CHCF

Pursuing Excellent Care

Seven California Case Studies on Using REAL Data for Quality Improvement

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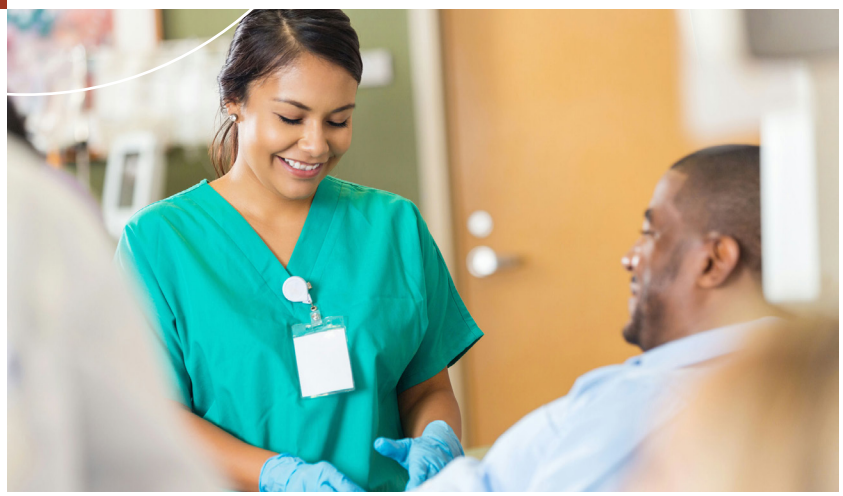

AUTHORS
Marsha Regenstein, PhD
Linda Cummings, PhD

Dear Reader,

At CHCF, we are committed to ensuring that all Californians have what they need to be and stay healthy. Our vision is a health care system sophisticated enough to respond to each person's unique needs rather than providing identical care to everyone. The collection, analysis, and use of race, ethnicity, and language (REAL) data is essential for achieving this vision.

Here we share seven case studies detailing how health care organizations are using REAL data to improve quality of care for Californians. While the political environment has shifted considerably since the case studies were completed in 2024, what remains unchanged is the power of REAL data to help health care providers and policymakers identify and address health disparities across California's diverse communities.

To understand where to target medical resources — clinical and financial — we need to know where health risks lie. This ability to focus resources saves money and, more importantly, lives. For instance:

- When a hospital discovers certain neighborhoods have higher rates of delayed diabetes care, it can establish targeted screening clinics that serve entire communities.
- When data reveal that patients who speak specific languages struggle to adhere to medication regimens due to communication barriers, a health system can improve interpreter services to enhance care for everyone who faces similar challenges.
- When data analyses show that Latino/x patients with diabetes have lower rates of specialty referrals despite similar disease severity, a clinic can address referral barriers by establishing tight clinical guidelines for all patients at high risk of diabetes.
- When maternal and infant health data demonstrate that Black women experience higher rates of severe maternal complications and Black babies experience higher infant mortality rates than their counterparts of other races/ethnicities, a hospital can develop a birth support initiative that connects expectant families to community doulas and helps those doulas collaborate with hospital clinicians.

All of us Californians — no matter who we are, where we live, or what languages we speak — need a health care system that can respond to our unique health needs so we can care for ourselves and our families and contribute meaningfully to our communities. We laud the seven health care organizations profiled here and thank them for sharing the lessons they are learning in difficult times. When we make our health care system smarter and more responsive to patient needs, we all have a clearer path to health and prosperity.

Sincerely,

Katherine Haynes
CHCF Senior Program Officer

About the Authors

Marsha Regenstein, PhD, is a professor in the Department of Health Policy and Management at the George Washington University Milken Institute School of Public Health. Linda Cummings, PhD, is a health services research consultant.

About the Foundation

The California Health Care Foundation is an independent, nonprofit philanthropy that works to improve the health care system so that all Californians have the care they need. We focus especially on making sure the system works for Californians with low incomes and for communities who have traditionally faced the greatest barriers to care. We partner with leaders across the health care safety net to ensure they have the data and resources to make care more just and to drive improvement in a complex system.

CHCF informs policymakers and industry leaders, invests in ideas and innovations, and connects with changemakers to create a more responsive, patient-centered health care system.

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Introduction

Almost a quarter century ago in its seminal report "Crossing the Quality Chasm: A New Health System for the 21st Century," the Institute of Medicine (IOM) described serious and widespread shortcomings in the quality of health care in the United States. The report defined six aspects of quality health care: safety, effectiveness, patient-centeredness, timeliness, efficiency, and equity. With its inclusion of equity, the IOM equated inequitable care with poor quality in the same way that ineffective, inefficient, unsafe, and otherwise deficient care signaled poor quality. Despite the time that has passed and the subsequent reports that have been produced detailing how race and ethnicity affect the quality of care a patient receives, racial and ethnic disparities in health care persist.

One bright spot in this slow-moving work is the use of race, ethnicity, and language (REAL) data to improve the quality of patient care in health systems. REAL data support critical functions, such as understanding population health, ensuring equitable access to care, and enhancing clinical quality of care, making this information central to reducing disparities.

The case studies presented here describe how seven California acute care hospitals and health systems use REAL data to advance equity and improve patient care. Together, they demonstrate a range of equity-focused practices that can serve as examples for others that face challenges using REAL data for systemwide improvement.

