

CASE STUDY

for U.S. health care executives

How Seattle Children's Created a Data Infrastructure to Advance Health Equity

Monitoring clinical performance to identify and address health inequities

Published - August 2021 • 10-min read





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Overview

The challenge

Advancing health equity has become an increasingly important goal of health care organizations across the nation, but many lack the data infrastructure needed to identify and address disparities in clinical performance.

The organization

Seattle Children's Hospital is a 407-bed pediatric and adolescent medical center that serves children in Washington, Alaska, Montana, and Idaho. They have 10 regional clinics, 23 outreach sites and clinics, and 12 affiliates.

The approach

Seattle Children's Hospital stratified all core quality metrics by race, ethnicity, and language when available to identify disparities in clinical outcomes. Then leaders set short- and long-term goals to address the identified inequities and selected key performance indicators to track their progress. To share progress and promote accountability across the system, Seattle Children's Hospital displayed this in their quality dashboard.

The result

Since implementation, Seattle Children's Hospital experienced an increase in interpreter use, and a decrease in missed appointment and rescue event inequities. Additionally, they've advanced their data culture to drive improvements aimed at addressing health inequities.

Approach

How Seattle Children's created a data infrastructure to advance health equity

In 2007, Seattle Children's created its Center for Diversity and Health Equity. The center is dedicated to reducing health inequities and improving the lives of all patients, families, research participants, and the community. To advance its health equity work, Seattle Children's Hospital built a data infrastructure to identify and address health disparities.

The four components

Leaders at Seattle Children's Hospital identified four critical components to building an improvement infrastructure to identify and address health disparities in their patient population.

01 Stratify all quality measures by patient demographic data to identify disparities

02 Establish short- and long-term goals to address disparities

03 Share progress in achieving goals

04 Sustain long-term progress through a clearly defined accountability structure

01 Stratify all quality measures by patient demographic data to identify disparities

To identify disparities impacting its patient population, the Seattle Children's Hospital Clinical Analytics Group, Center for Quality and Safety, and the Center for Diversity and Health Equity teams worked together to stratify all 26 of their core quality metrics by race, ethnicity, and language. The hospital looks at all metrics through a quality lens to ensure they don't inadvertently overlook disparities occurring in their patient population. Looking at quality metrics at this level of granularity allows Seattle Children's to pinpoint disparities unique to their organization and set strategy for reducing those disparities.

Quality core measures

Efficiency

- Missed appointments
- Patient flow
- Acute coagulopathy of trauma shock

Equity

- Central line-associated bloodstream infection
- Missed appointments
- Rescue events

Timeliness

- Average speed of answer
- New patient lag
- Sepsis time to antibiotics

Effectiveness

- Diverts
- Mortality ratio
- Readmissions
- Length of stay
- Employee engagement

Safety

- Central line-associated bloodstream infection
- Days since last serious safety event
- Total hospital acquired conditions
- Rescue events
- Hand hygiene
- DART culture of safety

Patient Centered

- Likelihood to recommend (organization, inpatient units, ED, day surgery, ambulatory)
- Pain management

02 Establish short- and long-term goals to address disparities

After stratifying all core quality metrics by race, ethnicity, and language data, leaders identified disparities in health outcomes for specific patient populations. Of those disparities, the Center for Diversity and Health Equity chose to address the metrics that were scalable and already had existing quality improvement initiatives deployed. The metrics selected include:

- Central line-associated bloodstream infection (CLABSI)
- Rescue events
- Missed appointments/no shows

Understanding that significantly reducing or eliminating disparities can take years, Seattle Children's set short-term and long-term goals for reducing disparities for each of the three metrics. For their short-term goals, leaders selected goals that were low cost, required fewer resources, and were achievable in the near-term. These short-term, achievable goals helped engage staff by demonstrating the meaningful impact they can make in their patients' lives. The hospital's long-term goals aim to address the root causes of disparities, and thus take more time and effort to achieve. These long-term goals are more transformational in nature and align with Seattle Children's Hospital's vision statement.



ESTABLISH SHORT- AND LONG-TERM GOALS TO ADDRESS DISPARITIES

Short-term goal: Improve access to interpreter services to reduce disparities in missed appointment rates and rescue events

Seattle Children's data analysis revealed that missed appointment rates were higher among non-English speaking patients. Leaders set a goal to reduce missed appointments by more reliably providing an interpreter to all patients who requested one. They also set a goal to increase interpreter use throughout the hospital stay to reduce inequities present in rescue event metrics.

To increase access to language services, Seattle Children's leaders shifted towards a blend of in-person and video-based interpretation on iPads. Staff also translated appointment reminder texts into the top seven languages spoken for care at Seattle Children's, and sent patients tailored texts in their spoken language. Additionally, staff increased interpreter use on rounds when feasible and implemented a process to access an interpreter prior to and during a rescue event.

The Center for Diversity and Health Equity is working with a community led taskforce and family advisors to develop meaningful interventions that meet the needs of patients and families.

