PLAYBOOK ▸

Cracking the Code:
A Health Equity Analytics Implementation Playbook for Healthcare Organizations

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California Health Care Foundation

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Executive Summary

PURPOSE

Advanced health equity analytics methods combine multiple quality measures and simultaneously evaluate performance in different stratified subgroups. These methods produce health equity scores, which can be used by healthcare organizations to monitor improvements in the reduction of disparities, quantify the impact of interventions and function as a benchmarking tool for system-wide accountability. Health equity scores can also steer program implementation efforts to improve health equity across different populations.

This *Implementation Playbook* presents a detailed approach for:

1. Selecting and building a health equity scoring method that works for your organization.
2. Mobilizing internal support and resources.
3. Gathering external buy-in across organizations to collectively address health gaps across overlapping populations.

RECOMMENDATIONS & CONCLUSIONS

The following recommendations are based on best practices from literature and findings collected from a group of healthcare organizations that evaluated the methods' application and use in their day-to-day work.

To build a health equity scoring approach, an organization must consider the following steps:

1. Selecting a quality measurement focus area.
2. Choosing demographic factors to analyze.
3. Identifying reference groups and comparison points.
4. Interpreting results.

Compiling and analyzing these data requires organizations to have adequate internal staff capacity, typically comprised of specialized staff who are well-versed in robust analyses and data systems. To build this out, leadership support must first be secured by presenting a convincing business case for the implementation of the health equity scoring method. This can include highlighting how it facilitates accountability for an organizational culture of equity.

Once the data for health equity scores are retrieved, they can be integrated into existing internal reporting methods or embedded into dashboards that, using Application Programming Interface (API) features, can combine data across electronic health records (EHRs), claims, case management systems, health information exchanges (HIEs) and more. The data should have longitudinal and comparative features to allow for assessment over time and across business units.

Once internal parties align, health equity scoring efforts can be expanded to encompass data from external organizations that also serve overlapping populations, such as health plans, hospitals or even community-based organizations. By forming coalitions, organizations and policymakers can foster collective accountability by introducing standardized benchmarks for their region.

Why an *Implementation Playbook* for Advanced Health Equity Analytic Methods?

Population health initiatives across the U.S. aim to achieve optimal health and outcomes for all. However, gaps in healthcare access and delivery exist and can contribute to worse health outcomes, especially for certain subpopulations. These gaps may be related to several factors, including variation in geography (e.g., urban, rural), age and social dimensions (e.g., race/ethnicity, education, income, familial support). Although improving health equity is a vital component of many healthcare organizations' initiatives, measuring and evaluating health equity can present complex challenges. Quality measurement strengthens accountability across healthcare providers and payers by helping organizations identify actionable goals and align their initiatives with one another.[1] However, when organizations evaluate their performance on individual measures in isolation or only consider one factor at a time (e.g., stratifying by race/ethnicity), they may miss key patterns or intersectional relationships in some populations. Thus, the use of advanced health equity analytic methods to create composite health equity scores allows organizations to evaluate multiple factors simultaneously in assessing and addressing quality gaps across populations.

WHAT ARE ADVANCED HEALTH EQUITY ANALYTICS METHODS?

These methods are systematic, evidence-based approaches that can be used to quantify disparities in health outcomes, access and care across a population. Specifically, the methods assess healthcare organization performance across various subpopulations and demographic groups by evaluating multiple factors simultaneously and producing overall *health equity scores* that allow for comparison across business units and over time. Organizations can identify a group of quality metrics related to a particular condition of focus and relevant sociodemographic factors across the selected population. They can then use one of these methods to generate a health equity score that aggregates these data and illuminates how they are delivering quality care across multiple measures and populations. These scores can primarily enable benchmarking across healthcare organizations so that they can gain a better understanding of their impact across their served population(s). The scores can also build a strong rationale for organizations to establish targeted interventions or improve resource allocation for initiatives that would help close health equity gaps.

> "[These] methodologies gave us an opportunity to compare equity scores among our 3 biggest Medicaid markets for our plan. We… sometimes compare performances between different markets, but we never really looked at health equity that way… and if there's any opportunity for us to come up with a different strategy to address some of the things that we observed. I think that was a good opportunity for us to really look into."
> – Senior Director for Quality Analytics

NCQA'S APPROACH

NCQA used a mixed-methods approach to assess the validity, utility and feasibility of selected advanced health equity analytic methods. Real-world data from three partner organizations (2 health plans, 1 health system) were collected and analyzed to calculate a set of different health equity scores using four analytic methods (see *Companion Resource: Step-by-Step Metric Calculation Guide*). This was paired with

interviews and focus groups with partner organizations to understand how these scores could be practically implemented and support their quality improvement and population health strategies. While NCQA's study examined four specific approaches (Health Equity Metric, Humana's approach, Population Health Performance Index and Health Equity Summary Score), this playbook is not specific to a given method and can guide the use of other robust scoring methods to summarize organizational progress in health equity.[2]

THE IMPLEMENTATION PLAYBOOK'S GOAL

This Playbook provides recommendations for quality improvement managers at health plans and health systems who are looking to select and implement health equity scoring approaches. Depending on where an organization is on their pathway to improving health equity, teams can use this guide to plan critical upcoming steps, gather useful real-world strategies for implementation or inform decision-making through key guiding discussion questions. The *Companion Resource: Step-by-Step Metric Calculation Guide*, while not a codebook, provides steps to calculate four health equity scores (i.e., Health Equity Metric, Humana's approach, Population Health Performance Index and Health Equity Summary Score). For organizations that may currently have limited resources or are in an early stage of implementing health equity initiatives, this Playbook also provides insight into a *phased approach* that organizations can follow if they are not ready to fully execute all the outlined steps.

Building A Health Equity Scoring Approach that Works for Your Organization

Advanced health equity analytic methods are a crucial tool for identifying and tracking health disparities. Research shows that marginalized groups disproportionately experience poorer quality of care, worse health outcomes and higher healthcare spending. Standardizing health equity scoring approaches is a key step to benchmarking, building consensus and closing gaps through targeted resource allocation. Core decisions include identifying a focus area, determining stratification attributes, choosing reference points and deciding how to quantify disparities. The Institute for Healthcare Improvement's (IHI) white paper, *Advancing Health Equity: An Approach to Systematically Identify and Evaluate Health Disparities*, dives deep into these decisions with a focus on how they apply to evaluation of individual measures.[3] This playbook aligns structurally with the four steps outlined by IHI and translates them for application when selecting and applying a composite health equity score (as opposed to a singular measure stratification). These steps are outlined in the following sections: (1) selecting a quality measurement focus area, (2) choosing demographic factors for analysis, (3) identifying comparison points and (4) interpreting results and finding meaning.

> "Oftentimes we collect a great amount of information and data from multiple sources at multiple times during encounters, etc. So being able to make sense of multiple data sources and multiple data outputs, such as 4 distinct numeric outputs of equity...I think it begins to allow organizations to have conversations around this."
> – Community Health Impact Manager

1) SELECTING A QUALITY MEASUREMENT FOCUS AREA

Applying a health equity scoring approach first requires deciding on a scope of evaluation – typically a population, health condition or quality initiative of interest. Your organization should consider current overarching priorities and initiatives when choosing the quality focus area. Once the focus area has been identified, your organization can select key demographic factors (e.g., race/ethnicity, education, language) relevant to its function, focus area and target population. The focus area also informs the selection of specific measures that will be calculated by the scoring method.

KEY QUESTIONS

These questions can help prioritize selection of measures and navigate potential differences in priorities across your organization.

- What are our key target areas for quality improvement and disparity reduction? Does the population we serve have any clinical conditions that require increased attention or improved management?
- Are there targets or priorities that are shared between different business units or clinical areas?
- Have we made specific commitments to the community or external partners that would benefit from additional data insight?

For health equity scoring, organizations should ideally select between three to eight quality measures that are relevant to the focus area. This number of measures allows for comprehensive analysis, but also prevents overcomplication of data and measure populations. Selecting more than two measures promotes insight into how measures may interact with each other. The upper limit of number of selected measures (around eight) will likely be informed by identifying measures which are logically related (as described in Recommendation #3 of this section). Choosing measures with an existing gap is helpful for ensuring utility of analyses and prioritizing quality improvement activities. If performance rates for any given measure(s) demonstrate all populations meeting or exceeding performance benchmarks, a different focus area should be evaluated. Below are some examples of approaches for quality measure selection:

A) Measures relevant to management of a specific condition:

Diabetes or cardiovascular disease are examples of specific conditions that can be selected as a quality focus area. For example, a variety of measures exist related to appropriate management of diabetes and evaluation of associated risks.