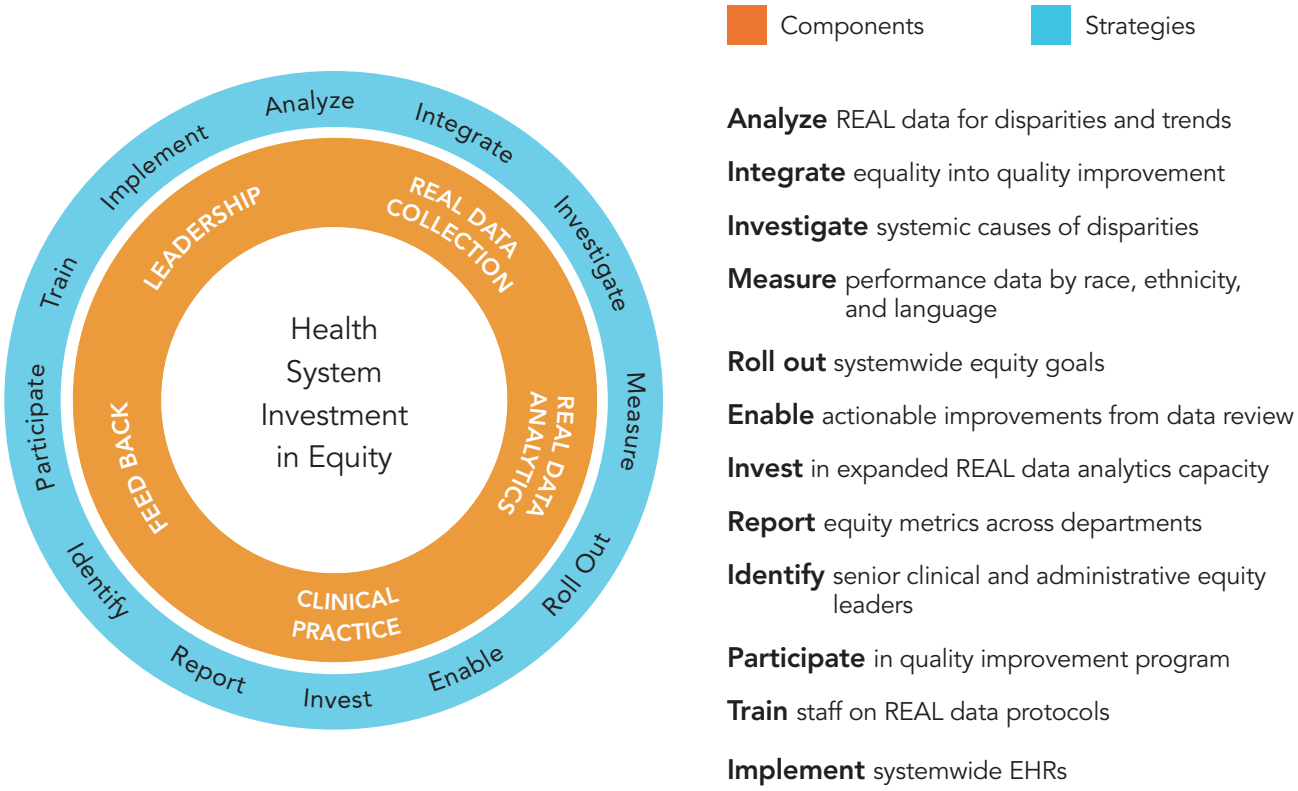
Kaiser Permanente and Zuckerberg San Francisco General Hospital and Trauma Center are characterized as having an "advanced, systemwide approach to equity" because of long-standing programs focused on equity that are fully integrated with their missions and strategic approaches to health care delivery and improvement. Three hospitals and health systems (San Mateo Medical Center, University of California San Diego, and Ventura County Medical Center) are characterized as "building and strengthening equity" in their approaches to collecting and analyzing REAL data and in taking action to reduce gaps in care. The case studies of two additional hospitals are presented here because of their participation in California's Quality Incentive Pool (QIP), which drives work on equity among California hospitals and health systems.

Figure 1 (next page) illustrates key components presented in the case studies that make up a health system's investment in equity including leadership, REAL data collection, REAL data analytics, clinical practice, and feedback.

As these seven case studies illustrate, hospitals and health systems can make important strides in addressing equity and advancing the health of their communities. The hospitals and health systems described in the case studies demonstrate key aspects of using REAL data for quality and performance improvement:

- Systemwide equity work using REAL data requires a commitment from the C-suite and some investment in health information technology and data analytics.
- The barrier to using REAL data is no longer a lack of availability.
- The most effective way to use REAL data for equity improvement is to stratify measures the system already uses to gauge its performance.
- The easier it is for clinicians to receive detailed metrics that reflect their own patient populations, the more likely it is that clinical staff will be engaged in equity improvement work.
- Health systems that actively advance equity are "learning organizations" that build in multiple levels of feedback, embedded in established quality improvement processes.

Figure 1. Health System Investment in Equity



Source: Authors' analysis of data from the Department of Health Policy & Management, Milken Institute School of Public Health and George Washington University, February 2025.

Advanced, Systemwide Approaches to Health Equity

Kaiser Permanente
A "complex ecosystem" providing equitable care

Kaiser Permanente is one of the nation's largest providers of integrated care and coverage in the United States, with hospitals and medical offices spread across eight states and the District of Columbia.

- Location: Headquartered in Oakland, California
- Multiple Level II trauma centers
- Patient population: Large diverse patient population, including people representing all backgrounds, ages, and abilities
- Inpatient/outpatient services: 8,800+ beds in California, broad specialty and general care; 37 hospitals (21 in Northern California, 16 in Southern California)
- Ownership: Nonprofit health plan and hospitals
- Types of services: Full-spectrum health care, with a focus on preventive care and chronic disease management

Kaiser Permanente is composed of the Kaiser Foundation Health Plan Inc., Kaiser Foundation Hospitals, and the Permanente Medical Groups that provide care to health plan members (creating a closed patient population). The Kaiser Permanente organizational structure has resulted in significant, and in some cases unique, attributes that contribute to its leadership in health equity across its patient population. For example, Kaiser Permanente's integrated health care delivery model — rooted in its centralized electronic health record and data systems — enables systemic ways of sharing expertise and caring for all of a patient's needs.

These features are key factors contributing to Kaiser Permanente's success in delivering equitable health care.

Kaiser Permanente's achievements in addressing health disparities derive from six key characteristics of the system:

- Leadership teams at all levels of the system, including governance, administration, and clinical, committed to health equity
- Clear, strategic goals and accountability mechanisms around quality and health equity
- Sociodemographic and geographic metrics as part of quality measurement
- A robust data system
- Continuous quality improvement
- Community engagement

Dedicated Leadership

Kaiser Permanente has a long-standing commitment to delivering health care equitably and eliminating health disparities. Responsibility for this work is dispersed across Kaiser Permanente's leadership, including the CEO; the chief medical officer; the chief equity, inclusion, and diversity officer; and the chief health equity officer for Medicaid and state programs.

