Institute *for* Healthcare Improvement

Advancing Health Equity

An Approach to Systematically Identify and Evaluate Health Disparities

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Institute for Healthcare Improvement

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Executive Summary

It has been more than 20 years since the National Academy of Medicine published their report, *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care*, and despite decades of efforts, true health equity remains a distant goal. The COVID-19 pandemic laid bare the equity gaps that plague health and health care today, and it tragically demonstrated the devastating impacts these gaps have on individuals and communities.

One of the core challenges in addressing inequities in health and care is measurement. The old saying, “What gets measured gets improved” may well be wrong, but it is indisputable that sustained improvement requires measurement. Yet, in the health care industry, there is no standard or consensus on best practices to identify, quantify, track, and report health equity gaps among patient populations. To help address this need, this document presents a detailed, four-step approach for identifying inequities and constructing metrics that advances health equity for health systems.

Four-Step Approach to Systematically Evaluate Health Disparities:

STEP 1: Identify and Prioritize a Health Equity Initiative Focus Area, Population of Focus, and Metrics
STEP 2: Determine Stratification Attributes and Compute Metrics for all Attribute Values
STEP 3: Choose Reference Points
STEP 4: Quantify and Characterize Health Disparities

Based on the current, cumulative state of health equity measurement research and practice, this four-step approach represents the consensus of more than 35 subject-matter experts representing experience and expertise spanning a vast array of health care settings including clinical, quality, payor, academia, administration, and the relevant health care quality improvement and disparities reduction literature. This document is intended to be a practical guide to achieve a minimum set of agreed-upon practices for analyzing and reporting equity data – from which benchmarks can evolve. The goal is to provide guidance that is intentionally flexible to allow for local applicability.

This paper includes the following:

- The context of environmental factors such as current mandates and standards for health-equity measurement;
- Recommendations for creating a health care environment where everyone thrives;
- A detailed discussion of the four-step approach to systematically identify and evaluate health disparities;
- Examples of how to apply this approach in a variety of health care settings; and
- Additional considerations and resources for evaluating the significance of findings.

We believe that health care organizations that are serious about reducing and eliminating equity gaps can use this guidance to understand where inequities exist, understand their magnitude, and chart a path toward meaningful and sustainable improvement.

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Introduction

Despite growing momentum for health care organizations to eliminate long-standing disparities and inequities, there are no industry standards or consensus on best practices to identify, quantify, track, and report health equity gaps among patient populations. In 2024, the Institute for Healthcare Improvement (IHI) Leadership Alliance convened the "Health Equity Accelerator" to facilitate a small cohort of IHI's global partners across the industry to develop a consensus statement with a detailed, practical approach for identifying inequities and constructing metrics that advance health equity for health systems, federally qualified health centers, community health centers, payors, and other health care-focused entities. This paper is one product of the IHI Health Equity Accelerator.

IHI's *Framework for Health Care Organizations to Achieve Health Equity* provided a springboard for this work.[1] Specifically, the guidance presented here contains detailed steps to identify and quantify health disparities, and provides recommendations on how health care organizations can create a health care environment where everyone thrives (e.g., by institutionalizing fair and inclusive health care practices) – both integral to executing the key components of IHI's framework. This document also extends the work on measuring health equity[2,3] that is highlighted in IHI's *Achieving Health Equity: A Guide for Health Care Organizations*[1] by providing recommendations based on the current, cumulative state of health equity measurement research and practice, and by including examples of how to apply this guidance in a variety of health care settings.

This document is intended to be a practical guide to achieve a minimum set of agreed-upon practices for analyzing and reporting equity data, from which benchmarks can evolve. Certainly, organizations may choose to also incorporate more advanced analytics and data visualizations to identify and eliminate inequities. The goal is not to stifle creativity and progress, but to provide a baseline. The guidance is intentionally flexible to allow for local applicability and to avoid an approach that is overly prescriptive. A detailed description of the process, methods, inputs, and evidence base used to inform the present work will be submitted for publishing.

Informed by the consensus of more than 35 subject-matter experts representing experience and expertise spanning a vast array of health care settings including clinical, quality, payor, academia, and administration; and by relevant literature on health care quality improvement and disparities reduction, this guidance is intended to create a standardized method by which health care organizations can examine their quality data to identify disparities, with the intent to move toward national benchmarks around health equity and eliminate existing disparities and inequities in health outcomes. Uncertainty in health care priorities, strategies, and the broader regulatory environment create a context in which some organizations will be able to implement all the steps described in this guide, while others will need to adapt and tailor the guidance to the unique circumstances of their environments.

Foundational Materials

Distinguishing Health Equity and Health Disparity

Klein and Huang[4] define health disparity as a difference or quantity that separates sociodemographic groups on a particular measure of health. Similarly, such difference or quantities can also be measured in an evaluation of the quality of health care. The Robert Wood Johnson Foundation (RWJF) provides a clear definition of health equity[5]:

> "Health equity means that everyone has a fair and just opportunity to be as healthy as possible. This requires removing obstacles to health such as poverty, discrimination, and their consequences, including powerlessness and **lack of access to** good jobs with fair pay, **quality** education and housing, safe environments, and **health care**." (*emphasis added*)

For the purposes of measurement, advancing health equity means reducing and eliminating health disparities, including the quality of health care that people receive (and its drivers), that adversely affect vulnerable groups of people that have been historically excluded or underserved. These groups include, but are not limited to, people of color, people living in poverty (particularly across generations), religious minorities, people with physical or mental disabilities, people who identify as Lesbian, Gay, Bisexual, Transgender, or Queer (LGBTQ+), and women.

This document provides guidance on quantifying and assessing disparities in the quality of health care across sociodemographic groups to inform the creation and deployment of interventions to reduce these disparities and reduce and eliminate health inequities.

The Roadmap to Advance Health Equity

The Roadmap to Advance Health Equity, hereafter referred to as "the Roadmap," was developed by the Advancing Health Equity: Leading Care, Payment, and Systems Transformation program.[6–8] The Roadmap's recommendations and guidance are based on the nearly 20-year history of the program, including systematic reviews of the health disparities intervention literature, evaluation of promising practices, and provision of technical assistance to health care systems, hospitals, clinics, government agencies, and insurance providers.[9–12] The Roadmap also aligns with components of IHI's health equity work, including the *Framework for Health Care Organizations to Achieve Health Equity*[1] and the Rise to Health Coalition.[13]

Metrics and measurement alone cannot create or support sustained change. Effective implementation and long-term sustainability of health equity efforts require attention to all Roadmap components illustrated in Figure 1. The guidance in this document aims to standardize elements of two key Roadmap components: *Create Cultures of Equity* and *Identify a Health Equity Focus*. To align with the work of the IHI Leadership Alliance Health Equity Accelerator "Create Cultures of Equity" is clarified as *"Institutionalize Fair and Inclusive Health care Practices"* and strongly encourages organizations to create a robust approach to organization-level change simultaneously with implementing the other Roadmap components.

Figure 1. Roadmap to Advance Health Equity

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Initiatives to reduce health and health care disparities are more likely to succeed if part of a broader organizational change effort that both recognizes the health disparities among the communities served, and also views those disparities as inequities that are both unacceptable and in need of remedy. In this document, the “Building a Health Care Environment Where Everyone Thrives” section defines the key aspects of, and best practices for, such an effort. The section titled “Four-Step Approach to Systematically Evaluate Health Disparities” helps organizations prepare for the Roadmap’s second step, *Diagnose Root Causes with a Health Equity Lens*.

Regulatory and Legislative Mandates

When this guidance document was developed, there were numerous regulatory and legislative standards and mandates to advance health equity, with examples described below. Many of them require identifying disparities in health and health care data or taking action to reduce or eliminate disparities. At the same time, there is a dearth of guidance to help organizations meet these standards and fulfill mandates. In addition to the examples below, Appendix A includes examples from other national organizations that provide guidance on improving health equity. It is important to note that regardless of whether state and/or federal standards to advance health equity remain, organizations that are driven by a commitment to improve quality must inherently be motivated to reduce disparities. This document is meant to provide guidance, which is distinct from standards, and to provide a step-by-step process to consistently use data to advance health equity.

Several national standards were in place when this guidance document was developed, including but not limited to:

- The Joint Commission's (TJC) Standard LD.04.03.08, EP3, which applies to hospitals and critical access hospitals, ambulatory health care, behavioral health, human services, and physical health care services accreditation programs, requires stratifying quality metrics by sociodemographic data to identify disparities. The Joint Commission suggests age, gender, preferred language, and race and ethnicity as stratification characteristics.
- The Centers for Medicare & Medicaid Services (CMS) Hospital Commitment to Health Equity (HCHE) assesses a hospital's commitment to health equity through attestations that all criteria in each of five domains are met.[14] Two of these domains are relevant to our present focus: *Equity Is a Strategic Priority*, which requires a strategic plan to identify "priority populations;" and *Data Analysis* which requires stratification of key performance indicators, and including this data on hospital performance dashboards.

National policies are subject to change. There are, however, numerous state laws and regulations that also continue to govern these efforts. Whereas national mandates tend to be broad and allow for a high level of flexibility, some state-level agencies have begun to require more specific and expansive reporting on health equity measures and action plans to reduce health disparities.

For example, the Hospital Quality and Equity Incentive Program (HQEIP) in Massachusetts is an initiative introduced by MassHealth to enhance care quality and promote health equity across the state's hospitals. Under the HQEIP, MassHealth's acute hospitals are incentivized to pursue performance improvements in three domains: demographic and health-related social needs data, equitable quality and access, and capacity and collaboration.[15] The program encourages hospitals to systematically collect comprehensive demographic and social needs data, identify disparities in access and outcomes, and implement targeted interventions to address these gaps. As a central requirement, participating hospitals must develop and submit a four-year Health Quality and Equity Strategic Plan that outlines their approach to advancing equity-focused initiatives.

The California Department of Healthcare Access and Information (HCAI) Hospital Equity Measures Reporting Program requires California hospitals to collect and analyze specific health equity data and publish a health equity report to the hospital's and HCAI's websites annually beginning September 2025.[16] HCAI's requirement specifies nine structural measures that capture CMS and TJC standards and a Healthcare Effectiveness Data and Information Set (HEDIS) Social Need Screening and Intervention measure, as well as nine core quality metrics to be stratified by, at a minimum, nine sociodemographic characteristics.

The state of Michigan initiated race and ethnicity stratification in 2010 as part of the state's Comprehensive Healthcare Program for Medicaid health plans. As of 2024, the Michigan Department of Health and Human Services evaluates racial and ethnic disparities in 14 health plan measures across four domains, including measures in the Performance Bonus Withhold programs.[17] This includes comparing differences between each non-white minority population and the white population, as well as comparisons of each racial/ethnic group to the national HEDIS 2020 Medicaid 50th percentile of measure performance. Stratification by race and ethnicity are also integrated into the state's Hospital Reimbursement Program.

Other state Medicaid programs that leverage stratification of quality metrics to advance health equity exist in Delaware, Florida, Georgia, Kentucky, Missouri, Oregon, Ohio, and Oklahoma.[18,19] Common stratifying characteristics in these programs are race, ethnicity, language, geographic region, and disability status.

The Business Case for Health Equity

In addition to compliance with regulatory and legislative mandates, there is a strong financial case for focusing on health equity – that is, improving health outcomes for all groups and reducing health disparities between them. Making the business case for health equity includes the elements described below.