EXAMPLE: DIABETES MANAGEMENT
Continuous Glucose Monitoring (CGM)
Diabetes Self-Management Education (DSME)
Hemoglobin A1c Control for Patients with Diabetes (HBD)
Kidney Health Evaluation for Patients with Diabetes (KED)

B) Measures that demonstrate gaps in access, available services or care coordination:

A set of measures could be determined based on utilization or access to care. Immunization, well-child visits, postpartum care or emergency department utilization could be relevant focus areas. As a note, ensure that the eligible population for each selected measure overlaps substantially for meaningful analysis.

EXAMPLE: CHILDHOOD WELL-BEING
Childhood Immunization Status (CIS)
Immunizations for Adolescents (IMA)
Well-Child Visits in the First 30 Months of Life (W30)
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents (WCC)
Child and Adolescent Well-Care Visits (WCV)

TECHNICAL CONSIDERATIONS

The recommendations below outline some considerations for measure selection that impact opportunities for analysis and the reliability of health equity scores.

Recommendation 1: Data Availability

Ensure that a substantially sized population carries over from one year to the next. This is especially pertinent for (1) scoring methods that require multiple years of data to calculate, (2) scoring methods that integrate multiple factor (intersectional) analysis as substrata groups can become quite small or (3) instances when including measures with a look back period. For reference, the minimum denominator size to meet NCQA's Healthcare Effectiveness Data and Information Set (HEDIS®) reporting standards is 30; this may be a useful guideline to consider when evaluating population sizes across multiple factors and stratifications.

Recommendation 2: Measure Format

Select measures that evaluate binary outcomes or ensure your data analytics team can convert measures into that format. Most existing health equity scoring methods rely on measures where individuals are scored based on whether they did or did not experience the measure event (e.g., the percentage of persons 12 years of age and older who were screened for clinical depression). There are also quality measures based on ordinal outcomes (having multiple groups/categories), but such measures can be adapted to be proportion-based. For example, blood pressure assessment measures may group patients in different ranges; such categories could be converted to 'out of target range' or 'within target range' to be a binary measure.

Recommendation 3: Overlapping Populations

Select measures that share similar populations or denominators but are not completely correlated. Measure selection requires striking a balance. Measures should share similar initial populations or denominators to yield more meaningful insights. The overlapping population across selected measures will be the population of interest reflected in the composite scores; the larger the population of interest, the more robust the analysis and the more useful the comparisons. For example, a measure bundle focused on chronic care management for specific conditions, such as diabetes or hypertension, will have naturally overlapping populations. On the other hand, an organization may not be able to make useful comparisons if it selects a measure bundle where the populations of interest vary in age (e.g., measures for older adults and measures for pediatric populations). Additionally, measures should be related, but not so tightly correlated that they amplify one clinical outcome—the suite of measures chosen should encompass multiple aspects of a population or clinical focus area.

2) CHOOSING DEMOGRAPHIC FACTORS FOR ANALYSIS

Next, health equity scoring requires the selection of demographic subpopulations that will be compared. Your organization should select between two to four sociodemographic dimensions that are particularly relevant based on the population(s) you serve and your quality objectives. Similar to selecting the number of measures for study, choosing between two to four demographic factors allows for comprehensive analysis without the number of data points becoming too unwieldy or difficult to interpret.

KEY QUESTIONS

These questions can help identify the population(s) of study and define an actionable, tangible plan for health equity scoring.

- Who does our organization currently serve? For which population(s) do we need more insights? Who do we have difficulty reaching or who are we aiming to serve?
- What are social and environmental exposures that are widely known to impact health and contribute to disparities and how do these intersect with our populations? Which groups that we serve may face disparities for historical or logistical reasons? How will our scoring approach reflect these realities?

There are many options to consider for sociodemographic dimensions.

Commonly collected categories include information on:

- Race/Ethnicity
- Age
- Sex (assigned at birth)
- Sexual orientation
- Geography (e.g., urban/rural, high-needs zip code)
- Language
- Disability status
- Educational attainment
- Income status

For some dimensions, there are a variety of definitions and category criteria. To make comparisons within and outside your organization easier, alignment on the definitions and categories is important. This impacts the accuracy of documentation and patient segmentation, extrapolation of findings and comparison of results to other organizations.

Demographic Definition Resources

There are a variety of federal standards and resources to reference for establishing demographic category definitions. Widely used and federally recognized *categories for Race/Ethnicity*, which were updated in 2024, are from the federal Office of Management and Budget (OMB).[4] Geographic variables can be defined in a variety of ways and the Rural Health Information Hub outlines a *step-by-step guide* to rural classification.[5] A *CMS resource* outlines example response options and definitions for various demographic dimensions, particularly as they relate to United States Core Data for Interoperability (USCDI) standards.[6]

DEMOGRAPHIC CONSIDERATIONS

The recommendations below outline considerations for selecting demographic dimensions for analysis, which will affect the relevancy and use of health equity scores.

Recommendation 1: Population Spread

Reference the breakdown of the population your organization serves; this is a key tool for distilling which demographic dimensions should be analyzed. For example, a health practice in a rural community, which mainly serves a rural population, may not find adequate sample sizes or useful insights for including Rural vs. Urban as a dimension. However, a health plan that serves several counties or multiple states may have diverse geography to provide more robust or useful analysis for this dimension. It is important to note that the categories can vary in granularity depending on the population spread. For example, if an organization serves a large population of Asian individuals, it may be worth further breaking Race/Ethnicity information into subcategories (e.g., Chinese, Asian Indian, Filipino, Vietnamese, Korean, Japanese).

Recommendation 2: Demographics and Clinical Factors

Consider environmental and social exposures that are already known or widely shown to impact health. For example, urban residence is linked to increased respiratory conditions and exacerbations.[7] Therefore, including a rural and urban geographic dimension may be insightful when considering any clinical quality areas related to respiratory diseases and

management. Any analysis of peripartum quality of care and outcomes could be analyzed by race/ethnicity given the high rates of maternal mortality and morbidity amongst Black birthing individuals.[8] Behavioral health measures could be analyzed by sexual orientation and gender, given the prevalence of mental health conditions among LGBTQ+ youth or the disproportionately high rate of suicide among adult men.[9,10]

Recommendation 3: Multifactor Analysis

Intentionally select characteristics that consider how subpopulations experience related factors and intersecting disparities. For example, low-income older adults living in rural areas have poor health outcomes,[11] so including income level and geography as demographic dimensions would allow for analysis of this subpopulation.

Diabetes Management and Health Equity

An organization saw improvements over time in healthcare outcomes for their populations with diabetes based on other quality analyses. They are interested in how these improvements would connect to health equity scores. They also aim to increase the use of continuous glucose monitoring and improve Hemoglobin A1C control among their Black and Hispanic populations. Because of this, the organization decides to select diabetes management as their focus area.

The three demographic factors they choose to evaluate are race/ethnicity, primary language and geography (urban/rural). They leveraged national data standards for race/ethnicity and rurality categories and selected language based on known prevalence in their population (spoken by 3% or more).

QUALITY MEASURES SELECTED
Continuous Glucose Monitoring (CGM)
Diabetes Self-Management Education (DSME)
Hemoglobin A1C Control for Patients with Diabetes (HBD)
Kidney Health Evaluation for Patients with Diabetes (KED)

KEY QUESTIONS

These questions can help organizations identify relevant populations that should be considered when building health equity scoring approaches.

- Have we observed in prior quality improvement projects that certain subgroups tend not to experience the same benefits or face unique process challenges?
- Are we interested in stratifying discretely by each social dimension or stratifying with subpopulations for each combination of demographic factors? What benefits could an intersectional approach bring to our organization?
- Would our organization benefit from learning about successes or disparities between different business units, clinics or markets?
- How would examining year-over-year changes of a certain population be beneficial? Is there an intervention to be implemented that should be assessed for impact?
- What demographic dimension data could help inform resource allocation or assist in decision making?

3) IDENTIFYING COMPARISON POINTS

Your organization will also need to select the basis of comparison—the reference groups—that are most relevant to its population and health equity goals. Stratification reference groups can be selected based on characteristics in the data or prior knowledge from comparing across organizations and across internal units, identifying year-over-year change or assessing intervention impact. The *Companion Resource: Step-by-Step Calculation Guide* offers details and instructions for four different health equity scoring methods that have varying comparison points embedded in their approach. Key considerations for selecting comparison points are provided below.