Kaiser Permanente research teams are also at the forefront of examining how innovations in care delivery can address disparities and inequities. Their large, diverse, and long-term membership enables Kaiser Permanente to study groups often underrepresented in research.

Clear Goals and Accountability

Kaiser Permanente tracks measures such as survival rates, mortality, and prevalence of certain diseases, with a goal of reducing disparities in health outcomes and improving the quality of care for all members. More than two dozen outcome measures across clinical areas — stratified by sociodemographic factors — are reported annually to the quality committee of Kaiser Permanente's board of directors. In addition, Kaiser Permanente has a feedback system for patients to evaluate their experiences with individual providers. The feedback system measures more frequently how well patients' needs are being met than the annual feedback that is standard elsewhere.

Viewing Sociodemographic Metrics as Part of Quality Measurement

Because sociodemographic characteristics have been collected and monitored over many years and because Kaiser Permanente is an integrated system, it has a very high self-reported demographic data collection rate. The organization has developed its capacity to routinely examine and report on health outcomes among its members by sociodemographic characteristics including race and ethnicity, language, and other variables. When the data indicate a disparity in care or outcomes, Kaiser Permanente teams create a comprehensive plan to address that disparity, which may include evolving clinical practices or expanding educational resources for members or the workforce.

A Robust Data Infrastructure

Several factors contribute to Kaiser Permanente's unique population health data capabilities:

- Its electronic health record captures robust data on its population — shared across care teams and tracked over time — that can be filtered by sociodemographic and geographic factors.
- The average tenure for its members is more than 11 years, which provides information about members' health status over time.
- The majority of care interactions (including telehealth) happen within the Kaiser Permanente system, providing a complete picture of members' health.

Kaiser Permanente's investment in a robust data infrastructure enables the organization to leverage its dataset to track and monitor health disparities effectively. Its analytics capabilities allow Kaiser Permanente to turn data into actionable information used by clinical and quality teams to improve the delivery of care within the system.

Kaiser Permanente is also focused on integrating social care and medical care, which has been shown in international comparisons to result in high-value care and improved health outcomes.

Continuous Monitoring and Assessment of Health Disparities in the Patient Population

To ensure the effectiveness of its health equity efforts, Kaiser Permanente continuously evaluates the impact of its interventions. Regular monitoring and evaluation allow clinicians and leaders to assess progress, identify areas for improvement, and adapt strategies as needed.

Centralized databases enable anyone in the system to access and look at all quality measures by sociodemographic factors at every medical center and as a result, compare across sites. Universal access to the data, coupled with a user-friendly interface, allows any clinician to access the data about individual panels of patients. After patient encounters, Kaiser Permanente's feedback system aggregates patients' ratings of their experiences for their clinicians. This lens provides clinicians with timely insight into how their patient panel feels about the care they receive.

Community Engagement

Kaiser Permanente's commitment to working with its members and communities is crucial. As part of its social health practice, Kaiser Permanente routinely screens individuals for social factors influencing their health, links them to resources — both community-based programs and Kaiser Permanente–funded initiatives — and considers their personal circumstances when creating care plans. The Kaiser Permanente Community Support Hub is a multichannel support center dedicated to ensuring that members' social health needs are met and that they can achieve good health. The hub leverages Kaiser Permanente's robust health plan infrastructure and brings together its existing social health programs — including phone support, community referrals, and proactive outreach to help members enroll in government programs — into a more coordinated model. The model uses enhanced data and technology to proactively identify members with social needs and link those who want support to vital programs.

By integrating social health data into the electronic health record system, Kaiser Permanente can customize care plans according to members' personal circumstances, predict social factors influencing peoples' health, and develop data-informed interventions that help build the evidence base, leading to more equitable health outcomes for underserved populations.

What Is Transferable from Kaiser Permanente?

Kaiser Permanente has population health advantages as a result of its unique model of integrated care and coverage. Yet features of its approach to equitable health care delivery can be replicated even without its extensive data system or organizational and staffing structure.

For example, colorectal cancer disparities were eliminated among Kaiser Permanente members in Northern California after the organization instituted a regionwide, structured colorectal cancer screening program. The colorectal cancer screening program identified who needed screening and offered a choice of screening tests. The team also ensured screening materials were culturally competent and addressed issues important to those who historically were less likely to be screened. After starting organized screening outreach, the proportions of people up to date with screening rapidly increased, from about 40% among both Black and White Kaiser Permanente members in Northern California in 2009 to 80% among Black members and 83% among White members by 2019.

In 2009, the colorectal cancer death rate (per 100,000) was 54.2 for Black members and 32.6 for white members. By 2019, death rates had fallen by more than half among Black members — decreasing to 20.9 — compared to 19.3 for white members, essentially eliminating the previous disparity.

Zuckerberg San Francisco General Hospital and Trauma Center

The center of the health care safety net in San Francisco for 150 years

Zuckerberg San Francisco General Hospital and Trauma Center (ZSFG) is a safety-net hospital system owned and operated by the city and county that sits within the San Francisco Department of Health.

- Location: San Francisco, California
- Level I trauma center
- Patient population: Vulnerable, uninsured, underinsured, diverse population (offers services in 20+ languages); 100,000 patients served annually
- Inpatient/outpatient services: 14 primary care clinics in the San Francisco Health network; 397 licensed beds
- Ownership: Public, city- and county-owned
- Types of services: Emergency and urgent care, mental health, primary care, specialty care, testing and diagnostics, pharmacy

ZSFG has long been recognized as a standout health system for its innovative approach to inculcating a culture of equity into the organization. Beginning its transformation journey in 2012, the health system has focused on aligning strategy, empowering staff, and fostering continuous improvement using principles, management systems, and tools from a specific methodology called Lean Six Sigma (Lean). In 2017, Dr. Susan Ehrlich, ZSFG's CEO, and other executive leadership invigorated the health system's commitment to health equity by designating equity as one of its six True North Goals, sending a clear message that at ZSFG, organizational excellence requires "persistent, resilient, iterative, data-driven approaches" to improve equity.[1]

ZSFG's Systemwide Equity Metric

In 2017, ZSFG established its first systemwide equity metric, which tracked the number of departments looking at their own performance data by race, ethnicity, and language preference. At the time of the systemwide metric rollout, about 5% of departments reported any data stratified by race on a routine basis. The system set a goal for every department (100%) to look at its data by race, ethnicity, and language. One year after setting the goal, about a third of departments were looking at their stratified metrics. As of the writing of this report, almost all clinical and nonclinical departments review stratified metrics, and ZSFG maintains its 100% REAL data reporting goal for all departments.

