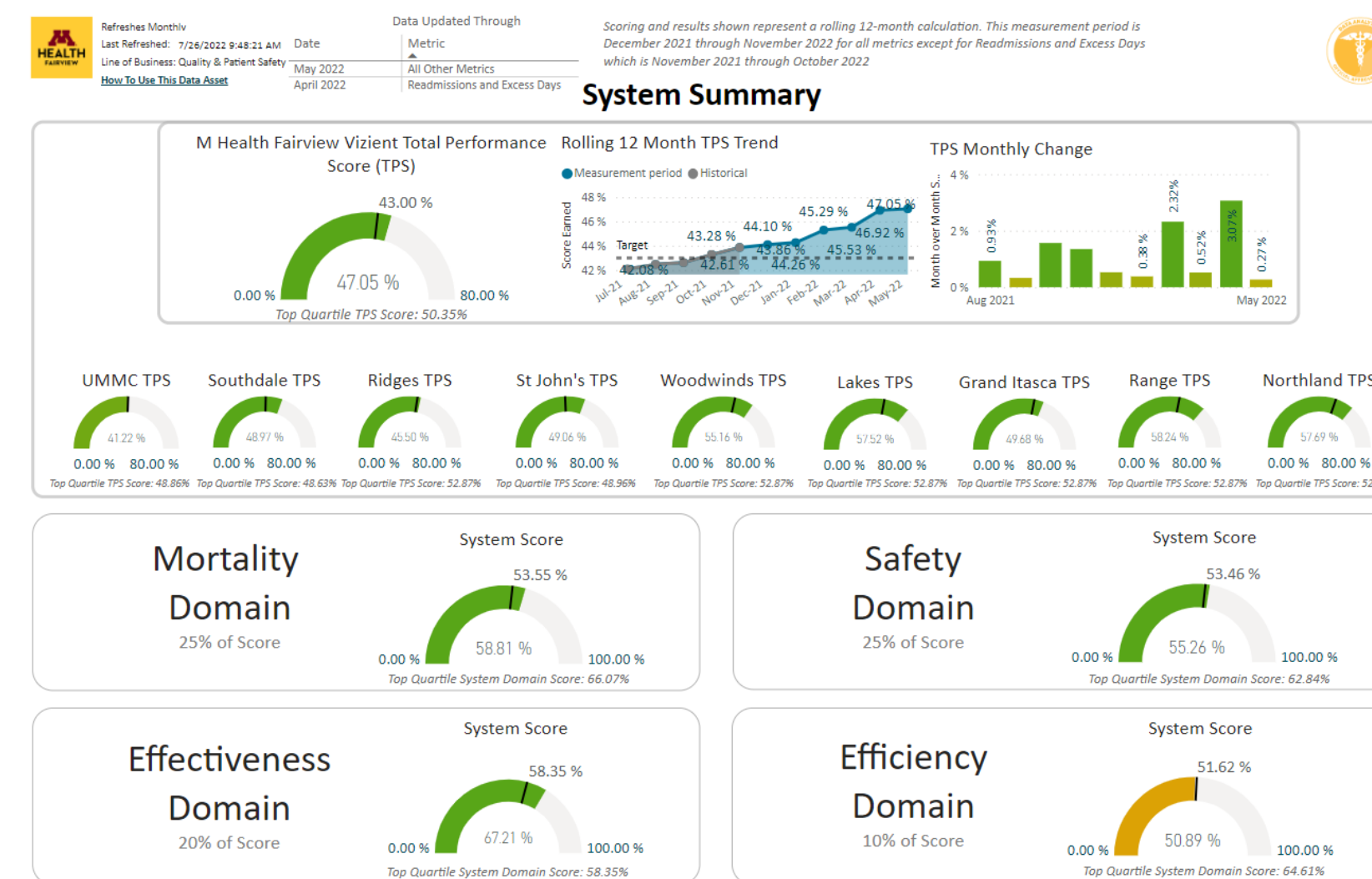
- Outline a framework to leverage quality and accountability scorecard methodology to drive improvement.
- Describe an advanced analytics tool via business intelligence software that provides innovative data visualizations, benchmarking, and targets that cascade across service lines, domains, hospitals, and the health system.