METHODS FOR COMPARISON

A Priori vs. Empirical Reference Groups

An *a priori* approach defines a reference group before data analysis. This group is determined based on theory or prior literature, rather than letting patterns in the data define a point of comparison (such as a top performing group). For example, recognizing the way systemic racism can lead to advantage for White populations and comparing the outcomes and health equity scores experienced by other racial groups to those experienced by the White racial group would be an a priori method of selection. Selecting an *a priori* reference group does not necessarily mean always selecting the group perceived to be the most advantaged. For example, population size may be used to select the reference group; if a plan serves a predominantly Hispanic population, that might be a good reason to make Hispanic members the a priori reference group.

Understanding Intersectionality

Intersectionality, a concept coined by Kimberlé Crenshaw,[12] is the recognition that belonging to multiple marginalized groups compounds experiences of inequality or marginalization, or that we can be simultaneously privileged on some dimensions even when marginalized in others.[13] For instance, the experiences of a person who is Black and part of the LGBTQ+ community are shaped by holding both of those identities, not merely one or the other. On the other hand, a person who is White and has a low-income is disadvantaged in the realm of economic status, but still benefits socially from being White. The Department of Health and Human Services developed a framework for understanding and employing intersectionality in research.[14]

In contrast, an *empirical* reference group is driven by results of the analysis (e.g., data is used to identify the language group experiencing the best outcome and this best performing language group is then compared to all other language groups). The theory here is that this can capture a maximum range of disparity and, therefore, room for improvement. The risk is that the group with the highest performance can sometimes be very small and sensitive to minor changes in performance. Use of the empirical method should be balanced with sample size considerations. It is not recommended to make the smallest group the reference group, given the potential for high variability in quality signals between years.

Although not always the case, health equity composite scores tend to be higher when using an *a priori* reference group, compared to when using an empirical reference group. This is because, if a particular group experiences higher outcomes than the selected reference group, the component of the health equity score comparing those two groups is set to zero. For example, if the reference group for race were White, but Asian members experience better care quality, many equity scoring methods would set the relative inequality to zero, artificially inflating the scores.

In the context of health equity scoring methods, intersectionality refers to the stratification of a given measure, considering the unique combination of a person's demographic factors where all dimensions are stratified simultaneously and each combination has its own stratum. For example, if we included race (with White and non-White groupings for ease of example) and rurality (rural and urban groupings) in an intersectional analysis, *White and rural, non-White and rural, White and urban and non-White and urban* would be distinct groups analyzed, and individuals would be in the grouping that combines their demographic identities. When stratifying one discrete demographic dimension at a time, everyone in the measure is represented once in each social dimension evaluated in the health equity score (i.e., once for race, once for geography). Intersectional approaches in analysis account for depth of experience and multiple identities of individuals, but can lead to small groups and insufficient sample sizes, causing them to be dropped from scoring. It may be best to consider intersectional scoring methods when starting with a substantially large population that can support minimum sample sizes at varying levels of stratification.

"I think the intersectionality of it where you're inserting so many different strata all at once, like building on top of each other, where right now… I think we're looking at things individually… we're looking at race. We're looking at geography. We're looking at age, gender, etc. But to be able to couple it and kind of pile it on top of each other to see a more holistic view. I think that for me was an opportunity for us to integrate further in moving our work forward."
– Vice President of Health Equity

Demographic Category Granularity

There will always be tradeoffs with data availability and population size, especially when considering intersectional stratification. For example, the category of Asian, as defined according to standards such as OMB, is a very diverse group and there are many reasons to break this population down into further categories. However, breaking it down too far will likely result in small cell sizes and may force some subgroups to be excluded from the analysis. To keep cell sizes interpretable, some precision will be lost. Organizations should evaluate their membership and leverage as many granular categories as data can reasonably support.

Between-Unit:

Organizations may also choose to compare results between business units within one organization or system for the same time period. **Between-unit** comparison allows organizations to assess disparities across their markets or service areas. It can serve as a resource allocation tool or be used to identify areas that employ best practices for quality improvement to apply organization-wide. This approach best serves organizations with business models with distinct market segments, such as a health plan operating in multiple states with distinct business units. A local health system may find difficulty in distinguishing units to facilitate comparison.

Year-Over-Year Change:

Organizations may also choose to compare results between years. Examining **year-over-year** changes to determine health equity scores can be especially helpful in assessing effects of a given intervention over time, which may be particularly useful for local health systems. This approach also lends itself to analyzing trends in quality measure performance across years.

4) INTERPRETING RESULTS AND FINDING MEANING

KEY QUESTIONS

These questions can help organizations make sense of their health equity score findings and refer to the original intent of health equity scoring.

- What do we want the quantitative findings to tell us about health equity in our communities?
- What is our frame of reference? How does the frame of reference affect the way we interact with the findings? How does the frame of reference make the findings useful to us?
- What expectations do we have upfront about what the findings will reveal? How might we facilitate reflection on how the actual results align or differ from upfront expectations?
- How can qualitative insights (e.g., from community advisory board, focus groups) provide additional context for quantitative findings?

A key step to designing your health equity scoring approach is ensuring that you have the appropriate framework and resources for interpreting results and identifying next steps. The *Companion Resource: Step-by-Step Metric Calculation Guide* can be referenced for selecting a health equity scoring approach that will suit organizational needs and facilitate meaningful results. A health equity score without a plan for interpretation and action will not effectively help close gaps in care.

It is important to have a **frame of reference**, which can be informed by the technical choice of reference group(s). Points of comparison may include:

1. **Across the business environment:** Comparing different business subunits offers a frame of reference that allows organizations to internally evaluate disparities, highlight top performers, seek out best practices and share them across the organization. With wider use of the scoring methods, more opportunities for comparison to others will present themselves. Refer to the section on *Leveraging Health Equity Scoring for Collective Accountability* to understand how to facilitate collaboration for this purpose.

2. **In context of time trends:** Including measures with timeframes less than a year or accessing sociodemographic data from past years can support meaningful interpretation of trends over time. Make use of all available and reliable data to extract the best possible understanding of your community and consider the data in relation to policies or interventions that may have occurred at different points in time.

3. **In contrast to expectations:** Comparing the results to expectations prior to conducting the analysis can also facilitate interpretation—does the score reflect more or less equitable outcomes than initially assumed based on other disparities research or quality improvement initiatives? Dig further into the results and the findings for various subpopulations that were used to calculate the overall score—what story do they tell? Reflect on what is surprising and why. Such discussions will assist organizations in facilitating understanding and engaging with equity score findings.

THE 3 I'S FRAMEWORK – A PHASED APPROACH TO IMPLEMENTATION

Certain roadblocks (e.g., funding or staffing constraints, leadership prioritization) may prevent your organization from implementing a composite health equity scoring approach immediately. It is possible to build more complex analytics through a phased approach, fostering growth towards implementation. A glide-path called the *3 I's Framework* is provided below, highlighting key milestones for those at various stages in implementing health equity scoring approaches.

The *Initiate* phase represents the first step for measure selection and stratification, while the *Iterate* phase introduces multi-measure complexity that helps your organization to easily reach the final stage (i.e., the *Innovate* phase) in implementing a composite health equity score. Even after implementation, this phased approach is recommended when your organization aims to gather composite health equity scores across additional populations or focus areas.

INITIATE

Individual Measure Stratifications

Identify a priority quality focus area and population for which you may quantify and characterize disparities. Select **one** quality measure for stratification and at least **one** demographic factor for analysis.

Resource: *Advancing Health Equity: An Approach to Systematically Identify and Evaluate Health Disparities*, Institute for Healthcare Improvement

ITERATE

2 x 2 Measure Stratifications

Approach this step once your organization feels comfortable stratifying one quality measure by a single factor.

Identify a priority quality focus area and population for which you may quantify and characterize disparities. Select **two** quality measures (with overlapping populations) and stratify each measure by **at least two** demographic factors.

Compare the two measures to identify patterns or shared disparities. Approaches may include "hot spot" tables or graphics, or basic regression methods evaluating interactions.

INNOVATE

Composite Health Equity Score Compilation

Approach this step once your organization is comfortable with stratifying more than one quality measure by multiple demographic factors separately and has successfully standardized health equity stratification data.