In 2020, ZSFG added a new systemwide equity metric of "percent of clinical and nonclinical departments that engage in active improvement work to address disparities in the stratified data." It improved from 27% in 2020 to 85% of all departments engaged in equity work in 2024. Improvements in the systemwide equity metrics were made possible by cultural values in the institution, supported by technical and conceptual expertise from clinical and administrative quality improvement leadership and new full-time equity leaders. Looking forward, ZSFG leadership has discussed replacing or adding to these current process metrics with one more focused on equity outcomes as data continue to advance systemwide thinking and equity-related quality improvements.

Reporting on Equity at the Department Level

As a Lean organization that supports ownership of data-driven problem-solving at the front line, clinical departments at ZSFG have primary responsibility

for creating their own quality reports on metrics of interest to the system. The decision to require departments to create their own reports was also a practical one, originally stemming from resource limitations in many safety-net systems and the lack of a common electronic health record that could stratify data from all corners of the health system. Department-level reports became a practical solution for widespread management of performance improvement data.

Situating reporting within departments seems to have several benefits. First, departments become invested in the quality of the data, since they are creating their own data reports and checking the data's accuracy. Second, because the departments trust the reports they create, the data tell a story critically important and relevant to their own patient groups. Over time, departments have become adept at validating the data and understanding how to look at it from a quality improvement mindset. Third, given the engagement of the departments with their data, moving from data review to actionable improvement activities has been a more natural next step at ZSFG than it has been at many other health systems.

Collection of REAL Data

A fundamental component of data-driven equity work is accurate and complete data on patients' race, ethnicity, and language for analysis and quality improvement. Though it had collected REAL data for years, ZSFG took a hard look at its data collection practices to make sure they were consistent, accurate, and complete across various components of the system. The review also addressed whether the data were collected in a respectful way, and whether the data made sense from a clinical and research perspective. As part of this effort, ZSFG devoted more time to training registration and scheduling staff on collection protocols.

Moving to a single electronic health system was also a major milestone for collecting, stratifying, and mining REAL data. With a single data system, ZSFG had the IT infrastructure in place to collect data in consistent formats. This system resulted in efforts to drill down on the data to see where the gaps and disparities were and figure out why they were happening. The system was then able to report, for example, where no-show rates were disproportionately high for certain subpopulations, certain groups were not receiving screening services to meet system targets, and certain patient groups were having difficulties accessing services.

Equity as a Key Component of the Performance Improvement and Patient Safety Committee

Members of the Performance Improvement and Patient Safety Committee (PIPS) routinely review reports from all 85 ZSFG departments and subcommittees in three-hour monthly meetings where they pore over run charts and other documents that are the bread and butter of the quality improvement process. PIPS has an interest in historical trends and the ability to interrogate the data to ask why certain patterns are occurring. Equity is a core component of this process, as the standard report format includes a mandatory page dedicated to reporting on the department's equity tracking/improvement status, equity data, challenges, and next steps.

Three members of ZSFG's leadership cochair the meeting. Each department receives at least one thorough annual review, which prompts a report to PIPS from each department, with targeted questions about quality and safety-related topics, including health equity. Many departments also review their own data on a monthly basis and discuss it in monthly or weekly meetings, or in real-time daily huddles.

The PIPS report gives departments an opportunity to share the reasons why progress has been slow or what kinds of roadblocks were encountered. Since PIPS reports are common quality tools that departments are accustomed to receiving, incorporating equity questions into those reports fully integrates equity work with all other quality processes. The expectation is that all departments will recognize the need to think about the delivery of services — and the equity implications — in all facets of their operations.

As examples, initially some departments such as clinical pathology or laboratory medicine departments, while supportive of equity in theory, did not initially see its relevance to their own services. After coaching, the departments frequently return with additional ideas and potential metrics where inequities might show up. First among the list was a look at fine needle aspiration or specimen collection practices, recognizing that the norms for phlebotomy were based on historical assumptions that were not accurate. This resulted in department-level improvement work that was not originally considered. Over time, the departmental commitment to equity is enhanced and institutionalized from a performance improvement perspective, because the system created the norm that all performance data would be stratified.

About a month before the PIPS meeting where a team's data will be reviewed, the ZSFG Performance Improvement team invites various groups to meet with improvement specialists to review team equity and quality projects, any potential data needs, and ways they are tracking equity. ZSFG also holds a monthly PIPS equity improvement learning lab. The key here is that the equity reporting expectations have been clarified by the highest levels of leadership, the reporting formats and metrics are identified, the review process of REAL data and equity activities by PIPS is well-established, and technical assistance, guidance, and support is available and encouraged at multiple steps along the way.

The performance improvement (PI) team has a long-standing partnership with the Department of Diversity, Equity, and Inclusion and the ZSFG Equity Council, and they share in coaching departments and department-specific equity champions. Department members review annual reports from departments alongside the PI team, participate in the PIPS meeting debriefs with the PI team, and attend the PIPS Equity Lab monthly meetings to provide technical assistance to other departments. This collaboration normalizes a culture of equity improvement, allows the Diversity, Equity, and Inclusion Department and Equity Council to support current and future improvement efforts, and informs strategic planning efforts for programs.