PROBLEM AND GOAL

- Problem:** Using the Q & A Scorecard as the foundation, senior leadership challenged the Quality & Safety Analytics team to create a system-wide single metric for easy, self-service, monthly monitoring at all organizational levels (board, executive leadership, hospital, service line.)
- Goal:** Develop an advanced analytic tool that provides monthly insight by identifying areas of Q & A opportunity and excellence across the system with the following unique features:
 - A singular system-level metric indicating M Health Fairview Q & A Scorecard performance
 - System, domain, hospital, and service line level analytics with benchmarking and annual targets
 - Accessible and intuitive to staff in the organization accountable for driving change

CHANGES IMPLEMENTED

- Analytics developed an in-house reporting & analytics tool that provides all the necessary data required to model our Q & A Scorecard(s) performance at multiple levels (system, hospital, service line, domain, and metric), while representing an intuitive self-service platform.



KEY TAKEAWAYS

- System approach to identifying trends is helpful in driving improvement at multiple levels within a healthcare system
- Setting attainable goals, tied to the strategic planning process, and aligned to the Vizient Q & A benchmarks, was critical to success
- Integrating proprietary data into our internal data warehouse system allowed for more agile and insightful analytics

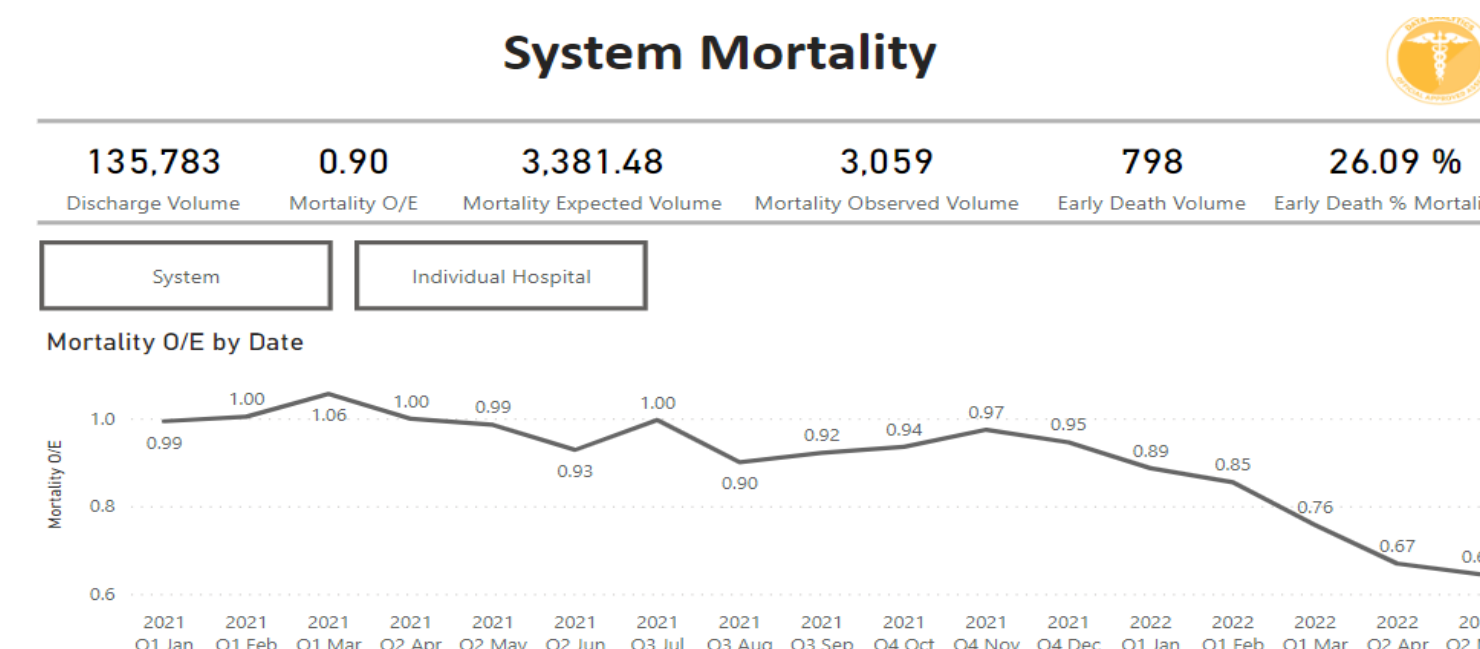
WHAT WORKED WELL

- Close collaboration between analytics and key stakeholders
- Interactive nature of tools allows customized drill down capabilities
- Low ongoing maintenance due to automated data download
- Leadership support and buy-in with adoption of tool at all levels of the organization
- Utilized the Q & A scorecard metrics that aligned with strategic priorities and allowed for monthly reporting