Identify a priority focus area and population for which you may quantify and characterize disparities. Select **three to eight** quality measures (with overlapping populations) and **two to four** demographic factors for analysis.

Resource: *Building a Health Equity Scoring Approach*

Implementation and Organizational Buy-In

1) BUILDING STAFF CAPACITY

KEY QUESTIONS

These questions can help organizations identify key skills, personnel and other resources needed to drive internal health equity initiatives.

- Who are the experts and/or internal champions that can push forward quality measurement or health equity score implementation initiatives?
- How can we leverage existing roles to be committed to organizational health equity initiatives where possible?
- How often do we provide training to ensure staff can interpret and apply health equity data effectively?
- What key roles, if any, are missing from our current team?

To successfully put health equity scoring methods into practice, organizations need to first build the ability to analyze and understand their health equity data. For your organization, this could mean hiring people with the right skills, ensuring everyone knows their roles and offering regular training to help the team improve how they use data to support health equity work.

Organizations benefit from having the right set of skills around the table. This includes expertise in data analysis, population health, implementation science and quality improvement.

See the key skills and team capabilities outlined on the next page to help guide your organization in understanding if your team is equipped with the right skillsets.

> "Data is only as good as the data that is used to build with… So I think, having somebody who not only knows how to use it out of the box, but also to be able to recognize when there are limitations [is important]"
> – Community Health Impact Manager

KEY SKILLS AND CAPABILITIES FOR YOUR TEAM

Before starting this work, ensure your team collectively has the following skills and knowledge areas.

Data Analysis and Management

- Ability to work with large-scale clinical and multimodal datasets to extract insights and improve health outcomes.
- Skills in managing and preprocessing clinical and sociodemographic data, including cleaning, transforming data and ensuring data integrity.
- Ability to analyze large data sets and knowledge of introductory machine learning.
- Knowledge of statistical methods, including regression, hypothesis testing and distributions.

Collaboration and Reporting

- Ability to collaborate with cross-functional teams, including clinicians, researchers and IT professionals, to design and execute data-driven projects.
- Proficiency in creating data visualizations and reports for both technical and non-technical audiences.
- Strong communication skills for engaging with diverse stakeholders and translating complex insights into actionable recommendations.

Other Skills

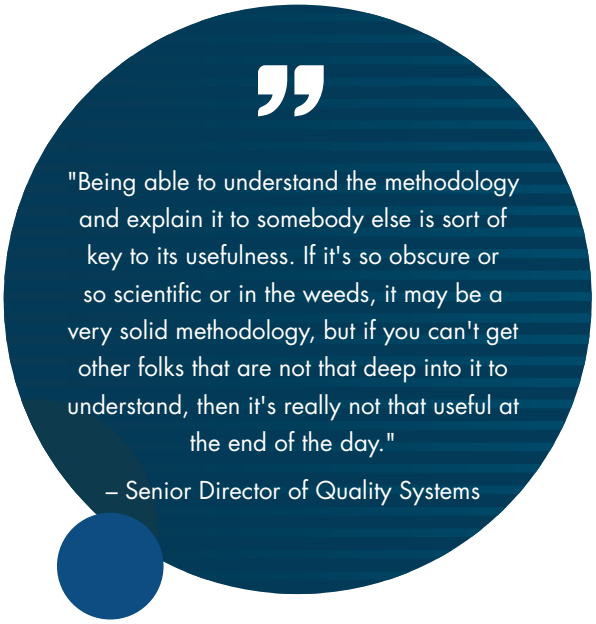
- Ensure the fairness, health equity, and transparency of predictive models to address healthcare disparities.
- Experience with clinical and sociodemographic data standards, such as HL7, FHIR, OMOP, and PCORnet.

**Note: This section was adapted from the Clinical Data Scientist position at Meharry Medical College. The health equity scoring approaches outlined in this playbook frequently require merging data across internal data sets, making choices about how to categorize stratification factors and ensuring data visuals accurately represent the unique comparisons different methods offer.*[16]

To build analytic and operational capacity for health equity scoring, consider the following roles:

- **Health Equity Data Analyst or Epidemiologist:** Conducts data extraction, cleaning and stratification and calculates health equity scores. Ensures validity, reliability and consistency across datasets.
- **Population Health or Quality Improvement Strategist:** Interprets analytic findings and designs targeted interventions to address identified health disparities. Collaborates with multidisciplinary teams to align activities with organizational priorities.
- **Clinical Data Scientist:** Develops and maintains dashboards that integrate clinical, demographic and social determinant data for leadership and programmatic teams.
- **Health Equity Implementation Lead:** Serves as a bridge between analytic, operational and community engagement teams to ensure that data insights inform practical and culturally competent interventions.

Clearly defining roles supports better teamwork between technical experts and leaders in operations. These roles can be operationalized either as a dedicated analytic team within a quality or population health department, or as an embedded skillset within those teams with shared responsibility. Creating a dedicated team can help make health equity measurement a regular part of the organization's processes. If health equity-related responsibilities are embedded into existing roles, ensuring adequate time and training can enable different areas of the organization to efficiently mobilize and push such efforts forward.



Training and Internal Capacity Building

Alongside hiring, organizations should invest in structured training to build internal capacity that fosters a shared understanding of data interpretation, analytic methods and the practical application of findings to support decision-making. Since organizations are more likely to implement ideas that they can clearly understand and explain, ensuring team members share a collective understanding of the data and its implications is critical for adoption of the health equity scoring approaches.

KEY APPROACHES:

- **Cross-Functional Workshops (including a human-centered design method)**[17]
- **Peer Learning Sessions**
- **Designate internal champions and liaisons**
- **Health Equity-Focused Analytics Training**

Securing Leadership Buy-In

While building internal capacity is essential to support implementation, securing leadership buy-in is arguably the most critical step for sustaining health equity initiatives and integrating them into organizational priorities. To garner their buy-in, teams that are well-versed in the organization's health equity initiatives must not only increase leadership's understanding of the health equity scores, but also frame health equity as a driver of quality improvement. Such intentional efforts are integral to advancing patient care and steering organizational strategies.

KEY QUESTIONS

These questions help teams identify their audience and what is most important to the leaders while garnering their support.

- Who will be in the room when our team presents this information to leadership? Whom does our leadership trust the most, and do those trusted people support our initiative?
- How can leadership input add value to our efforts/initiatives?
- What matters the most to leadership (e.g., organizational growth, reduction of health disparities, expansion of population served, delivery of high-quality products, application of financial resources)? Does our current presentation address their top-of-mind questions?

To gather buy-in, consider the following steps to present the selected method and business case to leadership:

- **Develop a clear, comprehensive implementation plan** with defined goals, objectives and needed resources. Highlight how the plan aligns with organizational priorities and quality improvement goals.
- **Use storytelling** to illustrate the importance and benefits of the health equity initiative. Combine patient stories with data to show real-world impact.
- **Tailor messaging and strategy to align with leadership priorities and concerns.** Frame health equity as a driver of organizational success. Use language that resonates with leadership, focusing on ROI and strategic alignment.
- **Identify and include key champions** within the department or organization whose endorsement will carry weight. This should primarily include early adopters who are willing to experiment with the suggested method and have influence in decision-making, such as the Chief Data Officer or key members of the analysis team. Engage these identified champions early and often, and encourage them to advocate for this work during leadership meetings.
- **Ensure that data interpretation and algorithmic calculations are replicable by leadership or their trusted teams.** This may involve creating a codebook to show a documented and defined process to derive the scores. It may also require a meeting between key leaders as well as the Analysis and Program Management teams to provide credibility to the calculations used and highlight the quantifiable benefit that the employment of this method could provide.

> "Part of my work here is to help educate top down around equity, right in the organization, with our members and the different disparities that we observe. I can't do that without solid data, right? And predictive analytics and [identification of] trends. Where are those hotspots? Where should we again deploy resources or limit resources? What measures do we need to tackle? We can't boil the ocean…. One thing… is using this as kind of an advocacy opportunity with our state partners to align on."
> – Vice President of Health Equity

- **Garner support across multiple leaders at the highest levels (e.g., executive, board)** by presenting the business case relevant to them. For instance, an executive leader might want to understand how findings from the method's implementation would improve the reach and value of proposed interventions, while a board member may want to know how these interventions could potentially offset long-term healthcare costs in the future.

2) DISPLAYING DATA AND COMMUNICATING RESULTS

KEY QUESTIONS

These questions help teams identify opportunities to integrate health equity scores into current reporting approaches in ways that make results understandable and usable.