Using Data to Drive Improvement

REAL data reports have been built into daily huddles and Plan, Do, Study, Act (PDSA) cycles using a variety of approaches, including the Lean thinking tool known as the A3 process for improvement work.[2] The ZSFG Kaizen Promotion Office has integrated an equity lens into its robust training curriculum and improvement tools.[3] At ZSFG, every department identifies metrics to incorporate REAL data to drive improvement work. Staff are trained to use process maps and causal analysis to understand what disparities exist and investigate how social determinants of health and individual or systemic biases may contribute to differences in clinical care or outcomes. Countermeasures in the form of PDSA are implemented to support improvements for both the overall population and the targeted groups.

Performance plans reviewed and voted on by the departments and health care system are stratified by race and other patient characteristics. At Family Health Center, for example, a ZSFG primary care site, this includes performance plans for

blood pressure screening (where disparities had been identified and flagged for improvement), mammogram screening, colorectal cancer screening, childhood immunizations, and many other areas. Visual displays of data improvement on run charts demonstrate where disparities have been closed, and also where further improvement work is needed. These data displays are actively used at the delivery site level and at the department level.

Still Much Work to Do

Even though most ZSFG departments have committed to active quality improvement efforts on health equity metrics, some departments struggle to implement equity projects due to lack of capacity in areas such as data analysis, project management, staffing, or other resources. While the system has created a safe space and training for this work, achieving continuous progress requires significant effort and resources. To move this work forward, ZSFG relies on outspoken champions in the C-suite and on diversity, equity, and inclusion and PI leaders, as well as other equity champions from leaders to frontline staff to ensure that equity is prioritized.

Additionally, equity and quality experts in the system are considering developing a health equity scorecard that would select a few outcome metrics that have relevance across hospitals and that reflect disparities. For example, no-show rates are particularly high for Black patients, which creates concerns about quality of care. An improvement effort across the system related to no-show rates might have beneficial implications quite broadly across the system while addressing the specific equity projects at the department level. These systemwide metrics would not replace ones generated by departments; system leaders give departments the ability to define and shape their own equity work as an important part of engagement and commitment. The combination of department independence to identify equity metrics, along with systemwide expectations to ensure an overall focus on disparities, is key to ZSFG's excellence in its equity True North goal. ZSFG now integrates an equity lens throughout its strategic planning process to ensure that executive leaders are considering inequities in every annual strategic initiative, and outcomes and key performance indicators are stratified whenever possible. This intentional lens creates ownership and accountability at all levels of the organization.

Building and Strengthening Equity

San Mateo Medical Center

Applying Lean Six Sigma methodology to achieve health equity

"With or without (seeing) the data, the underserved population experiences disparities."

San Mateo Medical Center is a public hospital and clinic system within San Mateo County Health providing comprehensive health care services to all residents, with a focus on underserved populations.

- Location: San Mateo, California
- Patient population: Primarily low-income, Medi-Cal insured, and underserved people, with a diverse racial and ethnic makeup
- Inpatient/outpatient services: Acute care hospital, skilled nursing facilities, and multiple outpatient clinics offering primary, specialty, and behavioral health services
- Ownership: Public, part of San Mateo County Health
- Types of services: General medical, surgical, preventive, and behavioral health services, with a focus on health equity
- Special programs: Health Equity Initiatives, Office of Diversity and Equity promoting culturally responsive care and reducing behavioral health disparities

In the past, quality improvement initiatives at San Mateo Medical Center (SMMC) were targeted at the overall population, under the assumption that "lifting all boats" would bring improvements to all. Historically, the systematic work around improvement focused on improving the outcome, not necessarily improving the disparity. The previous approach assumed that all patients had equal opportunity to affect their health outcomes: to control diabetes, to have equal access to mammography or colorectal screening, or to have the same access to sufficient food and outdoor space, for example.

Recently, SMMC reframed its approach to equity starting at the system level, in recognition that the overall population approach to improvement may not result in equal improvement for all patients and may unknowingly increase some disparities. As with other hospitals and health systems, SMMC had robust patient data but had only recently begun to stratify the data by race and ethnicity. Instead of a generalized population approach, SMMC has recently focused on addressing particular gaps in their stratified data and designing initiatives to close those gaps.

This reframed approach was aided by support from the Safety Net institute (SNI), which offers shared resources to advance high-quality health care to California's 21 public health care systems, including county-owned or county-affiliated systems and the five University of California academic medical centers. SMMC participated in SNI's Racial Equity Community of Practice, sponsored by CHCF, that assists participating members with developing strategies to embed equity in all aspects of care.

A Structured Approach for Improvement

SMMC has employed some type of Lean transformation or improvement strategy since 2011, and the Lean methodology is applied to quality and performance improvement across the system. The LEAP (Learn, Engage, Aspire, and Perfect) Institute supports this work across the system. The institute rests on the Lean methodology but brings in a range of leadership frameworks to support improvement.

The LEAP Institute has played an important role in helping leaders operationalize equity and embed equity into improvement work at SMMC. Some time ago, one of the core staff members of the institute became involved in the Government Alliance for Racial Equity (GARE), a nationwide peer-to-peer learning and practice network dedicated to advancing racial equity in government. This involvement galvanized the equity focus at SMMC, which was accelerated in 2020 with a more explicit focus on equity as a value.

Instead of a focus on functional units, like primary care, the focus shifted to the value delivered to patients in six value streams, such as chronic disease management or disease prevention. Some value stream groups now analyze data stratified by race, ethnicity, and other characteristics. For example, the Disease Prevention group now has ownership of processes like mammograms and Pap smears, so that they can see the stratified data, analyze gaps and health disparities associated with race and other factors, and address those gaps. The LEAP Institute helps these groups analyze the data and work on structured improvements for closing the gaps at the system level.

Prior to 2020 senior personnel would have to create a report to dig into specific data. Starting in 2020 and accelerated by COVID-19, dashboards were developed to filter and stratify data by race and ethnicity. Now there are councils of stakeholders, including frontline managers and supervisors, that are accountable for closing disparity gaps and improving outcomes. Similarly, in partnership with a patient feedback company, the councils look at patient comments and complaints, which can be filtered by race and ethnicity.

University of California San Diego Health
Department of Health Equity

UC San Diego Health is an academic medical center within the University of California system, serving the diverse population of San Diego.