- Reporting the data using a 12-month rolling average created less volatility in reporting and allowed us to see month over month improvement

OUTCOMES AND IMPACT

- Analytics implemented proprietary CDB “Data Download” functionality in order to provide a monthly “data pipeline”, and then built a Power BI tool closely replicating the Q & A’s methodology in four of the six Q & A Scorecard domains. Additionally, a methodology was created for weighting the hospital level results to generate system level results. This Power BI tool largely mirrors the data provided by period and annual Q & A reporting (including z-score methodology) – but it also provides additional insight into Vizient Q & A performance at the system level which is not currently available elsewhere.
- The overall system score improved from 40.67% to 42.71% final measurement period score. Seven of nine M Health Fairview hospitals included in the 2021 Q & A Scorecard improved their overall rank compared to the 2020 Q & A Scorecard – with a 19% median rank improvement across all scored hospitals. At the domain level, the majority of MHealth Fairview hospitals improved in 3 of the 4 domains captured by the tool.
- We continue to use the tool to drive performance across the health system. Since implementation, all 9 of our hospitals have achieved 50%tile and 5 of 9 achieved top quartile. Performance has been driven

largely by improvement in the mortality domain. From January 2020 to May 2022, we have reduced overall O/E mortality for the system from 1.13 to .65 for the Q & A Service lines and from 1.2 to .65 for all discharges.



REFERENCES

- Intermountain Health Power Huddle, 2020, PH243 - *Quality and Accountability Opportunity Analysis: A System Approach*

SPEAKER CONTACT INFORMATION

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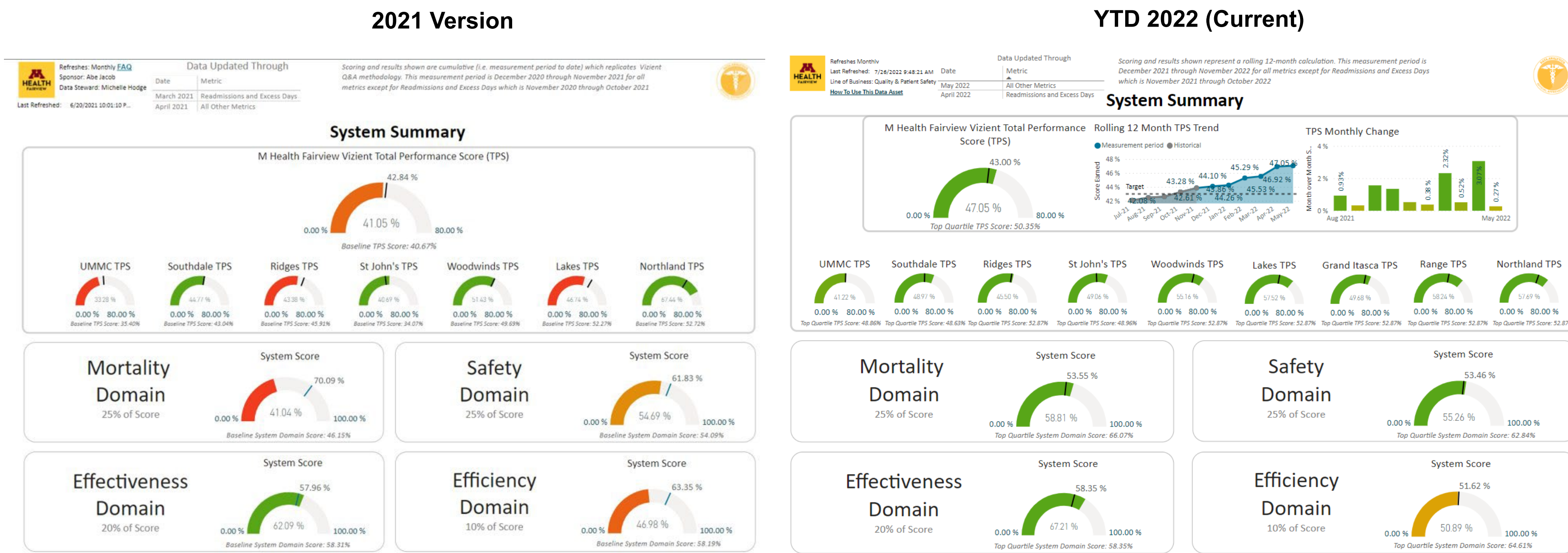
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Changes Implemented