- **Cost reduction:** Reducing health disparities reduces cost. Deloitte estimates that health disparities cost the US $320 billion in health care spending in 2021 and that costs could top $1 trillion by 2040.[20] An analysis of 2018 national data suggests costs may already be higher, with the burden of racial and ethnic health disparities estimates ranging from $421 to $451 billion.[21]
- **Market value:** Health care organizations that demonstrate a commitment to advancing health equity can see financial benefits in their overall brand reputation, customer loyalty, and trust, which all contribute to increased market value.[22,23]
- **Value-based incentives:** As value-based payment grows in health care, health plans are increasingly incentivizing health care delivery organizations to eliminate health disparities.[24]
- **Workforce productivity:** Employers often sponsor health insurance for their workforce. A McKinsey analysis found that employees from vulnerable groups (e.g., disabled individuals, veterans) were more likely to miss work or consider switching jobs due to unmet health needs.[25] By reducing health disparities within employee populations, employers – including those in the health care sector – can increase job productivity and retention.
- **Ability to participate in markets:** Requirements to demonstrate specific actions to improve quality metrics in order to participate in national health care accreditation and payment programs are becoming increasingly common.[26,27] In some instances, the ability to identify and reduce disparities in health care quality metrics across different sociodemographic groups is required. Failing to integrate equity efforts may lead to an organization's inability to meet prerequisites for participation.

A focus on reducing health disparities can also positively affect the *patient's* health care costs. For example, disparity reduction activities that improve timely access to effective treatments and care for all groups may slow the progression of, or regress, diseases associated with significant out-of-pocket costs for patients.

The impact of health equity initiatives can vary depending upon their specific configuration and the markets in which they are implemented. Sometimes equity initiatives can strengthen system reputation, reduce costly disparities, provide a market advantage, and improve long-term sustainability. Other times, equity incentives may instead drive organizations toward cherry-picking healthier or lower-risk patients. This potential interplay underscores the need for policy, payer, and community-level alignment to ensure that advancing equity is not only the ethical imperative but also a viable business strategy across different market contexts.

Building a Health Care Environment Where Everyone Thrives

Historical, economic, political, social, and cultural forces operate within all organizations.[28,29] In health care organizations, they impact patient–provider interactions, health care team dynamics, operational processes, health professional education, and community relations. These forces play a key role in generating health care quality and outcome variations that exist across patient populations.[7,11] However, most change initiatives aimed at reducing and eliminating these variations underemphasize the role of these forces within the health care system, and overemphasize individual behavior. This leads to most interventions attempting to effect change through individuals' physiology and lifestyle, and a lack of interventions aimed at improving the health care system.

In addition, most health care organizations and systems reinforce their inherent control over how health care is delivered and interventions to reduce inequities. This occurs despite the fact that most organizations are lacking the unique and specialized knowledge and skills that patients and community members hold, which are critical to quality care and can help identify and ameliorate the historical, economic, political, social, and cultural forces that negatively impact their operations. Health care organizations can begin to shift this dynamic and make faster progress in reducing health and health care disparities by prioritizing changes to address these forces and shift power to patients and communities.[11] For example, organizations can partner closely with patients and community members when conducting each of the steps outlined in this guidance document. This partnership, paired with the power and authority to influence key decisions, are critical elements missing from most initiatives and activities to advance health and health care equity. (See Appendix C for more information.)

Organizational change is always challenging. However, organizational change to advance health and health care equity poses additional challenges because the forces that produce and maintain health and health care inequities varies considerably by community context, patient population, and health care organization characteristics (e.g., quality improvement capabilities and infrastructure, financial resources, staff capacity, and skill sets). As a result, the design and implementation of organizational change initiatives to advance equity must be tailored to address the impact of these context-specific historical, economic, political, social, and cultural forces. Effective interventions typically require an iterative approach with multiple change attempts and failures to uncover and understand the unique local context that caused the inequities in the first place.

To effectively address these challenges and increase the likelihood of long-term impact on equity, health care leaders and staff must be equipped to recognize how historical, economic, political, social, and cultural forces operate within the organization. This can be accomplished by providing staff with the skills needed to identify and address root causes. This type of long-term commitment devoted to large-scale culture change can seemingly conflict with the standard approach of change implementation that typically focuses on the technical, quantifiable, predictable, and operational aspects of organizational change initiatives.[30–33] In reality, both approaches are necessary to reduce and eliminate health and health care disparities.

(Appendix B summarizes guidance from the health and health care equity intervention literature, as well as recommendations from participants in the IHI Leadership Alliance Health Equity Accelerator, on identifying and implementing change activities that can provide the health care workforce with key knowledge and skills to advance equity within their organizations. Such activities provide broad support for specific initiatives to reduce health and health care disparities and increase the likelihood of eliminating them.)

Four-Step Approach to Systematically Identify and Evaluate Health Disparities

With the Roadmap to Advance Health Equity as context, we present a systematic four-step approach to both identify a health equity focus area and analyze available quantitative data to reveal existing disparities by measuring quality of care and health outcomes and stratifying them by sociodemographic characteristics.

It is important to note that the four steps are intended to provide direction and structure to the process of identifying and evaluating disparities. Although the four-step approach itself is linear, the steps can be adapted to meet the needs of a given institutional context or situation. However, we strongly recommend that all adaptations be intentional, and that the organization documents the actions taken to implement each step, including the rationalization for any adaptations. (See Appendix D for a worksheet with the four steps.)

Four-Step Approach to Systematically Identify and Evaluate Health Disparities

STEP 1:

Identify and Prioritize a Health Equity Initiative Focus Area, Population of Focus, and Metrics

STEP 2:

Determine Stratification Properties and Compute Metrics for all Attribute Values

STEP 3:

Choose Reference Groups

STEP 4:

Quantify and Characterize the Disparity

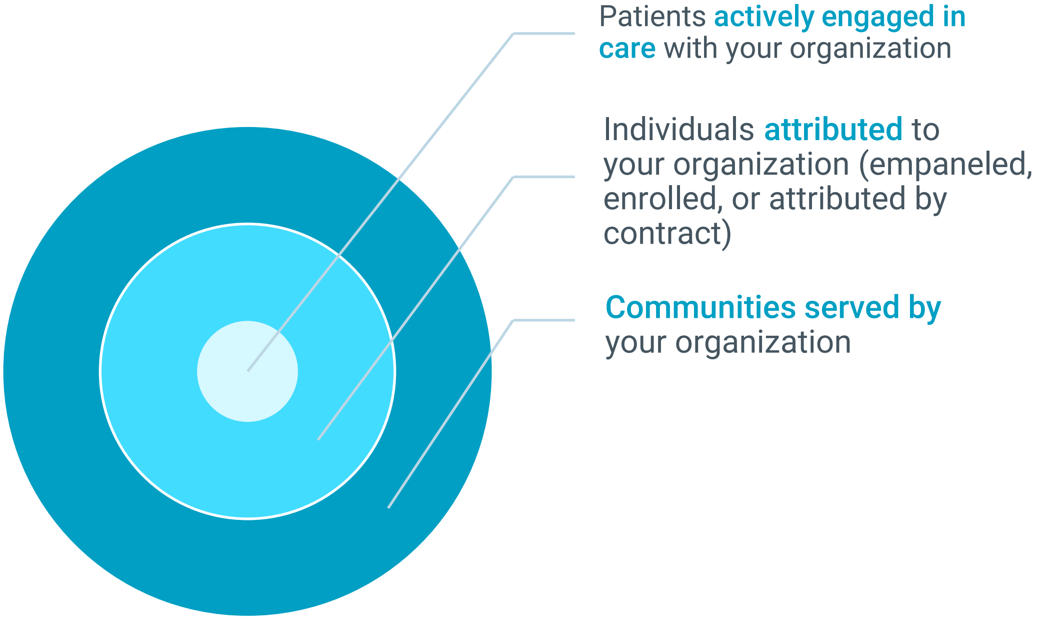
STEP 1: Identify and Prioritize a Health Equity Initiative Focus Area, Population of Focus, and Metrics

In practice, the starting point to identify health disparities in Step 1 can be either the selection of a focus area *or* metric selection *or* determining what population to focus your efforts on. Once one of the three is selected, the other two follow – either as proactive decisions or by default of how the metrics selected are defined.

Health Equity Initiative Focus Area: The focus area is the care setting or context of your efforts to improve health equity such as ambulatory care quality, acute care quality, patient safety, post-acute care quality, access and utilization, and patient experience. The focus area can remain consistent over time but the work within that area, and the specific metrics used, are likely to shift and evolve as equity gaps are closed and new ones are identified. For example, a set of health equity metrics across multiple focus areas can be tailored to a specific community and need. Similarly, systems may identify an area of focus that may be a lower priority for a community but may have important and widespread benefit. Flu immunization, for example, is generally financially sustainable, even for Medicaid populations, and reducing disparities improves quality measures and near and distal health outcomes. Once equity gaps are systematically closed, metrics are updated to align with new gaps that are identified.

Population of Focus: The population of focus refers to the group of patients experiencing the disparity that you aim to reduce. If you are selecting the population of focus as the starting point for your health equity work or if the population is “determined” by the metrics you have selected, it is important to understand the level of population that is included (and excluded). Figure 2 depicts three levels of population that may be captured in your selection. Some levels may be established externally (e.g., contract-attributed populations, or members enrolled in a health plan), while others may be more focused (e.g., patients actively seeking care from your organization) or broader (e.g., residents of geographic communities served by your organization).

Figure 2. Level of Population Measurement



It is also important to understand how inclusion and exclusion criteria may influence the observed outcomes and disparities. For example, there may be individuals that experience increased risk for suboptimal outcomes who are systematically excluded from the population. Moreover, definitions of “active patient” that are overly restrictive – for example, defined as having had three primary care encounters within two years – may bias outcomes measures and, more importantly, unintentionally exclude those who would stand to benefit most from preventive care. Also, when including patients currently under care, do not lose sight of the data for patients who have fallen out of care or are not engaged in care. Some organizations may consider expanding the population to include all community members, not just patients or clients, depending on the metric or need. Ultimately, patients who are less engaged are at higher risk to be excluded from the population of focus. This could lead to overlooking equity gaps that are important to address, further highlighting why it is critical to always document the rationale and inclusion and exclusion criteria utilized for the population of focus.

Metrics: Metrics to identify disparities can be drawn from traditional quality measurement targets that represent clinical outcomes (e.g., blood pressure control, maternal mortality, sepsis mortality), care processes (e.g., breast cancer screening, diabetic retinopathy screening, childhood immunizations), care transitions and access (e.g., avoidable emergency department use, readmissions, well child visits), and patient experience (e.g., patient satisfaction, communication effectiveness).

Metrics may also reflect broader equity goals, including activities to build a health care environment where everyone thrives (e.g., outcomes of equity accountability metrics for leadership, or inequities in pay), or the evaluation of equity data infrastructure including completeness and reliability of key equity data elements.

You may also consider tracking leading and lagging metrics composed of a care process metric paired with a clinical outcome – for example, diabetic retinopathy screening (leading metric) and the clinical outcome of severe diabetic retinopathy (lagging metric).

Table 1 provides examples of common data sources in health care and the data variables they include, which can be used as metrics to identify health disparities in a patient population.