- Location: San Diego, California
- Level I trauma center
- Patient population: Diverse communities, including many patients from immigrant and refugee communities
- Inpatient/outpatient services: Three main hospitals (Jacobs Medical Center with 364 beds; Hillcrest Medical Center with 381 beds, and UCSD East Campus Medical Center with 302 beds), multiple outpatient clinics, Moores Cancer Center, Shiley Eye Institute, Sulpizio Cardiovascular Center, express care, and urgent care
- Ownership: Public; part of the University of California system
- Types of services: Comprehensive academic medical services, research, and specialty care

The UC San Diego Health Department of Health Equity was established to operationalize health equity throughout the system. The health equity initiatives are associated with quality initiatives and include staff and team members from across the UCSD health system. The Health Equity initiatives data and analytics team was charged with focusing on strengthening REAL data collection to be able to stratify metrics and identify areas for improvement in clinical care and the patient experience. Like a number of other health systems in California, UC San Diego turned first to its patient experience data, which could be easily stratified by various patient characteristics, including race, ethnicity, and language. While the system had high scores overall, a deeper dive revealed inequities in patient experience on some communication-related questions, especially among patients whose preferred language was not English and patients with diverse gender identities. These survey data were complemented with qualitative (open-ended) comments from health system surveys.

Piloting Tools for Equity Work

In response, a toolkit was created collaboratively with Health Equity staff and representatives from interpreter services, gender health, and disability services to improve language accessibility, gender concordant care, and care for populations with disabilities, which were three areas where gaps were highlighted in the patient experience data. The toolkit, which offers both general principles and specific strategies, will be piloted in outpatient clinics, with data collected to see whether improvements are reported. The Health Equity team, in partnership with the Office of Experience Transformation, conducted technical assistance sessions, referred to as "salons," with teams at the pilot sites to go over the elements of the toolkit and brainstorm ways to implement the guidance in different clinical settings, depending on the services and target populations.

Stratifying clinical data by race, ethnicity, language, and other patient characteristics has been a work in progress. The Health Equity team is committed to getting reliable and accurate data to inform quality improvement. Quality dashboards have recently moved to stratifying required reporting elements by race, ethnicity, age, language, and other patient characteristics, but many other dashboards continue to report aggregate metrics.

The Health Equity Committee recognizes that patient records sometimes have missing REAL data. New employees receive trainings that emphasize REAL data collection protocols and why they are important, yet some employees reportedly are reluctant to collect the information because of concerns about potential patient pushback. Additional education from Health Equity staff address some of the gaps between system goals for comprehensive, high-quality REAL data and actual collection practices. For training purposes, UC San Diego developed a series of short video educational messages related to REAL data (and what "race" is a proxy for — i.e., racism) that are available to all people within the health system.

Moving to a Systemwide Equity Approach

In spring 2024, UC San Diego formed a Health Equity Steering Council with participants from all across the system to knit together separate efforts and embed health equity more consistently into system initiatives. A component of the senior leadership incentive plan was tied to various equity activities. Leaders received coaching from the Health Equity team on developing a health equity plan to prepare them for the process once better data are available. Part of the plan was to think through potential solutions to closing the gaps, and the types of resources, interventions, process improvements, or other initiatives that could be considered. The training and technical support from the Health Equity team for the development of equity plans relied on established quality improvement tools that were familiar to system leadership and were used extensively in quality improvement activities.

From this initiative, UC San Diego received 172 unique health equity plans from leaders. Some areas are implementing their health equity plan, while others are continuing to refine their plans to prepare for implementation. Some focus areas from the health equity plans, such as the need for better support for limited English proficient patients and better language access, have been system-level priorities that all of the system's service lines and departments will address. UC San Diego has also integrated an equity aim across all system-level priorities that are tracked (quality, access, experience, culture, and efficiency). Each of the executive leaders over those areas is identifying an equity driver that they track and report out every six weeks in regular executive meetings.

Ventura County Medical Center

Highlighting disparities in maternal health

The Ventura County Medical Center (VCMC) is a county-owned, full-service acute care hospital and trauma center that serves as the main medical hub for Ventura County.

- Location: Ventura, California
- Level II trauma center
- Patient population: Significant Latino/x population
- Inpatient/outpatient services: 274-bed acute care hospital with general hospital services and specialized care, 24-hour emergency center
- Ownership: County-run
- Types of services: General hospital services, trauma care, pediatric unit, and specialized care

Researchers and clinicians at VCMC have long been concerned about national trends in maternal mortality and morbidity and how these disparities may be reflected in the local community. VCMC participates in the California Maternal Quality Care Collaborative, which created a health equity dashboard to look at the relevant maternal health metrics by race and ethnicity. As part of the collaborative, health systems review outcomes by race and ethnicity, in addition to other patient characteristics.

VCMC has a large population of Latino/x patients, who became the focus of substantial equity engagement and quality improvement work at the health system. Because the California Maternal Quality Care Collaborative includes information from birth certificates, which lists country of origin of the mother, researchers at VCMC were able to analyze differences among US-born and non-US-born Latino/x women and birthing people. The deeper dive into the data allowed VCMC to identify whether the system was seeing disparities based on race and ethnicity, as well as place of birth, allowing for a more focused set of strategies targeting populations for improvement.

The impetus for VCMC posing the question about nationality came from years of working with Indigenous farm workers from southern Mexico, who over many decades settled in Ventura County, as well as other Central California areas such as Santa Maria and Salinas. When the data were analyzed by race, ethnicity, and place of maternal birth, meaningful disparities were identified among some subpopulations, particularly those from Indigenous communities in Mexico, many of whom identify as Mixteco.

Customized Improvement for Targeted Populations

VCMC identified areas for improving care specifically for the Mixteca-speaking population. The strategy included four areas of education:

- Revitalized in-services and grand rounds for all of the perinatal staff about Indigenous communities in general and the Mixteco community specifically
- A newly created equity conference that included comprehensive information about the needs of Indigenous communities, which was well-attended by staff and system leadership
- Developing and strengthening partnerships with community-based organizations composed of Indigenous community members, and reflecting their needs and preferences
- Continuing anti-bias training for all perinatal staff

VCMC also created a preeclampsia video in Mixteco and Spanish in collaboration with one of the community-based organizations. VCMC then cocreated the Indigenous Doula Program through a partnership with the local community-based organization and the local managed Medi-Cal program to support Indigenous women and birthing people during prenatal care, labor and delivery, and postpartum. Furthermore, VCMC recognized the lack of Indigenous language interpreters and created the Language Access Program for people from the farmworker community to become medical interpreters to provide medical interpretation between English and Indigenous languages such as Mixteco.