Analytics developed an in-house reporting & analytics tool that provides all the necessary data required to model our Q & A Scorecard(s) performance at multiple levels (system, hospital, service line, domain, and metric), while representing an intuitive self-service platform.

Creation of this tool required a collaborative and iterative process in order to ensure high reliability and functionality.



Calculation for System Score

- In order to accurately and fairly measure system performance, a volume-based weighting system was developed
- This table provides the total weighting (“TPS Weight”) assigned to each location included in TPS scoring, this weighting is used to calculate all system-level results, system-level benchmarks, and system-level targets.
- Weighted volumes based on 12-month discharge date range: July 2020-June 2021
- Includes only discharges included in the Q and A Scorecard (Mortality Domain)

Hospital	Vizient Q&A Cohort	Volume	Weight
UMMC	AMC	18,657	32.36%
Southdale	LSCC	15,848	27.49%
St. John's	CC	7,825	13.57%
Ridges	COMM	6,720	11.66%
Woodwinds	COMM	3,521	6.11%
Lakes	COMM	1,842	3.19%
Grand Itasca	COMM	1,252	2.17%
Range	COMM	1,064	1.85%
Northland	COMM	924	1.60%

Domains/Metrics Included

- Most metrics included on Q&A Scorecard replicated. However, due to data availability and complexity – a number of metrics are currently excluded
- For these reasons, the Equity and Patient Centeredness domains have been excluded
- Additionally, the lab-based metrics within the Safety and Effectiveness domains have also been excluded

Date Range Utilized

- In order to ensure data availability and reduce month-over-month variation, the report uses a moving (i.e. “rolling”) 12 month data range to calculate monthly results
- The performance (i.e. measurement period) is December 2021 through November 2022 to align with organizational strategic plans

Targets

- Year 1 (FY 2022) goal is median per cohort
- Year 2 (FY 2023) goal is 63rd percentile per cohort
- Year 3 (FY 2024) goal is top quartile per cohort

Group/Committee Assembled and Meeting Cadence

- Chief Quality Officer, VP Acute Quality, System Director Acute Quality Analytics, VP Service Line Quality, Manager of Acute Quality Analytics, Analytics Data Engineer, Acute Quality Improvement Consultant, Hospital-Based Quality Directors
- Approvals and governance from physician leadership, executive leadership team, board of directors
- Meetings were initially on a weekly cadence, eventually moving to a less frequent schedule as needed