Table 1. Example Data Sources and Associated Variables Measured*

Data Type	Examples of Data Source	Examples of Variables Reported
Administrative Data	• Billing data • Uniform Hospital Discharge Data Set	• Volume • Admissions • Discharges • Length of stay
Medical Records	• Electronic health records	• Clinical care and outcomes • Medication use • Surgical and procedural outcomes
Patient	• Consumer Assessment of Healthcare Providers and Systems (e.g., Press Ganey) • Qualitative feedback from patients and families (e.g., email, social media)	• Patient "would recommend" scores
Standardized Data Sets	• ORYX • Outcome and Assessment Information Set • National Surgical Quality Improvement Program • HEDIS • AHRQ (inpatient quality indicators, patient safety indicators, pediatric quality indicators) • National Hospital Quality Measures • National Database of Nursing Quality Indicators • Leapfrog Group Survey	• Inpatient or outpatient quality indicators • Patient safety indicators • Pediatric quality indicators
Human Resources	• Culture of safety surveys • Employee engagement surveys • Grievances and complaints	• One-year staff retention • Staff burnout indicators • Grievance and complaint trends by department or position

*Adapted from the National Association for Healthcare Quality (NAHQ) "HQ Solutions" 5th editions (Editors Pelletier and Beaudin)[34]

Selection Criteria. Consider the following criteria when selecting a health equity initiative focus area, population of focus, and metrics.

Anticipated Health Impact

- Consider the potential severity of the selected outcome and its impact on the health and well-being of individuals who experience disparities. For example, hypertension control is a common focus given the long-standing and persistent racial and ethnic disparities and its known link to stroke and heart attacks.
- Assess the size of the population potentially impacted.

Internal and External Alignment

- Select parameters that align with quality improvement goals and/or nationally accepted quality metrics and benchmarks that are already prioritized and resourced, to support ongoing quality efforts, strategic priorities, and/or have physician champions.
- Align with other organizational priorities such as strategic plans and performance incentives or Community Health Needs Assessment (CHNA) and Community Health Improvement Plan (CHIP).
- Align with existing national standards, definitions, and existing measure reporting requirements to promote consistency of evaluation and comparability of results. Alignment with existing data collection efforts (such as CHNAs or existing population health surveys) can reduce data collection burden.
- Align with insurance provider, regulatory, or policy requirements at the state and national level (e.g., HCAI California Hospital Equity Measures Reporting Program[16] and 2025 CMS policies[35]).

Actionability

- Consider the extent to which the health care organization can act on the metric and the availability of resources for the proposed action.
- Determine whether measurement and data availability for the selected outcome are easy or difficult to obtain.

Business Case

- The business case or financial impact for a health equity initiative may not be the primary consideration, but can be a useful factor when determining how to prioritize when resources are limited.
- Consider modeling the financial impact in terms of such things as cost savings.

Availability and Quality of Data

It is important to assess and understand the quality of the organization’s data that documents health care processes and outcomes. Table 2 summarizes the data quality characteristics to consider.

The selection criteria described above aligns with the National Quality Forum (NQF)[36] guidance that helps identify and prioritize metrics that detect disparities based on: prevalence of the populations with social risk factors; size of the disparity gap between the group with social risk factors and the highest quality ratings for the measure; the strength of the evidence linking performance improvement to improved outcomes for the population with social risk factors;

and actionability.[37] Accurate evaluation of any quality measure requires reliable and valid underlying data. While outside the scope of this paper, discussion of the unique challenges associated with the data types described below, as well as those specific to data such as those on social drivers of health, have been described elsewhere.[38–40]

Table 2. Data Quality Characteristics*

Data Quality Characteristics	Definition
Accuracy	Data represent correct and valid values that are attached to the correct patient record.
Accessibility	Data items are easily obtained with legal access. Strong data protections and controls are built into the process.
Comprehensiveness	All required data items are included. The entire scope of data is collected, with documented intentional limits.
Consistency	Data are reliable and consistent across applications.
Currency	Data are up to date.
Definition	Clear definitions are provided so current and future data users will know what the data mean. Each data element has a clear meaning and acceptable values.
Granularity	Data attributes and values are defined with the correct level of detail.
Precision	Data values are large enough to support the application or process.
Relevancy	Data are meaningful to the performance of the process or application for which they are collected.
Timeliness	Timeliness is determined by how data are used and by their context.

*Adapted from the National Association for Healthcare Quality (NCQA) “HQ Solutions” 5th editions (Editors Pelletier and Beaudin)[34]

For illustration, consider the following example of the relationship between focus area, population of focus, and metrics. If you start with identifying the *focus area* (e.g., ambulatory care), then select blood pressure (BP) control as the *metric* as measured according to the HEDIS standard, the *population of focus* is then defined based on the HEDIS measure denominator (i.e., 18- to 85-year-olds with hypertension, active within 24 months, with BP measures within the measurement year). If you specify a *population of focus* first, the *focus area* and *metric* follow. Starting with *population of focus* presents the most flexibility, but the three parameters are closely related.

Summary of Guidance for Step 1: Identify and Prioritize a Health Equity Initiative Focus Area, Population of Focus, and Metrics

Consider the following when selecting a health equity initiative focus area, population of focus, and metrics:

- **Anticipated health impact:** Do the metrics selected for the health equity initiative focus area include outcomes that capture severe morbidity or high mortality?
- **Internal and external alignment:** Does the focus area align with other organizational goals, existing standards, legislative or regulatory mandates, or insurance provider requirements?
- **Actionability and feasibility of improving the selected metrics:** Are the selected measures actionable by providers and other care team members that serve the population experiencing the disparity?
- **The business case**: What is the fiscal impact of a health equity initiative focus, both positive and negative?
- **Availability and quality of data:** Are high-quality data available for the identified focus area.

Tips:

Table 1 provides examples of common data sources and associated variables, which can be used as metrics to identify health disparities in a patient population.

Formally document the rationale for all choices and any inclusion and exclusion criteria to maximize transparency.

STEP 2: Determine Stratification Attributes and Compute Metrics for All Attribute Values

In the context of the four-step approach presented in this document, stratification is defined as the process of dividing the total patient population resulting from the three selected parameters (health equity initiative focus area, metrics, and population of focus) into subgroups based on certain sociodemographic characteristics. Stratifying by selected attributes ultimately provides insights that help to identify subgroups within the population of focus that are experiencing health disparities.

Step 2 contains three elements: 1) select stratification attributes; 2) stratify the population of focus into subgroups representing each of the values for a given attribute; and 3) compute the metric selected in Step 1 for each subgroup.

Element 1: Select Stratification Attributes. Race, ethnicity, preferred language, and disability status (REaLD) are sociodemographic variables that are an important and common starting point for patient stratification and subsequent identification of disparities. In addition to these four core sociodemographic characteristics, other characteristics and drivers of health to consider include:

- Age
- Sex (assigned at birth)
- Religion
- Health-Related Social Needs (HRSN)
- Geographic Location (such as ZIP code or census tract)
- Rural vs. Urban Area of Residence
- Socioeconomic Status
- Insurance Status and Type
- Immigration Status
- Other sociodemographic factors organizations deem important for population health such sexual orientation, gender identity, veteran's status, and income

These additional characteristics capture other historically underserved groups, including members of religious minorities; Lesbian, Gay, Bisexual, Transgender, and Queer (LGBTQ+) persons; persons who live in rural areas; and persons otherwise adversely affected by persistent poverty or inequality.[41] Other factors, aligned with things such as organizational population health priorities, or those necessary for compliance with local, state, and federal policies, may also be selected.

When defining racial and ethnic categories, consider using established definitions to allow for comparison and alignment. Some states require specific categories for their health programs.[42] Alignment with federal standards is also an option and supports comparison to national surveys and benchmarks. The most widely used federal standard is the 1997 Office of Management and Budget (OMB) categorization. This categorization was inaugurally used for the 2020 US Census and is still a valid categorization to support action in the near term, and benefits from the availability of mappings for detailed (and granular) responses (e.g., Centers for Disease Control and Prevention Race and Ethnicity Codes).[43] However, the OMB 1997 standards were superseded in 2024 by a revised set of categories and response options. Organizations may want to align health equity efforts with the updated 2024 categories to both reflect current national best practice and proactively prepare for changes to national programs and standards.[44] Additionally, based on an understanding of their population, organizations may choose to use more granular or specific categories to ensure actionable, effective approaches. It is important to acknowledge the critical importance of equity-focused data practices – including the tension between self-identity and identify captured in data systems as well as best practices for stratification – but addressing these issues in depth is beyond the scope of the paper.

This guidance document does not endorse the use of "Black, Indigenous, and People of Color (BIPOC)" – a term used in the United States to highlight the marginalized experiences of Black and Indigenous people[45] – as a stratification category, but does recognize its utility for some organizations.

Language as a stratification category should include, at a minimum, the top five languages read and spoken by patients that your organization serves, either as captured in electronic health records (EHRs) or used by the organization's interpreter services.

Just as it is important to assess and understand the quality of your organization's data on health care processes and outcomes, it is equally important to understand the quality of the associated sociodemographic data that might be used to identify disparities. For example, comprehensive patient self-reported race, ethnicity, age, language, and disability status (REaLD) data is crucial for identifying and addressing health and health care inequities, maintaining safety through high-fidelity written and spoken communication, and tailoring interventions to meet the unique needs of racially and ethnically diverse populations. Gathering high-quality demographic data requires ongoing and adequate training, staffing support, and supervision and support for those charged with collecting the data, as well as an organization's ability to evolve alongside best practices for categorizing, analyzing, and interpreting social and demographic groupings.[46] Organizations need to refer to the many existing resources to support best-practice approaches to collection of these data.[47,48] Organizations that do not have high-quality data should consider this when interpreting disparities identified through the evaluation process, as results could be skewed or incomplete.

While self-reported REaLD data is the gold standard, organizations without access to this information may consider leveraging other sources that can provide estimates, such as national data sets and other local data and qualitative data, while also working to improve the organization's demographic data quality.[49] These estimates can then be imputed for values at the person level. For example, person-level race and/or ethnicity values may be estimated by linking a person's first name, surname, and residential address to an outside source.[50] Such efforts should incorporate best practices for ethical use of such data, including clear governance over when use of imputed race and/or ethnicity data is appropriate versus when it is not.[51] This guidance document does not endorse a specific imputation method.

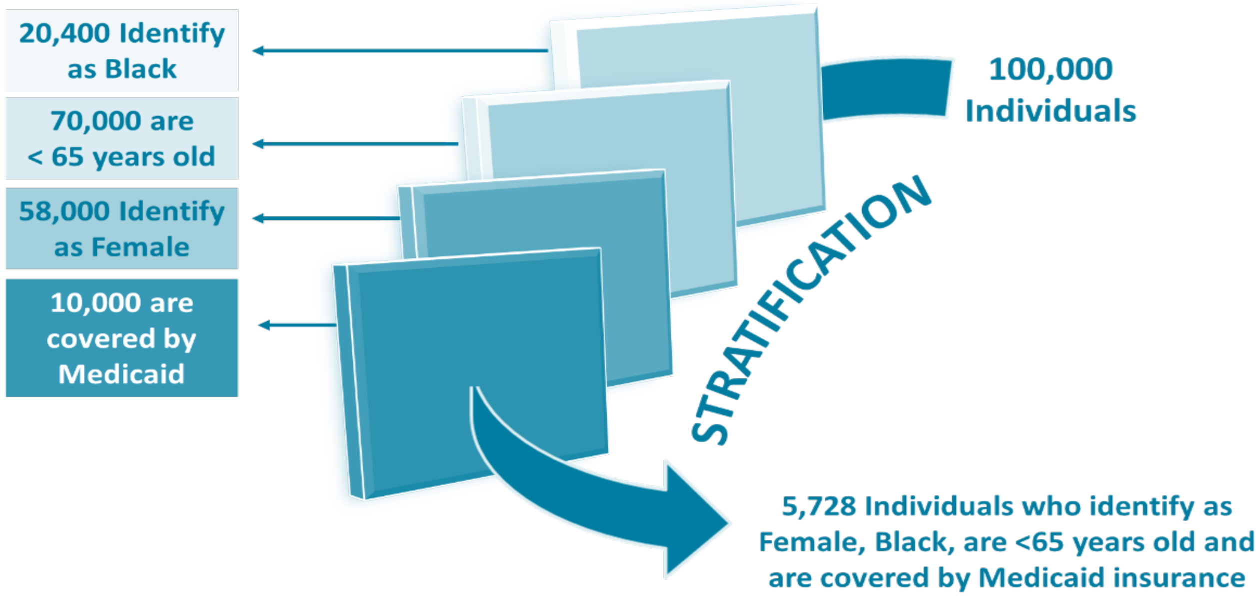
When it is impossible for a sociodemographic variable to exhibit variability based on the defined population for the selected metrics (e.g., patients assigned male sex at birth for a cervical cancer screening initiative), that variable does not need to be considered. However, avoid making the presumption of lack of population variability without supporting evidence or defined and documented irrelevance.