- Where do quality and performance data currently live in our organization, and how could health equity scores be incorporated into these existing dashboards or reporting processes?
- Do our current reporting tools allow us to display health equity scores in ways that support comparison over time, across populations or between organizational units?
- What information or context do different audiences (e.g., executive leaders, quality teams, operational staff) need for health equity data to be clear, interpretable and actionable?

Empowering action requires data not just to exist, but to be integrated and presented in a way that makes sense to the organization. Integrating metrics into existing dashboards and choosing visuals, as explained below, are two key ways that organizations can retrieve, represent and share their data effectively.

Integrating Metrics into Existing Dashboards

Where possible, organizations should integrate health equity scoring methods in existing analytic platforms and data systems. Embedding new health equity indicators into current dashboards keeps the user experience consistent and aligns with other performance measures. Automated data pipelines and application programming interface (API) connections can extract and combine data from multiple sources, such as electronic health records (EHRs), claims databases and patient registries, into a central data warehouse for visualization.

Dashboards should ideally include *longitudinal* and *comparative* features so users can assess progress over time and across regions or business units. Flexible reference groups (i.e., a priori and empirical) enhance interpretation of results by offering users better context and supporting more relevant population comparisons. Additionally, clearly documenting methodological differences within the dashboard increases transparency and helps users understand how scoring methods affect results.

Organizations do not need to implement every analytic feature at once. Many begin by integrating a small set of health equity scores into existing dashboards to establish basic workflows, then expand to more flexible functionality – such as dynamic comparisons, multiple reference groups or time-trend analysis – as needs and capacity evolve.

Choosing Visuals

It is also important to choose a visual format that aligns with organizational priorities and decision-making processes, as well as the selected health equity scoring approaches' innate characteristics. Effective visualization options include:

Run Charts: Best for methods like the *Health Equity Summary Score* that measure improvement across years.

Recommendation: Add intervention markers (e.g., policy changes, outreach programs) to show pre/post change.

Heatmaps: Best for methods with multiple sub-rates (e.g., *Population Health Performance Index*) to show geographic variation.

Recommendation: Clearly indicate which regions have the highest and lowest health equity scores and annotate any indexing logic (e.g., Population Health Performance Index = 0 for least equitable)

Bar Charts: Useful for comparing composite scores across groups or years. Ideal for comparing composite scores across demographic groups or tracking year-over-year changes.

Recommendation: Ensure all measures use the same scale and label reference groups clearly to avoid misinterpretation.

Scatter Plots: Examine variation within and between groups. Helpful for visualizing spread and identifying outliers in health equity scores.

Recommendation: Add reference lines or simple annotations to highlight outliers and prevent misinterpretations.

Interactive Dashboards: Allow for detailed analysis and exploration tailored to the target audience. It is important to align dashboard filters with demographic categories and reference groups used in the scoring method to maintain consistency.

Recommendation: Include drill-down functionality to view underlying measures and populations contributing to composite scores.

Strategies for Effective Storytelling through Data Visualization[18,19]

Data visualization should do more than present numbers. It should tell a story that connects data to real people, impact and action. Storytelling transforms metrics into meaningful insight that helps specific audiences understand the explanation for collecting the underlying data and its relevance to their roles and decision-making. When the data narrative illustrates how closing gaps leads to better patient outcomes and more efficient resource use, it positions health equity as both a moral and strategic priority.

For executives, emphasize high-level trends, performance gaps and important insights to inform strategic decision-making).[20] Storytelling helps link health equity scores to organizational goals and potential return on investment (ROI).

For example, instead of reporting that "preventive care rates are lower among Spanish speaking patients," a story might describe how the equity score improved by 0.15 on a 0-1 scale, a 9% relative improvement from the prior year, after implementing bilingual outreach and extending clinic hours. This helps executive leaders realize the tangible benefits of investing in health equity initiatives.

For operational teams, provide detailed analyses of specific metrics, disparities and interventions.[21] Data storytelling helps bring the purpose of health equity work to life. When staff can connect performance metrics to real stories, they better understand how their daily work drives measurable change.

Leveraging Health Equity Scoring for Collective Accountability

While implementing a health equity scoring approach, organizations can consider a few different paths, such as building coalitions or aligning with reasonable business use cases, to establish community support and accountability for driving impactful health equity initiatives.

> "Having these distinct approaches was… helpful… in determining if these are metrics that are available and used by other peer institutions or comparable institutions. How would we fall?"
> – Community Health Impact Manager

Building Coalitions with Other Regional Partners

Once organizations establish strong internal capability and leadership support, they may be motivated to explore opportunities to gather external support for implementation from trusted partners. Building or joining coalitions can allow organizations to collectively standardize their implementation of health equity scoring methods. Alignment across organizations in a coalition can facilitate coordinated action and create a synergistic effect in addressing health disparities within their overlapping communities.

KEY QUESTIONS

These questions support organizations in building health equity-focused coalitions and aligning common quality improvement goals with other organizations who also serve similar populations.

- Who in our network of partners is currently engaged in health equity initiatives or has expressed health equity priorities? Are there any existing areas of commonality between the partner(s) and our organization? Areas that could potentially result in differences?
- Are there any policy-level initiatives that create alignment between our organization and another? Are there interested parties on the legislating level that align with our populations of interest, clinical focus areas or health equity targets? Do they have ongoing opportunities for collaboration and coalition that our organization can join?

State Collaborative for Health Equity Advancement

After realizing the importance of having clear alignment and communication, one organization joined a collaborative of Chief Health Equity Officers in their state to align overall large-scale health equity initiatives and provide support within the network. Leaders are key players in upholding networks to move the needle on health equity. For additional insight into how to keep leaders engaged and gather buy-in, reference the section on *Building Staff Capacity*.

Strategies for Implementing Scoring Methodologies Across a Coalition

KEY QUESTIONS

These questions help align key needs and goals across a coalition once formed.

- After forming a coalition, what are the key needs and/or quality improvement goals that each organization in the coalition desires to capture through health equity scores? Do these goals align closely, or are there key differences?
- What types of comparisons and frames of reference will be useful to us as we set benchmarks? What types of health equity scoring methods are we familiar with or have we already implemented? How do they differ or align with other coalition members?

Below are some key strategies for working with external organizations in the coalition to implement a health equity scoring approach:

1. Align With Organizations Across Various Levels of the Healthcare System.
2. Identify Advanced Health Equity Analytics Methods with the Most Business Value.
3. Align Across Coalition on Technical Definitions and Details.
4. Encourage Independent Collaboration Among Members of Leadership.
5. Define Accountability Across Teams.

As your coalition works towards implementing a health equity scoring method for use, consider the value of setting a precedent as an early adopter of that method. As adoption of these methods spreads, their validity and capacity to identify nuanced disparities across populations and within different contexts will also strengthen.

"It's also been something really powerful… when we partner with other healthcare providers or things to be able to send them back our cut of their data. So, if I'm a hospital partner, I see my payer mix all day long. I can't see just [one organization's] slice of folks, and what that performance looks like, and how we're doing. Being able to have powerful data that shows these intricacies, and then I could give back to a provider, I think it's also very appealing…"
– Associate Vice President of Health Equity

Gathering External Support for Health Equity Scoring Methodologies

As coalitions aim to implement health equity scoring methodologies and drive collective quality improvement in their region, the risk of misalignment with the broader social and political landscape may also be a key concern raised by other peer organizations or funders. Regardless of whether health equity is explicit in policy priorities or funding, addressing inequities remains a fundamental element of healthcare quality improvement.

To navigate this challenge, showing alignment with one of the following business use cases may assist with validating the importance of implementing health equity scoring methodologies:

1. Needing to meet regulatory compliance for state entities or programs with financial bonuses/penalties.
2. Framing initiatives under quality improvement to attract partners to increase reach and improve efficiency in care delivery.
3. Ensuring accountability across organizations through common incentives.
4. Closing persistent gaps in care to meet quality benchmarks and value-based contracting targets.

Call to Action

Now that you have finished reviewing this Playbook, your organization may feel motivated to take the next step in adopting a health equity scoring approach to better understand 1) where disparities lie in your populations served and 2) how ongoing initiatives/interventions are supporting improvements in health equity. However, one of the most pertinent questions may still be "where do I start?" While the path ahead looks different across health plans and health systems and depends heavily on your organization's resourcing capabilities and strategic actions, below are a few key steps that we encourage you to act on now to advance your organization's capability to identify, interpret and intervene to reduce health gaps/disparities across your population.