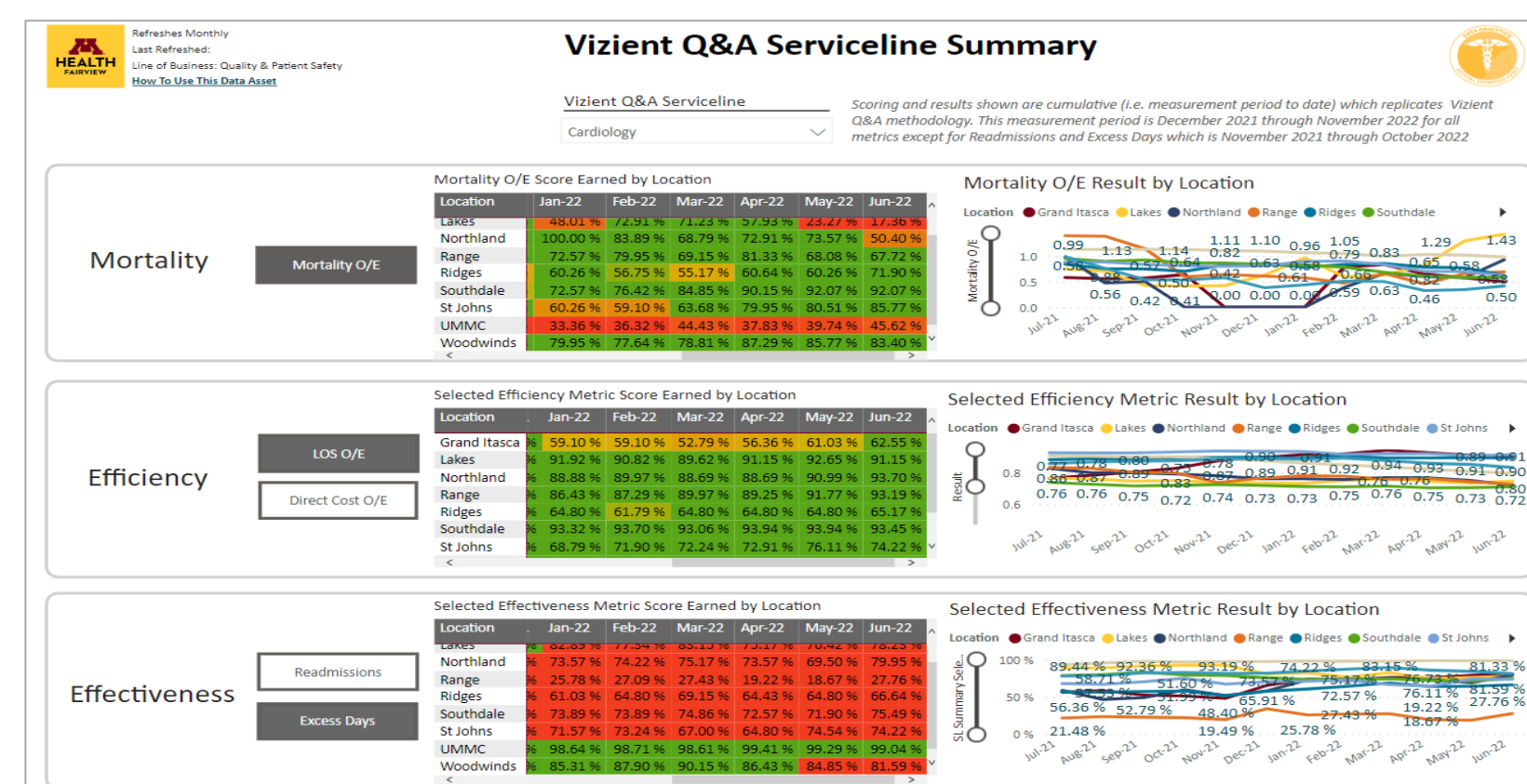
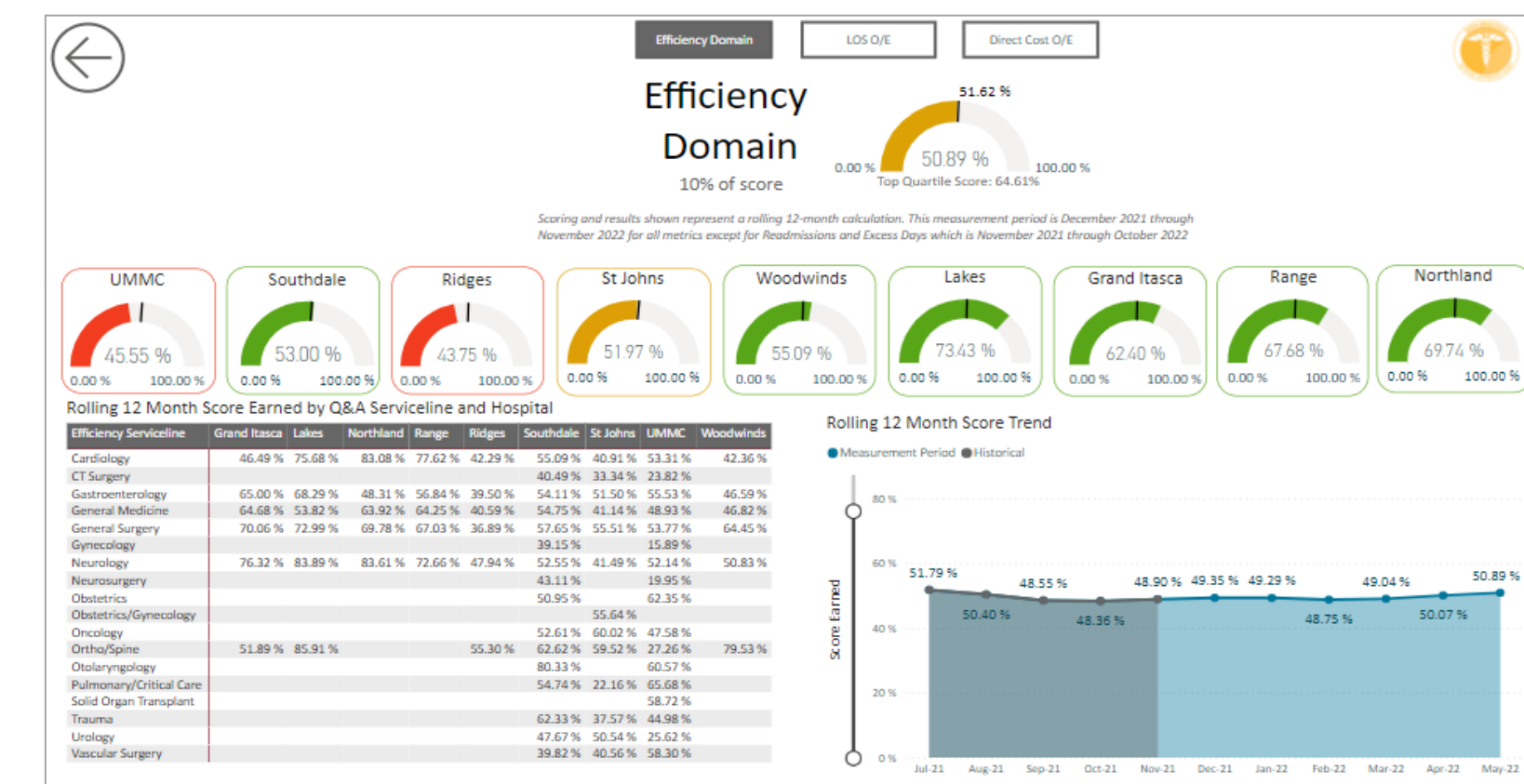
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Analytics Build