Age is typically categorized using five- or ten-year groupings. On some occasions, using other categories for stratifying by age will make more sense conceptually or clinically. For example, from a behavioral health perspective, certain diagnoses and risk factors present at different age ranges that do not align with ten-year groupings. Similarly, certain metrics (e.g., lead screening, developmental screening) may be more appropriate for age groupings as large as "the pediatric population." Organizations may also need to tailor age group ranges based on sex assigned at birth, as in the case when prevalence for certain diagnoses or behaviors have different age ranges for people assigned male or female. Be mindful that data collection timeframes for variables such as age may not align with the selected age parameters for outcomes under study. For example, a patient's current age is 50 years; the selected measure for the outcome being studied includes patients ages 50 years and older, however, the data is from the prior year and thus this particular patient should not be included in the data set. IHI's Age Friendly Health Systems provides guidance on metrics for adults ages 65 and older.[52]

Element 2: Stratify the Population of Focus into Subgroups. Once you have chosen sociodemographic characteristics for stratification, divide the data for the total selected patient population (that resulted from the selected health initiative focus area, population of focus, and metrics) into subgroups that correspond to each value or answer option for a given attribute. For example, if race and ethnicity is your chosen stratification attribute and values for that variable are Non-Hispanic White, Non-Hispanic Black, Non-Hispanic Asian, Non-Hispanic American Indian/Alaska Native, Hispanic/Latino All Races, Unknown, and Chose Not to Disclose, stratify the total selected patient population into these seven subgroups.

You may also consider using multi-factor stratification to allow for "simultaneous" consideration of different characteristics and inform intersectionality[53] and nuance in disparities by investigating more than one characteristic at a time (see Figure 3).

Figure 3. Multi-Factor Stratification



Element 3: Compute Metrics for Each Subgroup. To complete Step 2, compute the metric selected in Step 1 for each subgroup. To continue with the example of race and ethnicity as your selected attribute, the result of this computation is seven metrics, one for each value for race and ethnicity.

Summary of Guidance for Step 2: Determine Stratification Attributes and Compute Metrics for All Attribute Values

- When evaluating disparities for an outcome or process, stratify data by selected sociodemographic characteristics and compute the chosen metrics for each attribute value to help identify patient subgroups that are experiencing health disparities.
- At a minimum, stratify metrics by REaLD data (race, ethnicity, age, preferred language, and disability). However, there are circumstances when starting with different sociodemographic factors may be warranted, for example, based on past disparities assessments, understanding from community health needs assessments, or prior work with the community.
- Consider analyzing data using an intersectional approach facilitated by multi-factor stratification. For example, stratify within age by race and ethnicity.
- Document in detail the rationale for selecting specific sociodemographic factors for stratification and ensure that the document is accessible to those sharing your data or analyses.

STEP 3: Choose Reference Points

After selecting stratification attributes and computing metrics for each attribute value, choose a reference point for establishing whether a health disparity exists across the subgroups for the selected metric. The reference point is the specific value to which another metric is compared.[2] There is no single, best way to choose reference points that are appropriate in all situations. This guidance document provides a framework to make choices that are supported by a deliberation process and a documented rationale.

Example reference points include:

- **Metric value for the subgroup experiencing the "best result."** After stratifying the population of focus by a given socioeconomic characteristic and computing metrics for each attribute value (detailed in Step 2, Element 2), identify the subgroup that experiences the "best result" for the given metric. The "best result" may be the highest or the lowest value depending on the variable measured. Often, though not always, this subgroup is the most advantaged and best resourced group with fewer social barriers to optimal health.

  One limitation of identifying the subgroup experiencing the "best performance" is that the results may change over time. Another important consideration is ensuring appropriate documentation and disclosure of aggregated groups. For example, a large body of evidence suggests variation in cardiometabolic risk factors and outcomes across Asian ethnic subgroups.[54] These groups differ in terms of cultural practices and language, which need to be considered when interventions are designed and implemented.

- **Metric value for the subgroup assumed *a priori* to be the "most advantaged group."** The intention of such a comparison may be to highlight structural bias and discrimination, such as structural racism. However, this approaches risks reinforcing the privilege of and centering traditionally advantaged groups. It is for this reason we do not recommend this approach.

- **External performance benchmarks.** An external benchmark is one derived from data outside the patient and client population of focus. Benchmarks can be based on national, state, or other geographically-bound data (such as ZIP code or county). There may not be external benchmarks for all subpopulations of interest. In this case, organizations may consider using an external benchmark for the overall population for a given indicator. This also supports a goal of equity, setting a high target and incentivizing work to achieve that goal for all groups. Commonly used external benchmarks based on national and state data include:
  - CMS Star Ratings (https://www.cms.gov/files/document/2024-star-ratings-technical-notes.pdf)
  - Healthcare Effectiveness Data and Information Set (HEDIS)® and Consumer Assessment of Healthcare Providers and Systems (CAHPS)® measure ratings (https://www.ncqa.org/hedis/reports-and-research/ncqas-health-plan-ratings-2024/)
  - Healthy People 2030 performance targets (https://health.gov/healthypeople)
  - State-level performance targets (e.g., California Department of Healthcare Services performance targets[55] and Pennsylvania Medicaid maternity care bundled payment[56])

Keppel and colleagues[2] provide an excellent illustration of how the choice of a reference point can influence the magnitude and direction of the disparity (addressed in Step 4) and appeals to the importance of explicitly identifying and documenting the rationale for selecting the reference point. Given Keppel and colleagues' observations, there may also be a benefit to comparing multiple benchmarks in parallel.

Summary of Guidance for Step 3: Choose Reference Points

Below are examples of reference points to select for establishing whether a health disparity exists for the selected metric:

- Subgroup experiencing the "best result" for a given stratification attribute.
- The assumed "most advantaged" subgroup for a given sociodemographic characteristic. *
- External benchmark for a given attribute or population of focus.

** not recommended*

STEP 4: Quantify and Characterize Health Disparities

Measures of Disparity – Pairwise Comparisons: Once the population of focus is stratified, the metrics selected for each subgroup are computed, and a reference point or points are selected, you will need to characterize the disparity by quantifying the difference between each subgroup and the chosen reference points.

You can numerically characterize the difference between a metric score for a subgroup and the reference point in several ways. The most commonly used health disparity measures are as follows:

- **Absolute Difference:** The absolute difference between the measures for a subgroup and the chosen reference point ($Rate_1$ – $Rate_2$, where "2" is the subgroup from which the reference point is chosen).
- **Relative Rate:** The difference between the metric for a subgroup and the chosen reference point expressed as a ratio or percentage of the reference point ($Rate_1/Rate_2$, where "2" is the subgroup from which the reference point is chosen).
- **Variance:** The number of standard deviations each subgroup metric value is from the chosen reference point.

It is important to note that these measures of disparity are based on unadjusted measures and therefore do not consider confounders. In this document, we focus on simple measures and use stratification to account for some of the confounding. We also advise following guidance from Keppel and colleagues to measure in both absolute and relative terms in order to better understand the computed disparity measures, especially when making comparisons of data over time or across geographic areas, populations, or multiple indicators.[2]For example, relative differences can be very effective in showing progress and change, especially in groups with smaller sample sizes where an absolute difference may downplay intervention impact. Absolute measures can be important for estimating specific cost or material resource needs that may be tied to count of target populations.

Measures of Disparity – Composite Metrics: In addition to pairwise comparisons, organizations might consider using composite metrics and indices. Composite metrics are an approach to quantitatively summarize disparity across multiple comparisons simultaneously.[2,57] These methods can summarize across multiple metrics, multiple subcategories of the same variable, multiple equity variables, or all of the above, depending on the specific compositing calculation.[58] Such methods can support a shift towards intersectional, multi-factor evaluation, and provide a "big picture" assessment of organizational performance. While an in-depth summary of composite metrics is out of scope for this guidance document, at a broad level, such approaches can be broken into two categories:

- **Composites across all subgroups or strata:** Representative methods include the proportion of cases attributed to disparities between groups, Index of Disparity,[59] Population-Weighted Index of Disparity, and Gini Coefficient.[60] More computationally sophisticated approaches are described in the literature.[61]

- **Composites across characteristics:** Representative methods include the Health Equity Summary Score (HESS), Population Health Performance Index, Health Equity Metric, and approaches proposed by Humana, among others.[57] These four specific approaches have been compared in detail elsewhere.[58]

Composite calculations can also be extended beyond describing disparities to support equitable distribution of resources.[62] Such approaches can provide decision-makers with more control over the equity incentives inherent in quality programs, and promoting providing excellent care to all patients without incentivizing worsening care for any group.

Characterizing the Disparity Gap and Observed Significance: There are various ways to characterize the disparity gap once the disparity is measured, some more complex than others. Characterizing the identified disparity gap between subgroups can be as simple as making a pairwise comparison that one is “smaller” than, “greater” than, or “equal” to another, or that metrics “vary” by subgroup. If your goal is to make comparisons between multiple units that are part of a larger organization that have substantively different sample sizes or patient populations, consider using approaches that standardize differences to support an “apples to apples” interpretation. Examples of such approaches can be found in the literature.[63,64]

Our guidance for characterizing the significance of the observed disparity gap is to use a systematic approach that considers different types of significance: statistical significance, clinical significance, patient significance, community significance, and practical significance.

> ***Statistical significance*** relies on principles of probability and is often used in the medical field to assess associations between different groups or within a group over time. It is thought to provide for objective decision making. For example, if we observe a difference in blood pressure control between patients who self-identify as White compared with those who self-identify as Black, the statistical significance tells us how likely it is to see that difference if the two subgroups were truly the same.
>
> In health care quality improvement efforts, techniques such as those proposed in this document are, “statistically speaking,” being applied to a “population” not a “sample” from that population. The data are not intended to represent or be used to make inference about any other groups of individuals. In this respect, statistical significance is not particularly relevant.
>
> However, from another viewpoint, these ways of quantifying disparities are being applied to a health care system only as one sample from an infinite pool of possibilities, with this sample representing the others. There are many reasons this could be the case. The health system may have a transient membership, in which case, it is not possible to include everyone in the assessment; or the objective may be to create programs for patients or members who will utilize the system in the next months or years. From this perspective, statistical significance should be considered. When addressing statistical significance, ensure that team members with adequate training and experience in quantitative statistics are actively involved in calculating and interpreting statistical differences between patient population subgroups or an external reference.