Call-To-Action Estimated Timeline & Recommended Next Steps

PHASE 1: EARLY BUY-IN ~ 2 months

STEP 1

Review Key Questions with Quality Improvement team to define the following:

1. Purpose of health equity scores for your organization (WHY)
2. Which populations you serve (WHO)
3. A strategic quality improvement target (WHAT)

STEP 2

Engage key leaders at your health system (respected clinical staff, population health experts and data scientists) early on to drive adoption.

STEP 3

Collaborate closely with your health equity team to identify populations/service areas (including intersectional groups) that experience substantially worse outcomes.

PHASE 2: PILOT TESTING & ANALYSIS ~ 9 months

STEP 4

Brainstorm a field-testing approach with at least two desired health equity scoring approaches (examples listed in Companion Resource: Step-by-Step Metric Calculation Guide) and at least two populations for comparison. Recruit data science teams to collect and analyze population data per the Calculation Guide.

STEP 5

Host a discussion about the following with key leaders: Which methods are 1) the most useful to providers, 2) the most useful to population health teams, 3) align with organizational priorities/ strategy and 4) facilitate business action? Which data elements are missing?

STEP 6

With this initial data on disparities, identify how allocation of resources or changes within health plan processes can improve upon these areas. Note at least three areas for improvement.

EXAMPLES

HEALTH PLAN: Design effective outreach strategies to connect populations with higher care disparities with appropriate community resources for food, transportation, housing, etc.

HEALTH SYSTEM: Deploy additional care management touchpoints for continuous glucose monitoring and increase patient education on diabetes management for Black and Latino populations, who have higher average A1C levels.

PHASE 3: IMPLEMENTATION OF SCORING APPROACH ~ 4 months

STEP 7

Present these findings to leadership and aim to secure additional resources for semi-annual health equity score reports.

EXAMPLES

HEALTH PLAN: Garner additional funding for real-time improvements and determine if there are any changes that can be applied across business units.

HEALTH SYSTEM: Allocate resources/funding that can address population health disparities and provide community benefit.

STEP 8

Recruit data scientists to create an automated semi-annual report (at minimum) or comprehensive real-time dashboard that analyzes the current population of interest and reports year-over-year trends.

STEP 9

Work with clinical, health equity and data science teams to consider scoring approaches to build out strategy (3 I's Framework) for including additional clinical areas, populations or measures.

PHASE 4: ROUTINE RE-EVALUATION Annually

STEP 10

One year after the implementation of the health equity scoring method, re-assess the following factors using data:

1. Populations represented
2. Measures and/or demographic factors evaluated
3. Reporting methods
4. How health equity scoring approach drives population health improvement

STEP 11

Note any information gaps or discrepancies about your population. As required, change factors 1-4 above to better inform your organization's strategic decision-making and resource allocation.

This can be done by returning the Phase 2 and testing other approaches to align with your organizational needs.

STEP 12

Identify and align population benchmarks with other organizations serving the same population(s) or in same coalition.

EXAMPLES

HEALTH PLAN: There has been an increase of enrollment from three nearby counties, so the health plan expands its population to include these service areas in future data.

HEALTH SYSTEM: Due to recent demographic shifts in the population (shown in data), the health system now selects the Hispanic population as the a priori reference group (rather than White).

Companion Resource: Step-by-Step Metric Calculation Guide

This guide is meant to provide an overview of and step-by-step guide for calculating four different health equity scoring methods tested in real-world data by NCQA: Health Equity Metric, Humana's approach, Population Health Performance Index and Health Equity Summary Score. While other methods to calculate health equity scores exist, this guide outlines decision-making steps for each method that was evaluated in the NCQA pilot study.

It can be difficult to understand how the health equity scores are derived without simplified technical explanations. This document is meant to be referenced by data analysis teams throughout the process of setting up a health equity scoring method and can facilitate understanding among less technically oriented staff.

Table 1 provides an overview of the structure of the methods and their respective strengths and limitations.

TABLE 1: Summary of Technical Considerations for Each Health Equity Scoring Method Evaluated

METHODS	COMPARISON POINTS	REFERENCE GROUP AND STRATIFICATION METHOD	STRENGTHS	LIMITATIONS
Health Equity Metric (HEM)	Simple reference group	A priori, Intersectional	Straightforward calculation; presents health equity scores on each measure and in aggregate	Narrow range makes it challenging to differentiate between good and poor performance; does not always reflect disparities or clinical reality per *a priori* reference group
Humana's Approach	Between unit	A priori, Intersectional	Considers inequality within a unit as well as between units	Between-unit scores have a narrow scoring range that makes it challenging to differentiate between good and poor performance; within-unit scores are influenced by the degree of denominator overlap
Population Health Performance Indicator (PHPI)	Between unit	Empirical, Discrete	Provides helpful visual that breaks down data by measure dimension and region	Complex to interpret; difficult to assess in terms of absolute rate values without consulting supplemental data
Health Equity Summary Score (HESS) / Within Plan Improvement (WPI)	Year-over-year change	Empirical, Discrete	Straightforward calculation; ability to separate results into constituent measures and subgroups	Requires two years of data

HEALTH EQUITY METRIC

Overview

The original Health Equity Metric (HEM)[22] takes a single health quality measure, stratified simultaneously on all selected social dimensions, and calculates the median value for each group. It then compares everyone's outcome to that of the (a priori) reference group and takes a sum-of-squares average to produce a health equity score. All scores range from 0-1, where higher values indicate greater health equity. Scores from multiple quality measures can be averaged to achieve an aggregate score across a measure bundle.

Calculation Guide

- First, calculate stratified performance rates for all groups.
- Identify reference groups (either through *a priori* or empirical methods). Performance rate for the reference group will be used as the benchmark.
- Subtract performance rates of each other group from the benchmark rate. Then divide by the benchmark to standardize the rate. This will identify a proportion of inequality.
- Square the differences found, sum them all and then divide by 1 less than the total count of groups. Subtract this from 1 to make it an equity (rather than inequity) score.
- These will result in the HEM score for each measure. To find the aggregate HEM, average all the measure-specific HEM scores.

Example

In this example, White, high-income men will be set as the *a priori* reference group. Performance rates of White, high-income men on the Blood Pressure Control for Patients with Diabetes (BPD) measure will be the benchmark rate. Say the performance rate for this group is 0.79. Instances of rates being higher than the benchmark are set to zero. **Table 2** outlines example performance rates for 11 intersectional groups, the in-between calculations as prescribed by the HEM method and the final HEM measure-specific score for the BPD measure example. Average this measure specific score with other HEM scores to identify an aggregate HEM score.

TABLE 2: HEM Example Rates and Calculations

GROUP	EXAMPLE RATES	DIFFERENCE BETWEEN GROUP AND BENCHMARK RATES	DIFFERENCE VALUES DIVIDED BY BENCHMARK RATE	SQUARES OF STANDARDIZED DIFFERENCES	SUM OF ALL SQUARED VALUES	HEM MEASURE-SPECIFIC SCORE
A priori benchmark (White high-income men)	0.79	0	0	0	0.2388	**0.9783**
White low-income men	0.77	0.02	0.0253	0.00064009		
White high-income women	0.72	0.07	0.0886	0.00784996		
White low-income women	0.59	0.20	0.2532	0.06411024		
Black high-income men	0.75	0.04	0.0506	0.00256036		
Black low-income men	0.72	0.07	0.0886	0.00784996		
Black high-income women	0.61	0.18	0.2278	0.05189284		
Black low-income women	0.57	0.22	0.2785	0.07756225		
Asian high-income men	0.83	0	0	0		
Asian low-income men	0.69	0.10	0.1266	0.01602756		
Asian high-income women	0.80	0	0	0		
Asian low-income women	0.71	0.08	0.1013	0.01026169		

HUMANA'S APPROACH

Overview

Humana's approach[23] calculates a composite rate at the person level across all applicable measures, then calculates an average rate for every (intersectional) stratification. The method subsequently calculates the difference between each group's rate and a reference group (set *a priori*) and averages these differences to get a between-group health equity score, ranging from 0-1, with higher values indicating greater health equity. It also averages the standard deviations for each group to generate a within group health equity score; this is an assessment of the variation in individual-level composite scores within each stratum.

Calculation Guide

Humana's approach calculates a *between group equity score* and a *within group equity score*. This is because not everyone within a group has the same experience and, therefore, the score attempts to represent that variance for each demographic group.