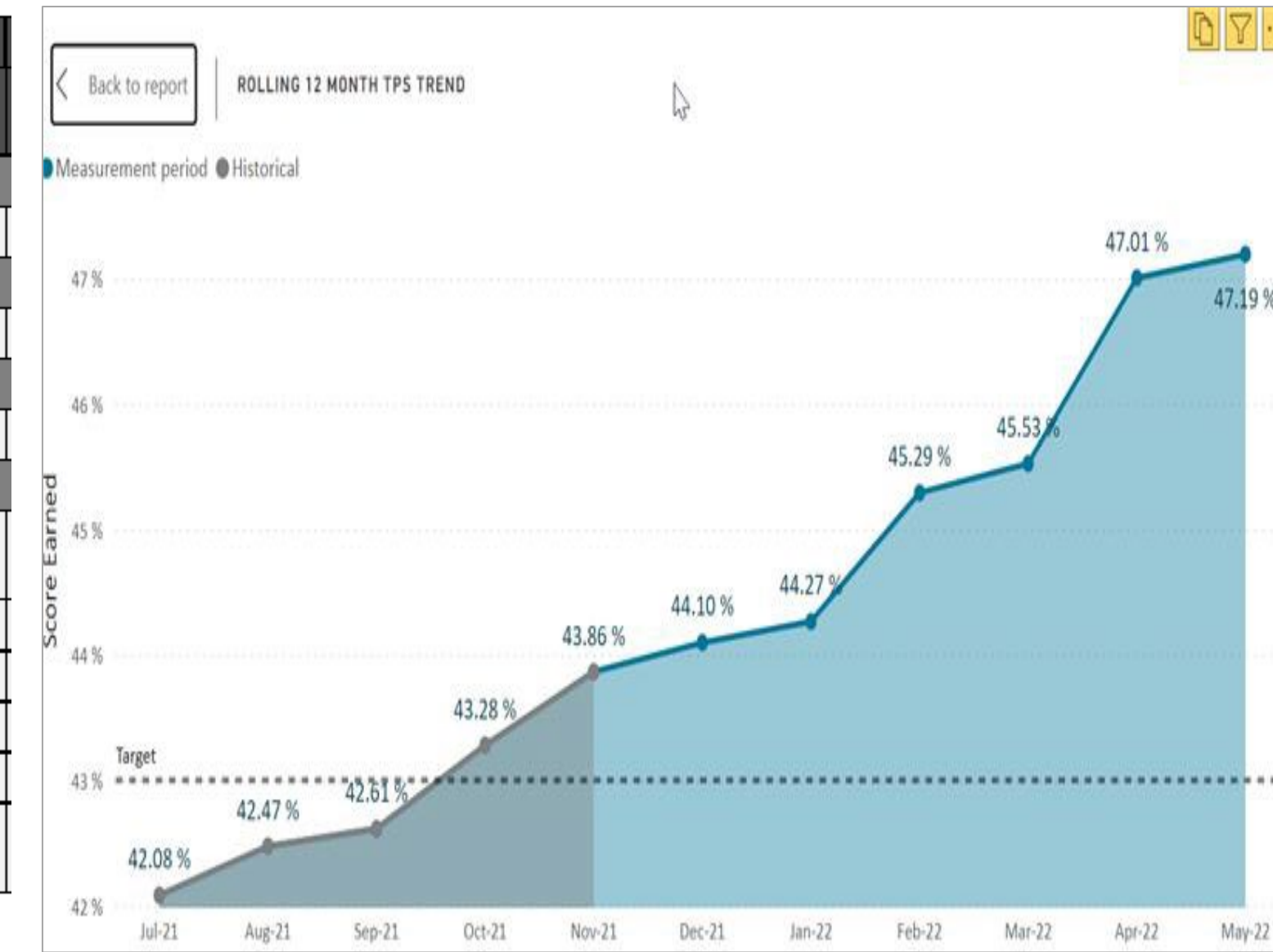
- Started with implementation of Vizient's CDB Data Download feature
- Creation of automated data pipeline loading CDB data monthly to an Oracle database
- Microsoft Power BI report built which refreshes from this database
- Provides analytics at the system, hospital, domain, service line, and individual metric level
- Case-level drill down and export capabilities
- Accessible and Intuitive for end users, includes a linked FAQ
- Clearly identifies areas of opportunity and excellence as it relates to Q&A scorecard impact