Long-term goal: Address clinician bias to reduce disparities in CLABSI rates

Seattle Children's found that certain patient populations may experience a CLABSI more frequently than others. Leaders recognized that improving disparities in CLABSI rates would take time because the root causes of these disparities likely include racism and implicit bias. While a difficult barrier to address, addressing implicit and explicit bias is essential in eliminating outcome disparities. Seattle Children's Hospitals launched the Anti-Racism Organizational Change (AROC) strategic initiative, which includes the implementation of an organization wide Health Equity, Diversity and Inclusion Council (HEDI). Larger departments and divisions have also launched HEDI/Anti-Racism committees to align with the AROC and HEDI goals. Seattle Children's is focused on policy change, evaluation of clinical standard work with an HEDI and anti-racism framework, and HEDI and anti-racism training.

03 Share progress in achieving goals

Seattle Children's uses their *Core Quality Measures Dashboard* to share track and visualize progress in achieving their goals. The dashboard helps instill a culture of transparency, widespread accountability, and reminds each staff member—from executive leaders to the frontline—that everyone has a role to play in improving health equity. These metrics define Seattle Children's true north of patient outcomes.

The quality dashboard is organized into the six domains of quality as outlined by the Institutes of Medicine: safety, efficiency, equity, timeliness, effectiveness, and patient-centeredness. Metrics are displayed under their corresponding domain with the current performance and target goal. For rapid interpretation, Seattle Children's Hospital color codes the current performance of each metric—green for when they meet their goal and red to indicate there's a gap to the goal.

Figure 1: Seattle Children's Core Quality Measures Dashboard

Equity	Patient Centered	Safety
Last 2 Years CLABSI 2.01 ! <small>Goal: 1.15</small>	FYTD Overall Experience INPATIENT NON-PBMU 81.9% ✓ <small>Goal: 81.2%</small>	FYTD CLABSI 1.30 ! <small>Goal: 1.00</small>
Last 2 Years CLABSI 1.19 ✓ <small>Goal: 1.21</small>	FYTD Overall Experience PBMU 48.4% ✓ <small>Goal: 42.7%</small>	Days Since Last SSE 54 ✓ <small>Goal: 30</small>
FYTD Missed Appointments 16.2% ! <small>Goal: 15%</small>	FYTD Overall Experience ED 69.2% ! <small>Goal: 70.7%</small>	FYTD Rescue 1.01 ✓

Image credit: Seattle Children's Hospital



SHARE PROGRESS IN ACHIEVING GOALS

The dashboard leverages real-time data from electronic health records. Employees have 24/7 access to the dashboard and can see individual metrics stratified by race, ethnicity, and language data.

The health equity team recognized that to advance equity efforts, staff would need to be aware of and recognize the disparities their patients experience during their care journey. The dashboard shows staff that the organization acknowledges these disparities and is dedicated to addressing and reducing them.

04 Sustain long-term progress through a clearly defined accountability structure

Seattle Children's charged its Quality Improvement Steering Committee with overseeing the organization's core quality metrics dashboard and working to reduce disparities at the point of care. The committee is a multi-disciplinary team made up of hospital operations leaders, clinical leaders, nursing leaders, family advisors, and subject matter experts (e.g., clinical analysts, clinician scientists, etc.). The committee meets once a month to discuss and monitor all metrics on the quality core measure set, including those in the equity domain. The Quality Improvement Steering Committee focuses largely on metrics that have not met the established goal.


Senior executives at Seattle Children's, including the CEO and Vice President, Chief Quality and Safety Officer (CQSO), oversee the equity-focused metrics (CLABSI, rescue events, and missed appointments). The CEO and CQSO assign owners to facilitate improving the equity-focused metrics. Metric owners are chosen based on their role and responsibilities. For example, CLABSI is assigned to a nursing leader and the CPSO who partner with Infection Control. Executive level involvement reinforces the importance of the metrics and creates a non-negotiable, top-down expectation.

For metrics not meeting goal, each owner meets with Quality Improvement Steering Committee quarterly. These meetings serve as an accountability structure and allow for opportunities for additional dialogue and resources support to make changes and improve on equity goals. At each quarterly meeting, the metric owners discuss the progress they've made in meeting their goals and any potential barriers they are facing. Once a year, all metrics are reviewed for appropriateness and relevance to hospital goals on the quality core measure dashboard.

Results

While it can take years to reduce disparities, in the short-term Seattle Children's implemented the following interventions:


- An equity review process for each CLABSI event
- Culturally responsive central line education and facilitated equity discussions on rounds, including informing patients and caregivers about care plans to promote shared decision making and trust building.
- Interpretation services for all communication with patients and caregivers who speak a language other than English through interpreters, telephone interpretation, and an option for iPads in ambulatory settings and the Emergency Department
- Translation of its MyChart portal to Spanish
- Enhanced text appointment reminders 7-days prior, 2-days prior, and the day of the scheduled appointment to caregivers and patients.¹


Seattle Children's continues to track progress in reducing disparities and advancing health equity. 


1. Texts are sent in English, Spanish, Somali, Arabic, Vietnamese, Russian and Simple Chinese. Previously the offered languages were Spanish and English.


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