Clinical significance refers to a quantifiable amount that matters for diagnosis, treatment, prognosis, or other clinical attribute of a condition or disease. While this can be subjective, it is often generated through expert opinion of the providers who treat patients with the condition. Clinical significance is important, as statistical significance can be misleading for larger health systems, where even small differences may be statistically significant given the large number of patients. However, if there is a group that has a disparity gap that is compelling in terms of clinical significance (e.g., mortality), but a very large degree of variability or uncertainty due to smaller group size, then the organization may choose to prioritize this disparity over others involving larger groups with more benign outcomes.

Patient significance refers to a disparity that is large enough to be meaningful to a specific patient or patient group. This type of subjective significance is understood through interaction with patients, their families, and patient advocacy groups.

Community significance refers to a disparity that is subjectively meaningful to the greater community, usually defined by the subgroup being studied. For example, if a disparity is observed among young Black individuals, then it is important to engage with the community of Black youth to learn what is significant to them.

There may be other instances when the disparities between specific groups are significantly meaningful to key stakeholders (e.g., clinicians, patients, community representatives). For these subjective types of significance, the stakeholders, when presented with a disparity, inform as to whether they warrant attention, regardless of statistical significance.

Use both quantitative and qualitative methods to characterize the disparity whenever possible. In addition to providing critical context, an illustrative accompanying story can also make the disparity understandable to a broad audience. However, be cautious about using stories to make decisions; anecdotes can be quite powerful, but they must be interpreted carefully. We recommend incorporating a qualitative perspective when characterizing the practical significance of an observed disparity. Qualitative methods include interviews, focus groups, and listening sessions to bring patient, family and community voices and experience into health equity work. See Appendix C for additional resources.

When considering the significance of the identified disparity, be explicit about the aspects that are objective and subjective – if there are value judgments, be transparent and call them out. We intentionally do not rank or prioritize between these four types of significance; they should be considered equally important – a perspective that may represent a culture shift to be addressed while building your organization’s culture of equity.

What about Small Groups or Subgroups? This guidance is aligned with recommendations to consider the size of the groups or subgroups and the number of persons affected in each group when assessing health disparities. To this end we suggest that, whenever possible, a confidence interval should accompany each measure of disparity to indicate the measure of uncertainty about an estimated difference.[2] If the confidence interval is wide and includes 0 (or no difference), then we might conclude that there is little evidence of a true difference.

Computing a confidence interval around the chosen reference point estimates provides a range of values that are reasonably compatible with the data, given the statistical assumptions used to compute the interval. The values within this interval can then further be deemed important or unimportant based on both statistical significance and practical significance. There are also more sophisticated statistical techniques to address small groups or subgroups, including non-parametric tests, sometimes called distribution-free tests (e.g., Fisher's Exact, Kaplan Meier curves, Kruskal-Wallis).[65–67]

For small group sizes, organizations can also use qualitative methods to assess disparities. If the group experiencing a disparity contains less than 10 individuals, focus groups or individual interviews can contribute to a better understanding of the disparity as well as the underlying cause.[68–71]

In some cases, an organization may not be able to statistically quantify a disparity gap due to group size, but this is not a reason to overlook or ignore the potential disparity. For example, some patient groups may experience persistent and severe disparities but their small group size prohibits identification of statistically significant differences. In such cases, consider identifying external data from sources such as municipal or national data sets that might lend support to the hypothesis that a disparity exists. Tracking the data from year to year, over multiple years, or using process measures as a proxy for outcome measures might also illuminate important new information for such groups. Finally, also utilize the three types of practical significance to inform the analysis.

Summary of Guidance for Step 4: Quantify and Characterize Health Disparities

- The most common measures of health disparity are absolute difference, relative ratio, and statistical variance.
- There are four types of significance of observed health disparities and all are important to consider: statistical significance, clinical significance, patient significance and community significance.
- When addressing statistical significance, ensure that team members with adequate training and experience in quantitative statistics are actively involved in the analytics.
- Do not assume that because a subgroup is small it prohibits the exploration of potential disparities experienced by that group. The ethical mandate to intervene does not require a large sample size.
- Take the following actions to characterize identified disparities:
  - Identify all five types of significance for the identified disparity, minimizing any normative judgments about the identified gaps. Be explicit about value judgments and who decides what is considered a gap worth prioritizing for action.

  - Discuss the significance of disparities as a team, ensure that multiple perspectives are gathered, elicit perspectives from outside of the team, and document this discernment.

- To fully assess meaningful differences and characterize the significance of equity gaps, consult directly with patients and community representatives.

- Many organizations following these steps will identify more inequities at the end of step 4 than they have the resources to address. If faced with that situation they can refer back to the factors in table 3 (step 1) to narrow down their options to a manageable number for intervention.

Example Application of the Four-Step Approach

STEP 1: Identify and Prioritize Health Equity Initiative Focus Area, Population of Focus, and Metrics

Impact Health (a hypothetical health system) identified ambulatory quality, with a specific focus on blood pressure control, as a priority health equity initiative. Blood pressure control has a significant health impact, given the high prevalence of hypertension both within the health system's population and nationally, and the serious consequences if left unmanaged. This metric also aligned internally with the ambulatory quality team's priorities and externally with established measures such as HEDIS and public health goals. Importantly, the health system identified opportunities to make a meaningful impact by addressing clinical practice and improving patient engagement, while also recognizing the long-term business case related to patient well-being, health outcomes, and system performance.

To support this equity initiative, Impact Health relies on several key data sources, including its EHR, accountable care organization (ACO) roster, and ambulatory quality reporting system (AQRS). The ambulatory quality team applied inclusion and exclusion criteria based on the HEDIS defined blood pressure control metric. Careful attention is given to data quality, feasibility, and limitations – for example, ensuring appropriate exclusions (such as deceased patients or those without continuous enrollment) and clearly defining the active patient population, which may differ by payor type (e.g., HMO, PPO, fee-for-service). The health system also reevaluated its definition of "active" or impaneled patients to avoid unintentionally excluding disengaged individuals who might benefit most from outreach. Finally, patient attribution to internal clinics, foundations, and specific primary care panels ensures accurate measurement and targeted intervention across the approximately 1.5 million patients included in the ambulatory quality denominator.

STEP 2: Determine Stratification Attributes and Compute Metrics for All Attribute Values

To examine disparities in blood pressure control among patients ages 18 to 85 with hypertension, Impact Health selected race and ethnicity as their stratification attribute. A plethora of data and studies has shown that racial disparities in blood pressure control have persisted for decades, making this an important sociodemographic factor for consideration. For each race and ethnicity category, blood pressure control, defined as systolic blood pressure of <140 mm Hg and diastolic blood pressure of <90 mm Hg among persons with hypertension, was computed.

In addition, Impact Health selected sex assigned at birth and socioeconomic status, operationalized as median household income (whether above or below two times the federal poverty line) from geocoded patient addresses at the census track level to combine with race and ethnicity for an intersectional analysis. These sex differences and socioeconomic disparities in blood pressure control have also been well documented.

STEP 3: Choose Reference Points

Upon examining blood pressure control rates among patients ages 18 to 85 with hypertension in each race and ethnicity subgroup, Impact Health identified Asian, non-Hispanic patients as having the “best results” defined in this case as the subgroup having the highest percentage of individuals with hypertension that have their blood pressure under control. This subgroup was established as the internal reference point. The team also designated an external benchmark from which to assess disparity: the 90th percentile for the NCQA HEDIS metric. This external benchmark was to allow for comparisons outside of the system.

STEP 4: Quantify and Characterize the Disparity

To quantify the disparity in blood pressure control for each race and ethnicity subgroup compared to the non-Hispanic Asian group determined as having the “best results” and the 90th percentile for the HEDIS metric, the absolute difference in blood pressure control between each subgroup and these reference groups was computed. The largest disparity measured by absolute difference was observed between the reference points and blood pressure control in the Black, non-Hispanic subgroup.

An intersectional analysis[53] using a comparable data set that combined race and ethnicity, sex assigned at birth, and socioeconomic status assessed suboptimal performance by calculating the proportion of patients in each subgroup who did not meet blood pressure control goals and compared these figures to the overall population using an “outcome equity ratio,” where values over one indicated inequity. This method further revealed that disparities for the non-Hispanic Black patients persisted regardless of sex or socioeconomic status.

The four types of significance for the size of this gap were considered. Impact Health relied on its quality and patient safety analytics teams, supported by a robust research enterprise and academic partnerships, to compute statistical significance. Clinical significance was ascertained through the involvement of clinician leaders and clinical improvement communities. Patient significance was evaluated by interviewing members of their patient and family advisory council. Assessing community significance by building relationships and connecting with the community is in progress but was not considered in this case.

Based on this comprehensive analysis, improving blood pressure control among Black, non-Hispanic patients with hypertension was identified as Impact Health's health equity focus.

Conclusion

Quantifying health equity gaps by measuring disparities is an essential first step in advancing quality and patient safety in health care. Without standardized metrics, it is nearly impossible to identify the true scope and drivers of inequities, making targeted interventions less effective and perpetuating gaps in outcomes for marginalized populations. Addressing these gaps systematically relies on building a solid foundation of standard, comparable metrics that enable health care organizations to identify inequities, develop comprehensive interventions to mitigate those inequities, and track progress toward improved outcomes.

By using the Four-Step Approach to Systematically Evaluate Health Disparities described in this paper, health care organizations can move toward a cohesive and measurable approach to systematically evaluate health disparities in their efforts to advance health equity. The four-step approach provides tools and approaches to measure disparities consistently, paving the way for inter-institutional benchmarking, collaborative learning, and ultimately, national progress on health equity.

Taking this critical first step toward standardizing the measurement and tracking of health care disparities is an imperative for driving long-term improvement. This data will help identify gaps, prioritize interventions, and enable organizations to hold themselves, and their partners, accountable for the quality and equity of the care they provide.

At the start of the 21st century, the National Academy of Medicine articulated the six core domains of health care quality: safety, timeliness, effectiveness, efficiency, patient-centeredness, and equity.[72] Equity has been the "forgotten domain" for far too long. The approach this paper recommends for systematically identifying and evaluating disparities will bring this forgotten priority to the forefront. Only by knowing the true scope of the inequities in health and health care will we be able to ensure that everyone gets the best, most appropriate care.

Appendices

APPENDIX A

Additional Examples of Health Equity Quality Standards and Guidance

The National Committee for Quality Assurance (NCQA) Health Equity Accreditation and Health Equity Accreditation Plus programs provide guidance for health systems, health plans and other care organizations in advancing health equity.[26] NCQA developed the tool “Advancing Health Equity: A Recommended Measurement Framework for Accountability in Medicaid” to guide the selection and use of quality metrics to support equity accountability.[73] While focused on the Medicaid use case, the model’s seven measurement domains function broadly and can be referenced when evaluating the types of measures to be considered for equity evaluation. The companion issue brief discusses different technical approaches to compositing performance on multiple equity metrics into singular summary scores.[58]

The National Quality Forum (NQF) has created a roadmap for promoting health equity and eliminating disparities that focuses on “Four I’s”: Identify, Implement, Invest, and Incentivize.[36] NQF calls for the collection of “social risk factor data” such as housing instability, food insecurity, gender identity, sexual orientation, language, and continuity of insurance coverage; to use and prioritize stratified health equity outcomes measures; and prioritizing measures in the domains of Equitable Access to Care and Equitable High-Quality Care for accountability. They further recommend that the health equity metrics are linked to accreditation programs being offered by organizations such as NCQA.