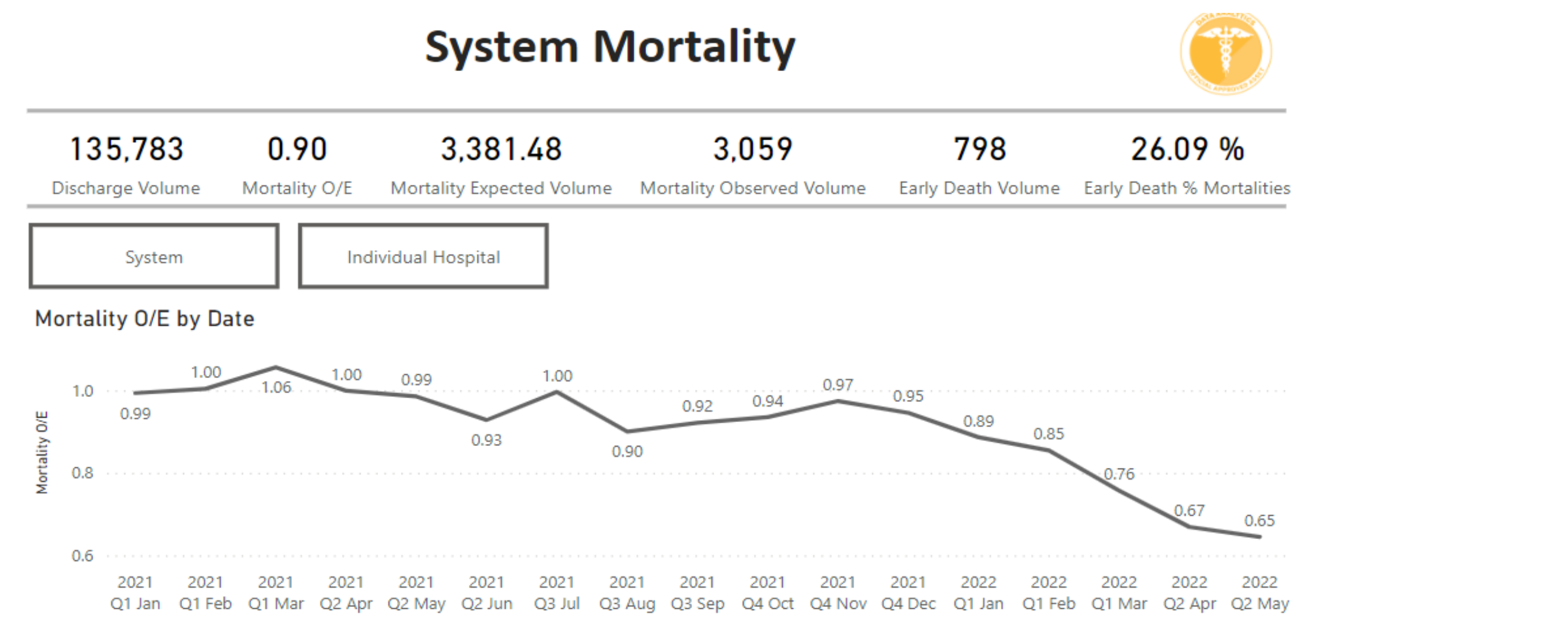
Outcomes and Impact

- Majority of hospitals in system improving year-over-year as indicated by Period 3 2022 Q&A Scorecard
- Internal system TPS score mirrors this improvement YTD 2022
- Significant component of TPS and Q&A Scorecard improvement is result of mortality O/E improvement. This is a direct result of numerous ongoing improvement projects focused on both the expected and observed mortality

Hospital	Overall		
	Period 3 2022	2021	Performance
Comprehensive Academic Medical Centers (AMCs, n = 107)			
FAIRVIEW_UMMC	63	68	Better
Large Specialized Complex Care Medical Centers (LSMCs, n = 124)			
FAIRVIEW_SOUTHDALE	40	42	Better
Complex Care Medical Centers (CCMCs, n = 145)			
FAIRVIEW_ST_JOHNS	80	44	Worse
Community Hospitals (CHs, n = 267)			
FAIRVIEW_GRAND-ITASCA	116	22	Worse
FAIRVIEW_LAKES	48	113	Better
FAIRVIEW_NORTHLAND	19	31	Better
FAIRVIEW_RANGE	27	71	Better
FAIRVIEW_WOODWINDS	36	29	Worse



Annual 2021 results shown here are using 2022 methodology (from Period 0 Calculator)
 Note that St. John's hospital changed cohort in for Q&A 2022, from Community Hospital to Complex Care Medical Center cohort



The authors have no relevant financial relationships to disclose.