Armed with additional data and understanding of people at risk for poor birth outcomes, VCMC took an aggressive approach to targeted improvements in care. Researchers and clinicians reviewed every patient chart where there was an adverse outcome to identify the precise characteristics of the adverse outcome and develop potential strategies to mitigate those risks.

Lessons for Additional Equity Work

VCMC will use the lessons from the maternal health project targeting Indigenous populations as a model for other equity-focused interventions. Future projects will continue to address the cultural and linguistic barriers to care for pediatric, emergency room, and adult patients. In this case as well, clinicians and researchers are seeking feedback from community organizations to make certain that they understand the experiences of the community and their concerns. The Indigenous Doula Program and Language Access Program are still in their infancy as program leaders plan to continue to develop these programs and partner with the community to develop culturally and linguistically responsive programs. VCMC strives to have these programs meet the immediate needs of the community today while creating these pipelines for a future workforce that represents the community that it serves.

Experienced with California's Quality Incentive Pool

Public safety-net health systems have participated in quality incentive programs for nearly a decade, primarily through Medicaid waiver programs that include important and lucrative value-based components. These incentive programs have evolved and expanded over the years. The program is currently known as the Quality Incentive Pool (QIP). In 2024, QIP was in its seventh year, having transitioned out of the PRIME (Public Hospital Redesign and Incentives in Medi-Cal) pay-for-performance component of its waiver program, which expired in June 2020. QIP is financed outside of the Medi-Cal waiver and instead uses redirected supplemental payments crafted into an ambitious and highly structured performance and reporting system.[4]

Structured Reporting Requirements

A key component in building such a structured reporting system linked to financial incentives is the capacity to report performance data in a comprehensive and timely manner. Health equity was built into QIP's early years through requiring participating systems to collect race and ethnicity data and have the ability to stratify at least some required metrics by these characteristics. According to several interviewees for this project, it is the QIP that pushed safety-net systems forward in REAL data collection. This could be particularly challenging from a health information technology perspective, especially in hospitals without systemwide electronic health records (EHRs), because of the need to integrate and harmonize data from multiple inpatient and ambulatory EHRs. The move to Epic, Cerner, or other systemwide EHRs was a game changer for data reporting; QIP participants without systemwide EHRs built workarounds to enable QIP reporting and data stratification.

Early Goals for Data Collection

In the early years of PRIME, health systems had to develop a plan for improvement of data collection and submit baseline data. Incentive payments in subsequent years were linked to improving or meeting data collection targets. PRIME also required participating systems to select a disparity reduction project, further developing the practice of using REAL data to inform and transform quality improvement through an equity lens. Systems had to select a target population that demonstrated the greatest measurable disparity; to receive incentive payments, they had to show a reduction in the disparity year over year to receive funding. These types of equity-driven improvement goals have also been built into the current structure of QIP. Non-safety-net systems do not have a comparable state-based incentive system related to quality or equity.

QIP includes two sets of measures selected because they represent leading causes of death in California. Twenty measures make up a set of "priority measures," and an additional 36 measures are included as "elective measures." The 20 priority measures are required for all participants. Systems must also select 20 of the 36 elective measures for improvement work. Thus, there are 40 aggregate measures that contribute to the system's potential incentive payments. In 2021, an estimated $1.2 billion was available for incentive payments for health systems that met their required targets on all reporting and performance.

Equity Measures for Improvement

Two of the 40 measures have an equity-focused improvement requirement linked to performance payments. Health systems must identify one health equity measure from the required 20 measures and one health equity measure from the elective measures. The chosen equity measure must reflect a disparity within their priority population, which represents less than 50% of the overall population. The

priority population must demonstrate a large gap in performance compared to the overall measure performance rate. QIP uses a 10% "gap closure methodology," meaning that systems must close the gap between their performance and a state benchmark by at least 10% each year to receive the full-measure incentive payment.[5] The benchmark is set at the 90th percentile of the state or national Medicaid benchmark for that measure.

In 2022, systems were required to report five specific measures stratified by race and ethnicity. By 2024, this requirement was increased to 10 specific measures, for reporting purposes only. This reporting is in addition to the equity measures chosen for improvement and linked to incentive payments. Some QIP participants routinely stratify all of the reported measures, using the information to identify areas for improvement. This helps clarify priority population gaps and can also be used for general improvement work in the aggregate measure.

Natividad Medical Center

Natividad Medical Center is a county-operated safety-net hospital serving the rural, agricultural community of Salinas, California.

- Location: Salinas, California
- Level II trauma center
- Patient population: Largely Latino/x, including a significant number of migrant farmworkers
- Natividad is a hospital and Level II Trauma Center dedicated to improving and inspiring healthy lives. As a public health care system, Natividad provides compassionate high-quality health care to everyone in Monterey County, regardless of their ability to pay. Located in Salinas, California, and founded in 1886, Natividad offers a wide range of inpatient, outpatient, emergency, diagnostic and specialty medical care for adults and children.
- Ownership: County-run
- Types of services: Culturally competent care, outreach programs, farmworker health initiatives, Indigenous interpretation program

As a public safety-net system, Natividad participates in California's QIP program in addition to other value-based programs. The system uses the Institute for Healthcare Improvement's Equity Framework that rests on traditional quality improvement principles, including creating Plan, Do, Study, Act (PDSA) cycles and developing an overall plan for improvement. The approach to equity work is consistent with systemwide quality improvement for the entire organization.