The Institute for Healthcare Improvement (IHI) recommendations pertaining to achieving health equity include “deploying specific strategies to address the multiple determinants of health on which health care organizations can have a direct impact.”[1] The potential effectiveness of these strategies relies on an understanding of where disparities exist, which requires “accurate collection of race, ethnicity, age, and language (REAL) data.” Once REAL (now “REaLD”) data is collected, a health system needs to analyze it to identify disparities. As is the case with many other recommendations, IHI appeals for data collection and analysis but does not operationalize the details.

The Robert Wood Johnson Foundation’s health equity work emphasizes the need for a vision of health care transformation couched in five foundational principles: mission, equity, community, power, and trust. The Raising the Bar framework speaks to the role of providers, employers, partners, and advocates in this transformation and the need for trust and sharing power in relationships and partnerships.[74]

The US Department of Health and Human Services Office of Minority Health National Standards created National Standards for Culturally and Linguistically Appropriate Services (CLAS) in Health and Healthcare as a blueprint to advance health equity, improve quality, and help eliminate health care disparities.[14,75] OMH CLAS Standard 11 requires health and health care organizations such as hospitals, public health departments, ambulatory care centers, and clinics to collect and maintain “accurate and reliable” demographic data to monitor and evaluate the impact of CLAS on health equity. This standard, however, does not provide any guidance of the specifics of these demographic data.

AHIP highlights the importance of “robust, accurate, actionable and standardized demographic patient data” aligned at the “ecosystem level across public and private health care stakeholders.”[76] AHIP’s efforts in convening such stakeholders to develop a set of demographic data standards resulted in specific recommendations regarding questions and response sets to capture race, ethnicity, language preference, sexual orientation, gender, veteran status, and spiritual beliefs.

American Hospital Association Health Equity Transformation Assessment (HETA) is an assessment of an organization’s health equity readiness and opportunities in six key areas or “levers,” which represent key areas where interventions can have a significant impact on reducing health disparities: 1) Leadership and Governance; 2) Workforce Diversity and Training; 3) Data Collection and Analysis; 4) Patient and Community Engagement; 5) Care Delivery and Access; and 6) Policy and Advocacy.[77]

APPENDIX B

Best Practices for Institutionalizing Fair and Inclusive Health Care Practices and Measuring Progress

Instructions

The approach described below guides organizations in developing a strategy to maximize the chances of successfully identifying, reducing, and eliminating health and health care inequities. Implementing the strategy and tracking progress will provide key data to organization leadership regarding the status of the organization’s equity efforts.

In addition to addressing the advancement of equity for patients and health plan participants, this practical guidance also addresses equity, inclusion, and belonging for the organization’s employees. Reducing the cognitive, emotional, motivational, and efficiency burdens resulting from inequities internal to the organization will improve employees’ abilities to address the health and health care inequities faced by patients.

Elements

There are five elements that contribute to “Institutionalizing Fair and Inclusive Health Care Practices”:

- **Strategic Planning**
- **Policy**
- **Partnering with Patients and Communities**
- **Employee Training and Support**

- **Patient Data** (as applicable to health care delivery organizations that collect patient data for health care quality monitoring and improvement activities).

Each element comprises individual activities. Some activities are required because they are fundamental or are ideally accomplished earlier in the change process. Those activities are highlighted with a red asterisk (*). Not all activities are applicable to non-health care delivery organizations. The overall number of required activities increases gradually over time to encourage progress. Organizations can choose which activities to add over time. This allows flexibility to accommodate shifting organizational capacity and priorities.

Strategic Planning

Create a multi-year strategic plan for your organization that is designed to advance its health equity work. The strategic plan should include the minimum required activities highlighted with a red asterisk (*). Include additional activities beyond those recommended, if feasible.

1. *Conduct an **organization-wide assessment** utilizing a tool or resource designed for that purpose. In an organization that nurtures fair and inclusive health care practices, all employees – individually and collectively – identify and reflect on the organizational dynamics that reproduce inequities and engage in activities to transform them.
2. *Create and implement a **strategic plan** to advance fair and inclusive practices. Ensure that the strategic plan's design and content fully integrates:
    - Key definitions: fair and inclusive health care practices, equity, disparity, inequity, health equity, health care equity, equality, and other concepts that the organization deems important for the health of their patient populations and a well-functioning workforce (e.g., racism, antiracism, diversity, inclusion, and belonging).
    - Key theories and frameworks that the organization deems important to guide planning, implementation, and evaluation. Examples include, but are not limited to, targeted universalism, critical theory, relational cultural theory, and intersectionality.
    - Active partnership with patients and/or representatives from community-based organizations in your organization's service areas. The active partnership strategy should include:
        - An assessment of the current quality of the partnership(s) utilizing the Spectrum of Community Engagement (marginalization, placation, tokenization, voice, delegated power, community/patient ownership) or a similar tool that supports increasingly shared/ceded power to patients and community.
        - A plan to advance the quality of the partnership(s) and increase the power of patients and community in the partnership over time.
    - Results of the equity assessment (see #1, above).

- Strategies and tactics primarily focused on identifying and addressing historical, economic, political, social, and cultural forces that impact the organization's operations and that cause inequities, in addition to individual-level causes.
- Incorporating an equity lens into quality and quality improvement activities, processes, tracking, and reporting.
- Systems that hold organization leadership accountable for making measurable positive change to advance equity (e.g., compensation).
- Specific, measurable, achievable, relevant, and time-bound (SMART) goals whenever possible.

3. ***Report on strategic plan** implementation, assessment, and other key metrics two or more times per year to one of the following entities:
    - Board
    - Senior Leadership (including clinical leaders)
    - The organization broadly (e.g., quality staff, front-line staff, managers, directors, providers, committees and departments or service lines)
    - Patients and families (if applicable, e.g., Patient and Family Advisory Council members)
    - Community partners or stakeholders
    - Organization's website

    Add a minimum of one entity every two years that will receive strategic plan reports and key metrics, until all six entities are receiving regular reports.
4. *Require **every team/unit of the organization to establish annual goals to ensure equitable,** fair, and inclusive practices and practices to advance equitable health care (if applicable), a strategy to achieve them, and accountability processes.
5. Embed a commitment to health equity for patients and employees into the organization's **mission, vision, and value statements.**
6. Embed specific duties and activities to advance equity for patients and employees into all **employee job descriptions.**
7. **Establish a team to implement the strategic plan** which models fairness, inclusivity, and equity for the organization. Support the implementation team financially and logistically (e.g., space, protected time, supplies, regular and ongoing training opportunities).
8. ***Regularly update the strategic plan** a minimum of every three years, **adding** two or more **new activities** from any of the elements, or combination of elements, a minimum of every three years.

Policy

1. *Create and implement a plan to ensure that all **new and revised organization policies are developed and written utilizing an equity lens.**
2. **Assess all active policies** utilizing an equity lens and update them accordingly to maximize fairness and inclusivity. Establish a goal date to complete the assessment and update of active policies.

Partnering with Patients and Communities

The following two activities are required within the first three years for organizations providing health care services directly to patients (e.g., hospitals, community health centers).

1. *Create and sustain authentic **partnership with patients and community-based organizations** to prioritize which health and health care inequities to address.
2. ***Partner with non-academic and non-governmental community organizations** experienced in addressing and mitigating historical, economic, political, social, and cultural forces that create and sustain inequities. This will:
   - Build the organization's capacity to improve the quality and level of power sharing in patient and community partnerships.
   - Provide training and capacity building to view individuals and communities living with inequities through a strengths-based perspective – valuing their resilience, knowledge, and lived experiences as critical for both transforming the forces and systems responsible for inequities and imagining new ones.
   - Take action to recover and document the patients' and communities' historical experiences with the organization (i.e., quality of the relationship and interactions) and the broader culture to understand the etiology of oppression and their lived experiences of oppression.

All non-health care delivery organizations (e.g., health plans or pharmaceutical and device companies are required to establish and formally document goals and an implementation plan to assess and improve the organization's role in **community-level health equity and/or equitable community development** via one or more of the following strategies:

- Supplier and Vendor Selection
- Local Purchasing
- Local Hiring Pathways
- Community Investment

Additional Activities

1. *Create and sustain authentic **partnerships with patients living with health and health care inequities prioritized for elimination** to:
   - Conduct root cause analyses of health and health care inequities;

- Develop care transformation interventions to address the root causes; and
- Evaluate the progress of reducing and eliminating the identified inequities.

2. *Establish and formally document goals and an implementation plan to ensure that the organization's **inpatient and/or outpatient payer mix** reflects the payer mix in the surrounding communities and/or service area.
3. Establish specific, measurable, achievable, relevant, and time-bound goals, for all positions throughout the organization's hierarchy, to create and utilize hiring selection pools that are inclusive of individuals from all groups.

Employee Training and Support

1. *Provide **training** to all levels of employees throughout the organization's hierarchy that goes beyond cultural competence and humility. Include, at minimum, one of the following topics based on your organization's equity priorities. Add a minimum of one additional topic every two years**:**

    - Knowledge and skills to incorporate equity actions into daily work and processes
    - Knowledge and skills to identify and mitigate historical, economic, political, social, and cultural forces that create and sustain inequities
    - Cross-cultural communication skills
    - Conflict/disagreement resolution skills
    - Understanding and implementation of Culturally and Linguistically Appropriate Services (CLAS) Standards
    - Knowledge and skills to provide culturally responsive, relevant, and high-quality care and welcoming environments for all employee and patient populations; including how to take additional steps that might be necessary for patients living with specific health and health care inequities, including but not limited to: rural populations, patients with disabilities, older patients, immigrant populations and other patients with minoritized identities

    Establish one or more goals for the percentage or number of employees trained and the organizational spread of the training (e.g., levels of organization hierarchy, number of departments/teams/areas).

    - Affirm or establish new training goals a minimum of every three years so that more employees are trained (e.g., higher percentage) and the spread of training within the organization is expanded over time (e.g., more departments/areas/teams).

    Develop and implement strategies to support achieving the organization's training goals and processes to evaluate and report progress.

2. *After initiating #1, progress to **focused training by business and job function** to assist employees in applying an equity lens to their standard daily work, operational processes, and systems.
3. **Assess and measure belonging, equity, and inclusion** a minimum of every two years via standardized employee surveys (e.g., Institute for Healthcare Improvement (IHI) Equity Assessment).
4. Ensure that the training curriculum and processes incorporate relational cultural theory (RCT) or a similar theoretical and practical approach to **facilitate building skills to establish growth-fostering relationships** as evidenced by (1) feelings of zest or energy; (2) increased sense of worth; (3) increased awareness of the self and others; (4) the ability to take action both in relationships and outside of them; and (5) the desire for more connection.
5. **Appoint (or hire) and adequately resource an implementation team** to model, implement, and advance the organization's strategic plan to create fair and inclusive health care practices. Can be paired with a voluntary or incentivized health equity ambassador or champion program.
6. Establish and formally document goals and an implementation plan to assess and improve **employee engagement, inclusion, and belonging** – both overall and stratified by key demographics deemed important by your organization. Options include, but are not limited to race, ethnicity, sex, position/title, pay-grade, language, sexual orientation, gender identity, and age.
7. Establish and formally document goals and an implementation plan to assess and improve employee **pay equity** between the highest and lowest paid employees at the organization.
8. Establish and formally document goals and an implementation plan to establish (or improve) an **employee resource group (ERG) program.** Ensure that the ERG program has adequate infrastructure. Program support should include annual (or more frequent) feedback and reporting mechanisms from ERG participants to senior leadership regarding the strengths of the program and opportunities to improve it.