- The first step is aggregating at the patient level: calculate a score for each person across all measures for which they qualify prior to aggregating by demographic factors; if an individual meets the numerator and denominator for all selected measures, their personal score would equal 1.
- Average the personal rates for all individuals within a particular demographic group.
- Identify a reference group (either *a priori* or empirical) and begin comparing the reference group rate to the rates of each group.

- The average of all the differences is the *Between Group Disparity Score*. To achieve the *Between Group Equity Score*, calculate 1 minus the disparity score finding.
- The *Within Group Disparity Score* takes half of the average of the standard deviation for any given demographic group. Similarly, to achieve the *Within Group Equity Score*, calculate 1 minus the disparity score finding.
- Note: If you have a set of measures with differing initial populations—meaning different subsets of the studied population qualify for some measures, but not for others—*Within Group Equity Rates* will appear worse than in cases where the measure set has closely aligned initial populations.

Example

We will use the same initial numbers as the example for the HEM, but for the case of Humana, these rates represent the average of personal rates (rather than performance rates) for all individuals within intersectional demographic groups. Refer to step 1 of the *Humana Calculation Guide* for further context on identifying the personal rates.

For the purposes of the example, an *a priori* method will be used and White high-income men will be set as the reference group. When using an a priori method, when a group's rate is higher than the reference group, the difference value is set to 0. **Table 3** outlines the average of personal rates and the standard deviation of the personal rates, which are the starting data points needed to calculate the *Between Group Equity Score* and *Within Group Equity Score* as outlined by the Humana method. The table also includes the in-between calculations and outcome values for the *Between Group Equity Score* and *Within Group Equity Score* of the example rates.

TABLE 3: Humana Example Rates and Calculations

GROUP	AVERAGE OF PERSONAL RATES	STANDARD DEVIATION OF PERSONAL RATES	DIFFERENCE BETWEEN GROUP AND BENCHMARK RATES	BETWEEN GROUP DISPARITY SCORE (AVERAGE OF ALL DIFFERENCES)	BETWEEN GROUP EQUITY SCORE (ONE MINUS THE DISPARITY SCORE)	WITHIN GROUP DISPARITY SCORE (HALF THE AVERAGE OF THE STANDARD DEVIATION)	WITHIN GROUP EQUITY SCORE (ONE MINUS THE DISPARITY SCORE)
A priori benchmark (White high-income men)	0.79	0.326	0	0.089	0.911	0.137	0.863
White low-income men	0.77	0.238	0.02				
White high-income women	0.72	0.259	0.07				
White low-income women	0.59	0.246	0.20				
Black high-income men	0.75	0.237	0.04				
Black low-income men	0.72	0.314	0.07				
Black high-income women	0.61	0.255	0.18				
Black low-income women	0.57	0.272	0.22				
Asian high-income men	0.83	0.276	0				
Asian low-income men	0.69	0.328	0.1				
Asian high-income women	0.80	0.257	0				
Asian low-income women	0.71	0.276	0.08				

POPULATION HEALTH PERFORMANCE INDEX

Overview

The Population Health Performance Index [PHPI][24] calculates the health inequity of each reporting unit by measure, year and social dimension. Health inequity is defined as the difference between the groups experiencing the highest and lowest outcome rates. Social dimensions are treated discretely. The method then identifies the region with the lowest health equity and compares all other regions to that reference region. This produces a set of health equity scores ranging from 0 to 1, where higher scores indicate greater health equity relative to the region with the lowest health equity (which is indicated with a 0).

Calculation Guide

This metric requires subunits to compare; multiple states offer perfect comparison, but it is possible to break down by counties/regions or business units (such as multiple practice sites). Subunits should be mutually exclusive and discretely bound.

- Within each subunit and for each social dimension, calculate the difference in performance rates between every possible pairing. (In the case of race as a demographic of interest, this looks like White vs Black, White vs Native American, White vs Asian, Asian vs Black, Asian vs Native American, etc.) Select the maximum difference for each subunit as the basis for all other calculations. This is that unit's inequality index.
- Each entity's inequality index is divided by the highest inequality index (most inequitable unit). The most unequal entity will equal 1 (with 0 as the most equitable) and the lower the score, the more equitable that unit is.
- NCQA adjusted this by subtracting each score from 1 to provide an Equity Index (where 0 is the least equitable).

It is important to note that the resulting scores do not carry meaning outside of the specific context of the selected measures, identified subunits and the year of study. Given that units can vary in terms of which have the highest inequality depending on the measure, social dimension, year and included subunits, the reference group and resulting scores may vary greatly across configurations.

Example

For the BPD measure, Indiana's inequality index was 0.30, Ohio was 0.25 and Georgia was 0.40. It was identified that the greatest inequality was in Georgia. Then, entities' inequality indexes are divided by the largest inequality index. This would look like: Ohio 0.25/0.40, Indiana 0.30/0.40 and Georgia 0.40/0.40. Thus, the PHPI for Ohio is 0.63, Indiana is 0.75,and Georgia is 1.

Completing the adjustment to an Equity Index, Ohio's final score is 0.37, Indiana's is 0.25 and Georgia's is 0.

HEALTH EQUITY SUMMARY SCORE

Overview

The complete Health Equity Summary Score [HESS][25] was designed to compare health equity across health plans. For this study, NCQA adapted one part, the Within Plan Improvement [WPI] score, which evaluates each plan individually. The WPI score treats social dimensions discretely and calculates how much a plan's health equity has improved from one year to the next. These scores are first calculated for each discrete social dimension and for each measure. They are then averaged across measures to give a dimension-level score and then further averaged to the plan-level WPI score.

Calculation Guide

HESS requires at least two years of data, and the final assessment will be how much change occurred over two years. In summary, the metric identifies the leading group at baseline for each measure and each social dimension, then calculates the gain.

- First, ensure that the groups being evaluated are present and reportable (a sample of at least 30) in both years.
- By social dimension, identify which group has the highest outcome in year one (must be a group that is present and valid in both years of data). They will be the reference group.
- Calculate disparities between that leading group and all lagging groups. Keep the same group that was leading as the reference group for year two data.
- Subtract the second-year disparity from the first-year disparity. This is considered the Gain, which, with slight adjustment, will become the WPI Score.
- Calculate the raw improvement score. The raw improvement score is the difference in each group's rate between year one and year two (e.g., if a group's rate went from 0.75 to 0.77, they had a two-point raw improvement). It does not compare a group's rate to the leading group's score in the baseline year. If the group has a positive Gain but negative raw improvement, their WPI score will be set to 0. This is to avoid giving credit for disparity reduction if relative outcomes improved, but overall outcomes worsened. If their rate is lower in the second year than the first, they have negative gains, and the metric will capture that worsening disparity.
- Average the within plan improvement from all the lagging groups for each social dimension and for each measure. Roll up to the dimension level (e.g., race across all measures, geography for all measures) by averaging the separate scores. Then take the average across each submission across the social dimensions to get the WPI score of the particular entity. There will be one WPI score for each unit (e.g., if the given organization has three plans, they will have three aggregate WPI scores).
- To make the within plan improvement interpretable, divide the WPI score by a unit's initial disparity; this gives a proportional WPI score (the relative amount by which a unit's disparity changed).

In NCQA real-world analyses, plans were improving overall rather than worsening. There were cases where there was worsening, but this was usually when disparities were already low (particularly social dimensions and measures did not have large initial disparities).

Example

If the leading group has a rate of 0.80 in the first year and other groups had rates of 0.65 and 0.68 in that same year, then calculate the difference between those performance rates: 0.80 -0.65 = 0.15 and 0.80 - 0.68 = 0.12.

In the second year, the other groups had rates of 0.68 and 0.69. Calculate the difference between those rates and the baseline of the leading group: 0.80-0.68 = 0.12 and 0.80 - 0.69 = 0.11.

Then, identify the difference between the first- and second-year disparities: 0.15 - 0.12 = 0.03. This implies that the first lagging group had a three-percentage point increase in terms of catching up to the leading group in the initial year. For the other group: 0.12 - 0.11 = 0.01

Average all differences (within plan improvement score) of each social dimension and then average across measures. For the purposes of this example, the only average to take is 0.01 and 0.03, which is 0.02.