Selection of Cervical Cancer Screening for Black Women

Natividad selected cervical cancer screening among Black women as its equity metric from the list of QIP priority metrics. The cervical cancer screening rate among the priority population was at least 3% lower than among the overall population, which met the requirement set by the QIP program. It also met the threshold for required patients in the numerator of the measure, set at a minimum of 30 by QIP. It was considered a disparity that could be improved over a year. Measures related to Hispanic/Latino/x patients were not eligible, since more than 50% of Natividad's patients are Hispanic/Latino/x.

QIP Dashboard

Natividad uses a reporting dashboard designed specifically for the QIP program. The dashboard indicates whether the health system is hitting the target performance for a given time period. Data are stratified by race, ethnicity, or other patient characteristics of interest such as language, sexual orientation and gender identity, religion, and geographic area.

According to interviewees, including REAL data as well as other patient characteristics adds a deeper level of analysis to the quality improvement work, which has cascading benefits for the health system. Natividad has developed higher analytics capacity on the clinical informatics side, which provides critical information for clinicians at the point of care. Quality improvement discussions focus on why a specific clinic, or service, is not meeting its screening targets for a group of patients.

Getting the Data Right

Part of the work of the analytics team is to make sure that the data included in the dashboard are accurate and valid. Data analytics has worked on the QIP program for years, creating a sense of trust

among data users. If gaps are identified by race or ethnicity, concerns about whether the data are accurate are less often a barrier to improvement. Once the data are considered sound from a technological perspective, the system investigates whether clinical workflow deficiencies or inefficiencies are contributing to the performance gap. By the time departments or clinics get the data showing the need for performance improvement, most of the data problems have already been resolved.

Clinician Use of Data to Make Change

Departments and clinicians review the dashboard to make sure their data make sense to them from a patient care perspective. Clinicians and departments work together with the data team to develop strategies for improvement that are amenable to tracking and performance reporting. According to interviewees, having the QIP and other value-based incentive programs has been the catalyst for a strong and consistent focus on the integration of equity with quality improvement. QIP does not require stratifying all reported metrics by race and ethnicity; while this is possible from a technological perspective, it is not done in practice for most of the metrics largely because of time and resource limitations, which are even more substantial since COVID.

University of California, Irvine

UC Irvine (UCI) Health is the largest academic medical center in the University of California system, serving diverse patient populations in Southern California.

- Location: Irvine, California
- Orange County's only Level I adult trauma center and Level II pediatric trauma center
- Patient population: Significant Latino/x and Asian populations
- Inpatient/outpatient services: Over 1,300 licensed beds across multiple facilities; 20+ ambulatory sites
- Ownership: Public; part of the University of California system
- Types of services: Specialty care, research, and teaching hospital services

UC Irvine has been a participant in QIP for years, helping to establish a consortium between the five University of California systems that works collaboratively to interpret state QIP specifications and develop coding for monitoring and reporting performance. UC Irvine interviewees describe the programs as "constant process improvement."

Selection of Breast Cancer Screening for Black Women

UC Irvine's equity measure from the list of priority measures is breast cancer screening for Black patients. A question raised for the equity measure, as well as the measures stratified for informational purposes, is how to report people who are multiracial. When they report results to make them eligible for QIP incentive payments, UC Irvine reports on patients who identify as the targeted race/ethnicity, including patients who are part of a multiracial category. When reporting the overall population metric, UC Irvine is required to use the US Centers for Medicare & Medicaid Services rules, which combine all multiracial people. As a practical example, UC Irvine works to improve rates of breast cancer screening for all patients, with a special focus on ways to advance equity for any patient identifying as African American, including patients who are multiracial. This is particularly important for UC Irvine, since "multiracial" is the largest group at the health system by race and ethnicity.

A Business Case for Better Care

Linking financial incentive payments to improvement for an equity or other measure means that health systems will sometimes think more creatively about how to improve performance, since attaining the measure will bring additional resources for patient care. A business case can be made for improving access and quality of care, since failing to meet the measures leaves precious resources on the table. For the case of breast cancer screening for African American patients, UC Irvine created a new pathway for Medi-Cal patients to use previously inaccessible imaging centers, at an additional cost to the system. Reaching the measure target, however, made this strategy a sensible option from patient care and business perspectives.

From a practical perspective, UC Irvine and other participants tend to select their equity measures from a preapproved list provided in the QIP's highly detailed specifications manual. Initial analyses are conducted to determine which of the preapproved measures, by priority population, meet the criteria for inclusion as a chosen equity measure. The system looks at trends in measures over past reporting periods and makes the decision about where the greatest opportunities for improvement are as it addresses all of its QIP metrics.

Early Gains in Data Quality

UC Irvine's successes with the QIP program have come after years of working to improve data quality and basic quality improvement approaches. QIP involves the enterprise data and analytics team, which is tasked with calculating the measures as accurately as possible. According to interviewees, in the early years of QIP, the system could see 10% to 20% improvement just through better data reporting. This is because clinical reports or claims data do not necessarily include all the information required for measures reporting in an accessible fashion. In those cases, screenings and other services were being provided at higher rates than reported, which was essentially a data problem.

Like Natividad, UC Irvine has advanced its performance improvement activities largely as a result of the QIP program and its predecessors, which used targeted incentive patients to push health systems to use highly structured data analysis to improve care. This has been a powerful motivator for leadership and finance staff at health systems, but reportedly is less persuasive to system clinicians, whose motivation is more closely linked with patient care quality. Providing clear data on performance to departments and service managers can have substantial impact on aggregate and equity measures.

Endnotes

1. "Our Vision, Mission, and Values," Zuckerberg San Francisco General Hospital and Trauma Center; and Susan Ehrlich and Bruce Siegel, "Combating Structural Racism Locally and Nationally: A Blueprint for Progress on Health Equity," *NEJM Catalyst Innovations in Care Delivery*, May 1, 2022.
2. "A3 Problem-Solving — a Resource Guide," Lean Enterprise Institute.
3. The term Kaizen refers to continual improvement or rapid improvement processes and is a common concept in Lean methodology. The Kaizen Promotion Office trains and educates employees about Kaizen.
4. *Improving Quality and Reducing Disparities Through the Quality Incentive Pool (QIP)* (PDF), California Association of Public Hospitals and Health Systems (CAPH).
5. Improving Quality, CAPH.