Patient Level Data

This element is applicable only to health care delivery organizations that collect patient data for health care quality monitoring and improvement activities.

1. *Build the capability for collecting valid and reliable **patient demographic data** as described in Step 2 below. If your organization does not collect one or more of the demographic categories, add missing categories at a minimum rate of 1 category every four years.
2. *Provide ongoing and regularly recurring training and supportive supervision to employees responsible for **patient demographic data** collection.

3. Develop and implement **systems to share patient-level quality and outcome data** with care team members.
4. Define minimum standards for data quality and **assess the quality** of patient demographic **data** including completeness and reliability at regular recurring intervals.

APPENDIX C

Resources for Assessing Community Significance and Best Practices for Community and Patient Engagement

Community Advisory Boards (CAB) provide critical insight that is essential for organizations to understand community significance and to develop a complete picture of the health disparities and health equity needs of populations. CABs may consist of persons with lived experience (including patients), community-based organizations, policymakers, and other community or grassroots leaders. Patients and community members with authentic power and governance authority represent a shift toward a justice-oriented process that centers the voice and experience — and therefore the expertise — of those who experience the disparities we aim to eliminate.

- Movement Strategy Center's "The Spectrum of Community Engagement to Ownership" provides detailed explanation and guidance.[78]
- The University of California at San Francisco Benioff Homelessness and Housing Initiative developed a toolkit[79] to guide users in designing and implementing community-engaged work, including practical methods, definitions, and insights for best practices stemming from two years of engagement work with the unhoused community in San Francisco.
- The Medical University of South Carolina's Center for Community Health Partnerships lays out best processes for forming and sustaining CABs[80] for successful academic-community partnerships when conducting community-based participatory research.
- The Urban Institute's "Tools and Resources for Project-Based Community Advisory Boards"[81] offers additional practical teachings such as how to assess readiness to form a CAB, compensation of CAB members, and examples of successful partnership with CABs.

Effective CABs can support members of the health care ecosystem in understanding and prioritizing many of the components outlined above, notably significance and issues pertaining to sample size, metric selection, and governance. However, in order to be most effective and justice-oriented, health systems and other members of the health care ecosystem must be intentional in forming CABs and take time to explore organizational leadership's readiness to engage in meaningful partnerships with the community.

Health care organizations can also partner with patient advocacy groups in efforts related to health equity and determining community significance. Patients for Patient Safety is an example of a patient advocacy organization that focuses specifically on reducing harm in health care and has a specific goal to engage the community in their efforts.

APPENDIX D

Worksheet

The worksheet helps guide users through each of the four steps in a structured and accessible way. While the steps offer a helpful starting point, they are not intended to constrain critical thinking and reflection. In fact, Step 1 of the four-step approach requires thoughtful analysis, dialogue, and context-specific insight that goes beyond what a worksheet can capture. Teams are encouraged to adapt the worksheet as needed to support deeper exploration and clarity to reflect the specific context of their organizations. See the example completed worksheet (Fig. D-2) as a guide.

Figure D-1: Worksheet

Fig D-2: Completed Worksheet

STEP 1 SELECT HEALTH EQUITY INITIATIVE FOCUS AREA

Ambulatory Care

POPULATION OF FOCUS

Active 18+ with hypertension

METRIC (M) (VARIABLE VALUES (m))

% in control of blood pressure

STEP 2 SELECT STRATIFICATION ATTRIBUTE (S)

Race and Ethnicity

(ATTRIBUTE VALUES(s1, s2,...sn))

A = Black, Non-Hisp.; B = Hispanic

C= White, Non-Hisp.; D = Asian, Non-Hisp.

GROUP BY ATTRIBUTE VALUE (s_i)

COMPUTE METRIC FOR EACH SUBGROUP (M_{si})

% in control = (% m = 1)

M_A	M_B	M_C	M_D
65.05	67.65	70.13	71.31

STEP 3 SELECT REFERENCE POINT (and GROUP)

"Highest/Best" = 71.31 (D. Asian, Non-Hisp.)

STEP 4 SELECT MEASURE(S) OF DISPARITY (MD1, MD2,...MDn)

Absolute Difference; Relative Rate

COMPUTE MEASURE OF DISPARITY

		$MD1_A, MD2_A, \ldots MDn_A$	$MD1_B, MD2_B, \ldots MDn_B$	$MD1_C, MD2_C, \ldots MDn_C$	$MD1_D, MD2_D, \ldots MDn_D$
Absolute Difference	MD1	65.05 - 71.31 = -6.26	67.65 - 71.31 = -3.66	70.13 - 71.31 = -1.18	71.31 - 71.31 = 0
Relative Rate	MD2	65.05 / 71.31 = 0.91	67.65 / 71.31 = 0.95	70.13 / 71.31 = 0.98	71.31 / 71.31 = 1
	...				
	MDn				

References

1. Wyatt R, Laderman M, Botwinick L, Mate K, Whittington J. Achieving Health Equity: A Guide for Health Care Organizations | Institute for Healthcare Improvement. Published online 2016. Accessed October 3, 2024. https://www.ihi.org/resources/white-papers/achieving-health-equity-guide-health-care-organizations

2. Keppel K, Pamuk E, Lynch J, et al. Methodological issues in measuring health disparities. *Vital Health Stat 2*. 2005;(141):1-16.

3. Asada Y. A summary measure of health inequalities for a pay-for-population health performance system. *Prev Chronic Dis*. 2010;7(4):A72.

4. Klein R, Huang D. Defining and measuring disparities, inequities, and inequalities in the Healthy People initiative. Published online 2010.

5. Braveman P, Arkin E, Orleans T, Proctor D, Plough A. What is Health Equity? RWJF: Robert Wood Johnson Foundation. May 1, 2017. Accessed October 3, 2024. https://www.rwjf.org/content/rwjf-web/us/en/insights/our-research/2017/05/what-is-health-equity-.html

6. Chin MH, Clarke AR, Nocon RS, et al. A Roadmap and Best Practices for Organizations to Reduce Racial and Ethnic Disparities in Health Care. *J Gen Intern Med*. 2012;27(8):992-1000.

7. Cook SC, Todić J, Spitzer S, et al. Opportunities for psychologists to advance health equity: Using liberation psychology to identify key lessons from 17 years of praxis. *American Psychologist*. 2023;78(2):211-226.

8. Advancing Health Equity: Leading Care, Payment, and Systems Transformation. Accessed November 1, 2024. https://advancinghealthequity.org/

9. Clarke AR, Goddu AP, Nocon RS, et al. Thirty Years of Disparities Intervention Research: What Are We Doing to Close Racial and Ethnic Gaps in Health Care? *Medical Care*. 2013;51(11):1020-1026.

10. Thorndike AL, Peterson L, Spitzer S, et al. Advancing health equity through partnerships of state Medicaid agencies, Medicaid managed care organizations, and health care delivery organizations. *Front Public Health*. 2023;11:1104843. doi:10.3389/fpubh.2023.1104843

11. Todic´ J, Cook SC, Spitzer-Shohat S, et al. Critical Theory, Culture Change, and Achieving Health Equity in Health Care Settings. *Academic Medicine*. 2022;97(7):977-988.

12. Cook SC, Goddu AP, Clarke AR, Nocon RS, McCullough KW, Chin MH. Lessons for reducing disparities in regional quality improvement efforts. *Am J Manag Care*. 2012;18(6 Suppl):s102-105.

13. Rise to Health Coalition: Health Care Organizations Actions and Activities Resources. Published online November 2024. Accessed October 2, 2025. https://www.risetohealthequity.org/healthcare-organizations-actions-and-activities-resources

14. Health Equity Measures and Standards. Accessed October 3, 2024. https://hanys.askflorence.org/Data/healthEquity/index

15. MassHealth. MassHealth Hospital Quality and Equity Incentive Program (HQEIP) | Mass.gov. Accessed May 5, 2025. https://www.mass.gov/info-details/masshealth-hospital-quality-and-equity-incentive-program-hqeip

16. Hospital Equity Measures Reporting Program. HCAI. Accessed October 3, 2024. https://hcai.ca.gov/data/healthcare-quality/hospital-equity-measures-reporting-program/

17. Comprehensive Quality Strategy 2023-2026. Published online August 2024. Accessed October 21, 2024. https://www.michigan.gov/-/media/Project/Websites/mdhhs/Assistance-Programs/Medicaid-BPHASA/Other-Prov-Specific-Page-Docs/Quality_Strategy_2015_FINAL_for_CMS_112515.pdf

18. Compendium of Medicaid Managed Care Contracting Strategies to Promote Health Equity. Published online April 2024. Accessed October 21, 2024. https://www.shvs.org/wp-content/uploads/2024/04/Compendium-of-Medicaid-Managed-Care-Contracting-Strategies-to-Promote-Health-Equity_April-2024.pdf

19. Incentivizing Health Equity through Quality Measures Working Paper Review of State Medicaid Strategies. Published online April 11, 2024. Accessed October 21, 2024. https://www.oregon.gov/oha/HPA/ANALYTICS/MetricsScoringMeetingDocuments/4.-Working-paper-Incentivizing-health-equity-in-other-states-%28updated-04.11.2024%29.pdf

20. Davis A, Batra N, Dhar A, Bhatt J, Gerhardt W, Rush B. US health care can’t afford health inequities. Deloitte Insights. June 22, 2022. Accessed October 3, 2024. https://www2.deloitte.com/us/en/insights/industry/health-care/economic-cost-of-health-disparities.html

21. LaVeist TA, Pérez-Stable EJ, Richard P, et al. The Economic Burden of Racial, Ethnic, and Educational Health Inequities in the US. *JAMA*. 2023;329(19):1682-1692.

22. Helwig A. Comparing Major Health Equity Frameworks & Measures | RTI Health Advance. RTI Health Advance. January 13, 2023. Accessed October 3, 2024. https://healthcare.rti.org/insights/comparing-major-health-equity-frameworks-measures

23. Making And Proving The Business Case For Investing In Health Equity. RTI Health Advance. May 2, 2023. Accessed October 3, 2024. https://healthcare.rti.org/insights/business-case-investing-in-health-equity

24. Chin MH. Creating the Business Case for Achieving Health Equity. *J Gen Intern Med*. 2016;31(7):792-796.

25. Cordina J, Greenfield M, Purcell L, Stueland J. How employers can help advance health equity in the workplace | McKinsey. McKinsey & Company. 2021. Accessed October 3, 2024. https://www.mckinsey.com/industries/healthcare/our-insights/income-alone-may-be-insufficient-how-employers-can-help-advance-health-equity-in-the-workplace

26. NCQA’s Health Equity Accreditation Programs. Published online 2023. Accessed October 4, 2024. https://www.ncqa.org/programs/health-equity-accreditation/

27. R3 Report Issue 38: National Patient Safety Goal to Improve Health Care Equity. Accessed November 1, 2024. https://www.jointcommission.orghttps://www.jointcommission.org/standards/r3-report/r3-report-issue-38-national-patient-safety-goal-to-improve-health-care-equity/

28. Bailey ZD, Feldman JM, Bassett MT. How Structural Racism Works — Racist Policies as a Root Cause of U.S. Racial Health Inequities. Malina D, ed. *N Engl J Med*. 2021;384(8):768-773.