TABLE 4: HESS Example Rates and Calculations

GROUP	GROUP EXAMPLE RATES YEAR 1	GROUP EXAMPLE RATES YEAR 2	DIFFERENCE BETWEEN LEADING GROUP AND OTHER YEAR 1 RATES	DIFFERENCE BETWEEN BASELINE LEADING RATE AND YEAR 2 RATES	DIFFERENCE BETWEEN YEAR 1 AND 2 DISPARITIES	AVERAGE OF DIFFERENCES: WPI SCORE
Leading	0.80	Not Relevant	0	N/A	N/A	0.02
Other	0.68	0.69	0.12	0.11	0.01	
Other	0.65	0.68	0.15	0.12	0.03	

GENERAL GUIDANCE

Handling Race Vectors

For the purposes of analysis, race/ethnicity must be a single, discrete variable. NCQA built its analysis to identify Hispanic ethnicity first and included a *Two or More Races* group to account for individuals who selected multiple race options. Your organization's population can inform this schema. For example, if an organization does not serve many Hispanic individuals, identifying Hispanic individuals over other possible markers may not be the best approach. Another example—if an organization serves a large proportion of Asian individuals, you may want to break down the demographic group into smaller subpopulations (e.g., Chinese, Asian Indian, Filipino, Korean, Bangladeshi, Pakistani, Japanese, Vietnamese).

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- ChristianaCare

ABOUT THE FOUNDATIONS

The California Health Care Foundation (CHCF) is an independent, nonprofit philanthropy that works to improve the healthcare system so that all Californians have the care they need. We focus especially on making sure the system works for Californians with low incomes and for communities who have traditionally faced the greatest barriers to care. We partner with leaders across the healthcare safety net to ensure they have the data and resources to make care more just and to drive improvement in a complex system. CHCF informs policymakers and industry leaders, invests in ideas and innovations, and connects with changemakers to create a more responsive, patient-centered healthcare system.

The Commonwealth Fund works to promote a high-performing, equitable healthcare system that achieves better access, improved quality, and greater efficiency, particularly for society's most vulnerable, including people of color, people with low income, and those who are uninsured. The Fund carries out this mandate by supporting independent research on healthcare issues and making grants to improve healthcare practice and policy. An international program in health policy is designed to stimulate innovative policies and practices in the United States and other industrialized countries.

References

1 Institute for Healthcare Improvement. (2021). Advancing health equity: A guide to systematically identify and evaluate health disparities [White paper]. https://www.ihi.org/library/white-papers/advancing-health-equity-approach-systematically-identify-and-evaluate-health

2 Azar, K. M. J., Hailu, E. M., Berkowitz, R., Reno, D., Walden, M., Grey, J., & Pressman, A. (2023). Health System Dashboard Metrics: Intersectional Approach to Making Health Equity Gaps Visible and Actionable. CMS.gov. https://www.cms.gov/files/document/intersectional-approach-making-health-equity-gaps-visible-and-actionable.pdf

3 Institute for Healthcare Improvement. (2021). Advancing health equity: A guide to systematically identify and evaluate health disparities [White paper]. https://www.ihi.org/library/white-papers/advancing-health-equity-approach-systematically-identify-and-evaluate-health

4 Office of Management and Budget. (2024, March 29). Revisions to OMB's Statistical Policy Directive No. 15: Standards for maintaining, collecting, and presenting federal data on race and ethnicity (89 FR 22182–22196) [Notice of decision]. Federal Register. https://www.federalregister.gov/documents/2024/03/29/2024-06469/revisions-to-ombs-statistical-policy-directive-no-15-standards-for-maintaining-collecting-and

5 Rural Health Information Hub. (n.d.). Am I Rural? Tool. Retrieved January 15, 2026, from https://www.ruralhealthinfo.org/am-i-rural/help#classification

6 Centers for Medicare & Medicaid Services. (2024). CMS Office of Minority Health: Data Definitions [PDF]. https://www.cms.gov/files/document/cms-2024-omh-data-definitions.pdf

7 American Thoracic Society. (2023). Respiratory health and cities. American Journal of Respiratory and Critical Care Medicine, 207(6), 675–687. https://doi.org/10.1164/rccm.202304-0759VP

8 Centers for Disease Control and Prevention. (2024). Maternal mortality rates in the United States, 2023. National Center for Health Statistics. Retrieved January 15, 2026, from https://www.cdc.gov/nchs/data/hestat/maternal-mortality/2023/maternal-mortality-rates-2023.htm

9 The Trevor Project. (2024). The Trevor Project's 2024 U.S. National Survey on LGBTQ Youth Mental Health. Retrieved January 15, 2026, from https://www.thetrevorproject.org/survey-2024/

10 Centers for Disease Control and Prevention. (2024). Suicide data and statistics. Retrieved January 15, 2026, from https://www.cdc.gov/suicide/facts/data.html

11 Cohen, S. A., & Greaney, M. L. (2023). Aging in Rural Communities. Current Epidemiology Reports, 10(1), 1–16. https://doi.org/10.1007/s40471-022-00313-9

12 Crenshaw, K. (1989). Demarginalizing the Intersection of Race and Sex: A Black Feminist Critique of Antidiscrimination Doctrine, Feminist Theory and Antiracist Politics. University of Chicago Legal Forum, 1989(1), 139–167.

13 Crenshaw, K. W. (1991). Mapping the margins: Intersectionality, identity politics, and violence against women of color. In Critical race theory: The key writings that formed the movement (pp. 357–383). Routledge. https://doi.org/10.4324/9780203060902-6

14 Office of the Assistant Secretary for Planning and Evaluation. (2023). Intersectionality in research and analysis [PDF]. U.S. Department of Health & Human Services. https://aspe.hhs.gov/sites/default/files/documents/f7f4942e1d0591c717c06348777edfb3/Intresectnality-Resrch-Anlysis.pdf

15 Institute for Healthcare Improvement. (2021). Advancing health equity: A guide to systematically identify and evaluate health disparities [White paper]. https://www.ihi.org/library/white-papers/advancing-health-equity-approach-systematically-identify-and-evaluate-health

16 Meharry Medical College. (n.d.). Clinical data scientist [Job posting]. https://meharrymedicalcollege.wd12.myworkdayjobs.com/en-US/external/job/Clinical-Data-Scientist_JR101026

17 Design Kit: The Human-Centered Design Toolkit. IDEO. (2015, June 11). https://www.ideo.com/journal/design-kit-the-human-centered-design-toolkit

18 Gallifant, J., Kistler, E. A., Nakayama, L. F., Zera, C., Kripalani, S., Ntatin, A., Fernandez, L., Bates, D., Dankwa-Mullan, I., & Celi, L. A. (2023). Disparity dashboards: an evaluation of the literature and framework for health equity improvement. The Lancet. Digital health, 5(11), e831–e839. https://doi.org/10.1016/S2589-7500(23)00150-4

19 Thorpe, L. E., & Gourevitch, M. N. (2022). Data dashboards for advancing health and equity: proving their promise? American Journal of Public Health, 112(6), 889-892.

20 American Hospital Association. (2021). Using data to reduce health disparities and improve health equity. AHA Center for Health Innovation. https://www.aha.org/system/files/media/file/2021/03/Market_Insights_Disparities_Data.pdf

21 American Hospital Association. (2021). Using data to reduce health disparities and improve health equity. AHA Center for Health Innovation. https://www.aha.org/system/files/media/file/2021/03/Market_Insights_Disparities_Data.pdf

22 Zimmerman, F. J., & Anderson, N. W. (2019). Trends in Health Equity in the United States by Race/Ethnicity, Sex, and Income, 1993-2017. JAMA Network Open, 2(6), e196386. https://doi.org/10.1001/jamanetworkopen.2019.6386

23 Russell, K. S., Ma, S., Siddiqui, M., Shrank, W. H., & Olayiwola, J. N. (2022). Building the Foundation for Reducing Disparities in Medicare Advantage. Catalyst Non-Issue Content, 3(3). https://doi.org/10.1056/CAT.22.0068

24 Kindig, D., Lardinois, N., Asada, Y., & Mullahy, J. (2018). Considering mean and inequality health outcomes together: The population health performance index. International Journal for Equity in Health, 17(1), 25. https://doi.org/10.1186/s12939-018-0731-2

25 Agniel, D., Martino, S. C., Burkhart, Q., Hambarsoomian, K., Orr, N., Beckett, M. K., James, C., Scholle, S. H., Wilson-Frederick, S., Ng, J., & Elliott, M. N. (2021). Incentivizing Excellent Care to At-Risk Groups with a Health Equity Summary Score. Journal of General Internal Medicine, 36(7), 1847–1857. https://doi.org/10.1007/s11606-019-05473-x

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