29. Bailey ZD, Krieger N, Agénor M, Graves J, Linos N, Bassett MT. Structural racism and health inequities in the USA: evidence and interventions. *The Lancet*. 2017;389(10077):1453-1463. d

30. Bovey WH, Hede A. Resistance to organisational change: the role of defence mechanisms. *Journal of Managerial Psychology*. 2001;16(7):534-548.

31. Hughes M. Do 70 Per Cent of All Organizational Change Initiatives Really Fail? *Journal of Change Management*. 2011;11(4):451-464.

32. Pettigrew AM. Longitudinal Field Research on Change: Theory and Practice. *Organization Science*. 1990;1(3):267-292.

33. Tsoukas H, Chia R. On Organizational Becoming: Rethinking Organizational Change. *Organization Science*. 2002;13(5):567-582.

34. Pelletier LR, Beaudin CL, eds. *HQ Solutions: Resource for the Healthcare Quality Professional*. Fifth edition. Jones & Bartlett Learning; 2024.

35. Jacobs DB, Schreiber M, Seshamani M, Tsai D, Fowler E, Fleisher LA. Aligning Quality Measures across CMS — The Universal Foundation. *N Engl J Med*. 2023;388(9):776-779.

36. NQF: A Roadmap for Promoting Health Equity and Eliminating Disparities: The Four I's for Health Equity. Published online September 2017. Accessed October 3, 2024. https://www.qualityforum.org/Publications/2017/09/A_Roadmap_for_Promoting_Health_Equity_and_Eliminating_Disparities__The_Four_I_s_for_Health_Equity.aspx

37. Geppert J, Rabel B, Warmbrodt I. Data Requirements for Valid Quality Measurement. In: Pines JM, Burstin H, Thorpe JH, eds. *Quality Measurement in Healthcare*. 1st ed. Wiley; 2025:61-75.

38. Boyd AD, Gonzalez-Guarda R, Lawrence K, et al. Equity and bias in electronic health records data. *Contemporary Clinical Trials*. 2023;130:107238.

39. Tan-McGrory A, Bennett-AbuAyyash C, Gee S, et al. A patient and family data domain collection framework for identifying disparities in pediatrics: results from the pediatric health equity collaborative. *BMC Pediatr*. 2018;18(1):18.

40. Cook LA, Sachs J, Weiskopf NG. The quality of social determinants data in the electronic health record: a systematic review. *Journal of the American Medical Informatics Association*. 2021;29(1):187-196. doi:10.1093/jamia/ocab199.

41. House TW. Executive Order On Advancing Racial Equity and Support for Underserved Communities Through the Federal Government. The White House. January 21, 2021. Accessed October 3, 2024. https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/20/executive-order-advancing-racial-equity-and-support-for-underserved-communities-through-the-federal-government/

42. Race and Ethnicity Patient Self-Identification. Published online August 2022. Accessed October 3, 2024. https://hcai.ca.gov/wp-content/uploads/2022/08/race-ethnicity-sample-data-collection-tool.pdf

43. Race and Ethnicity Code Set Version 1.0. Published online March 2000. Accessed November 1, 2024. https://www.cdc.gov/phin/media/pdfs/2024/09/CDC-Race-Ethnicity-Background-and-Purpose_Pgs-1-to-3.pdf

44. Revisions to OMB's Statistical Policy Directive No. 15: Standards for Maintaining, Collecting, and Presenting Federal Data on Race and Ethnicity. Federal Register. March 29, 2024. Accessed October 3, 2024. https://www.federalregister.gov/documents/2024/03/29/2024-06469/revisions-to-ombs-statistical-policy-directive-no-15-standards-for-maintaining-collecting-and

45. Race and National Origin. National Institutes of Health (NIH). August 11, 2022. Accessed October 3, 2024. https://www.nih.gov/nih-style-guide/race-national-origin

46. OMB Publishes Revisions to Statistical Policy Directive No. 15: Standards for Maintaining, Collecting, and Presenting Federal Data on Race and Ethnicity | OMB. The White House. March 28, 2024. Accessed October 3, 2024. https://www.whitehouse.gov/omb/briefing-room/2024/03/28/omb-publishes-revisions-to-statistical-policy-directive-no-15-standards-for-maintaining-collecting-and-presenting-federal-data-on-race-and-ethnicity/

47. Harris W, Shapiro A, Lawson M, Meyer D, Iyasere J. We Ask Because We Care.

48. Irving, S., Ahmed, S., Burns, S., Jensen, E., Koo, G., Pratt, B., and Sivinski, R. *Race and Ethnicity Data Tools*. Federal Committee on Statistical Methodology; 2023.

49. Haley JM, Allen EH, Nelson T. Using Race and Ethnicity Data to Advance Health Equity. Published online October 2023.

50. Imai K, Olivella S, Rosenman ETR. Addressing census data problems in race imputation via fully Bayesian Improved Surname Geocoding and name supplements. *Sci Adv*. 2022;8(49):eadc9824.

51. Brown S, Stern A, Bullied R, Watson J. Considering Ethics and Empathy in Imputing Race and Ethnicity to Expand the Availability of Disaggregated Data. Published online August 27, 2021. Accessed October 21, 2024. https://www.urban.org/urban-wire/considering-ethics-and-empathy-imputing-race-and-ethnicity-expand-availability-disaggregated-data

52. A Core Measure Set For Age-Friendly Health Care Delivery. Published online September 13, 2024. Accessed October 3, 2024. https://www.healthaffairs.org/content/forefront/core-measure-set-age-friendly-health-care-delivery

53. Crenshaw K. Mapping the Margins: Intersectionality, Identity Politics, and Violence against Women of Color. *Stanford Law Review*. 1991;43(6):1241-1299.

54. Aggarwal R, Wadhera R, Szarek M, Bhatt D. Cardiovascular risk factors and disease mortality among asian american subgroups. *European Heart Journal*. 2024;45(Supplement_1):ehae666.3589.

55. Quality Measures and Reporting. Accessed November 1, 2024. https://www.dhcs.ca.gov/dataandstats/Pages/Quality-Measurement-And-Reporting.aspx

56. Jarlenski M, Cole E, McClure C, Sanders S, Smalls M, Méndez DD. Implementation and early effects of medicaid policy interventions to promote racial equity in pregnancy and early childhood outcomes in Pennsylvania: protocol for a mixed methods study. *BMC Health Serv Res*. 2024;24(1):498.

57. Martino SC, Ahluwalia S, Harrison J, Kim A, Elliott MN. Developing Health Equity Measures. Published online January 2021. Accessed November 1, 2024. https://aspe.hhs.gov/sites/default/files/private/pdf/265566/developing-health-equity-measures.pdf

58. Measuring Health Equity: A Review of Scoring Approaches. Published online 2023. Accessed November 1, 2024. https://www.ncqa.org/wp-content/uploads/2023/02/NCQA-MeasuringHealthEquity-Whitepaper-FINAL_WEB.pdf

59. Pearcy JN, Keppel KG. A summary measure of health disparity. *Public Health Reports*. 2002;117(3):273-280.

60. Health Disparity Measures. Accessed November 1, 2024. https://www.cdc.gov/library/researchguides/health_disparity_measure.html

61. Rao JS. Overall Estimation of Health Disparities. In: *Chapman and Hall/CRC eBooks*. 17-60.

62. Agniel D, Cabreros I, Damberg CL, Elliott MN, Rogers R. A Formal Framework For Incorporating Equity Into Health Care Quality Measurement. *Health Aff (Millwood)*. 2023;42(10):1383-1391.

63. Radley D, Shah A, Collins S, Powe N, Zephyrin L. *Advancing Racial Equity in U.S. Health Care*.; 2024.

64. Zhai S. Medicaid Health Equity Project Year 9 Report (HEDIS 2019). Published online November 2022.

65. Fisher RA. On the Interpretation of χ 2 from Contingency Tables, and the Calculation of P. *Journal of the Royal Statistical Society*. 1922;85(1):87.

66. Kaplan EL, Meier P. Nonparametric Estimation from Incomplete Observations. *Journal of the American Statistical Association*. 1958;53(282):457-481.

67. Kruskal WH, Wallis WA. Use of Ranks in One-Criterion Variance Analysis. *Journal of the American Statistical Association*. 1952;47(260):583-621.

68. Felner JK, Henderson V. Practical Strategies for Health Equity Researchers to Enhance Analytic Rigor and Generate Meaningful Insights From Qualitative Data. *Prev Chronic Dis*. 2022;19:220134.

69. Shavers VL. Measurement of socioeconomic status in health disparities research. *J Natl Med Assoc*. 2007;99(9):1013-1023.

70. Barker LE, Luman ET, McCauley MM, Chu SY. Assessing Equivalence: An Alternative to the Use of Difference Tests for Measuring Disparities in Vaccination Coverage. *American Journal of Epidemiology*. 2002;156(11):1056-1061.

71. Ramírez M, Ford ME, Stewart AL, A. Teresi J. Measurement Issues in Health Disparities Research. *Health Services Research*. 2005;40(5p2):1640-1657.

72. Institute of Medicine (US) Committee on Quality of Health Care in America. *Crossing the Quality Chasm: A New Health System for the 21st Century*. National Academies Press (US); 2001. Accessed October 2, 2025. http://www.ncbi.nlm.nih.gov/books/NBK222274/

73. Advancing Health Equity: A Recommended Measurement Framework for Accountability in Medicaid. Published online September 2022. https://www.ncqa.org/wp-content/uploads/2022/10/NCQA-CHCF-EquityFrmwrkMedicaid-Sep22_FINAL.pdf

74. *A Framework for Promoting Equity and Excellence in Healthcare*. Robert Wood Johnson Foundation; 2022. https://rtbhealthcare.org/wp-content/uploads/2022/07/RWJF-RTB-FULL-REPORT-060622.pdf

75. Cultural and Linguistic Competency | Office of Minority Health. US Department of Health and Human Services Office of Minority Health. Accessed October 3, 2024. https://minorityhealth.hhs.gov/cultural-and-linguistic-competency

76. New Reports: Harnessing Measurement and Technology to Promote…. AHIP. February 2, 2023. Accessed October 3, 2024. https://www.ahip.org/news/press-releases/new-reports-harnessing-measurement-and-technology-to-promote-equity-reduce-burden

77. Health Equity Transformation Assessment. Published online 2022. Accessed October 4, 2024. https://equity.aha.org/

78. Gonzalez R. The Spectrum of Community Engagement to Ownership. Movement Strategy Center. Accessed November 1, 2024. https://movementstrategy.org/resources/the-spectrum-of-community-engagement-to-ownership/

79. Ponder KY. Creating Authentic, Effective Partnerships between Organizations & People with Lived Experiences: A Toolkit. Published online April 2024. Accessed November 1, 2024. https://homelessness.ucsf.edu/sites/default/files/2024-04/LEAB%20Toolkit%2004.2024-1.pdf

80. Newman SD, Andrews JO, Magwood GS, Jenkins C, Cox MJ, Williamson DC. Community Advisory Boards in Community-Based Participatory Research: A Synthesis of Best Processes. *Prev Chronic Dis*. 2011;8(3):A70.

81. Arnos D, Kroll, E, Jaromin E, Daly H, Falkenburger EF. Tools and Resources for Project-Based Community Advisory Boards. Published online October 2021.