Institute *for* Healthcare Improvement

WHITE PAPER

Achieving Health Equity:
A Guide for Health Care Organizations

AN IHI RESOURCE

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The Institute for Healthcare Improvement (IHI) is a leading innovator in health and health care improvement worldwide. For more than 25 years, we have partnered with a growing community of visionaries, leaders, and frontline practitioners around the globe to spark bold, inventive ways to improve the health of individuals and populations. Together, we build the will for change, seek out innovative models of care, and spread proven best practices. To advance our mission, IHI is dedicated to optimizing health care delivery systems, driving the Triple Aim for populations, realizing person- and family-centered care, and building improvement capability. We developed IHI White Papers as one means for advancing our mission. The ideas and findings in these white papers represent innovative work by IHI and organizations with whom we collaborate. Our white papers are designed to share the problems IHI is working to address, the ideas we are developing and testing to help organizations make breakthrough improvements, and early results where they exist.

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Foreword

In 2001, the Institute of Medicine described "Six Aims for Improvement" in its influential report, *Crossing the Quality Chasm: A New Health System for the 21st Century*. The "Six Aims" called for health care to be safe, effective, patient-centered, timely, efficient, and equitable. In the 15 years since the *Chasm* report, health care has made meaningful progress on five of the six aims (though there is much more work to be done on all). But progress on the sixth — equity — has lagged behind. Forward-thinking organizations have made strides, and pockets of excellence are emerging, but the lack of widespread progress leads some to call equity the "forgotten aim."

At IHI, we took steps to keep all six aims top of mind — we even printed them on our hallway walls. Despite this daily reminder, as a leader of IHI, I have to admit to a frustration with our failure to help move the needle on health equity. I know I share this frustration with all of my IHI colleagues, and with so many of you. We hope this IHI White Paper can help lay the foundation for a true path to improving health equity.

Hope, of course, is not the same as a plan. So, this white paper offers practical advice, executable steps, and a conceptual framework that can guide any health care organization in charting its own journey to improved health equity. The framework stresses the importance of making health equity a strategic priority at every level of an organization, especially at the top. The framework emphasizes a systems view of how we've arrived at health inequities, and how they can be mitigated. And it urges us to work both within our walls, dismantling the institutional racism and implicit biases that hold us back; and beyond our walls, creating and nurturing new partnerships in our communities that can make an impact on all the social determinants of health.

More than anything else though, the framework and all of the innovative and passionate work described in this paper demand that we expand our understanding of how health care can improve health equity. Improving only what we're doing now isn't enough; real improvement will require broadening and deepening our connections to our staffs, our patients, and our communities.

The United States has a unique history of racism that has resulted in disparate and unjust health outcomes. Indeed, institutionalized racism operates all over the world. At the same time, the more we learn about how race, gender, ethnicity, sexual orientation, age, mental health, disability, geographic location, and other factors contribute to health inequities, the more our determination to make a difference grows. This IHI White Paper is part of a larger call to all of you to bring your unique skills, knowledge, passion, and good ideas to those who need them most.

Thank you for reading.

Derek Feeley
President and CEO
Institute for Healthcare Improvement

Executive Summary

Significant disparities in life expectancy and other health outcomes persist across the United States. Health care has a significant role to play in achieving health equity. While health care organizations alone do not have the power to improve all of the multiple determinants of health for all of society, they do have the power to address disparities directly at the point of care, and to impact many of the determinants that create these disparities.

This white paper provides guidance on how health care organizations can reduce health disparities related to racial or ethnic group; religion; socioeconomic status; gender; age; mental health; cognitive, sensory, or physical disability; sexual orientation or gender identity; geographic location; or other characteristics historically linked to discrimination or exclusion.

To inform this work, IHI reviewed selected literature, interviewed numerous experts, and conducted site visits to exemplary health care organizations working to improve health equity in their communities. The result, presented in this white paper, is a framework for health care organizations to improve health equity in the communities they serve. There are five key components of the framework:

- Make health equity a strategic priority;
- Develop structure and processes to support health equity work;
- Deploy specific strategies to address the multiple determinants of health on which health care organizations can have a direct impact, such as health care services, socioeconomic status, physical environment, and healthy behaviors;
- Decrease institutional racism within the organization; and
- Develop partnerships with community organizations to improve health and equity.

The white paper also describes practical issues in measuring health equity, presents a case study of Henry Ford Health System, and includes a self-assessment tool for health care organizations to assess their current state related to each component of the framework. The framework is a continuation of IHI's work, which began in 2007, on the Triple Aim: improve the individual experience of care, improve the health of populations, and reduce the per capita costs of care for populations. Health equity is not a fourth aim, but rather an element of all three components of the Triple Aim. The Triple Aim will not be achieved until it is achieved for all.

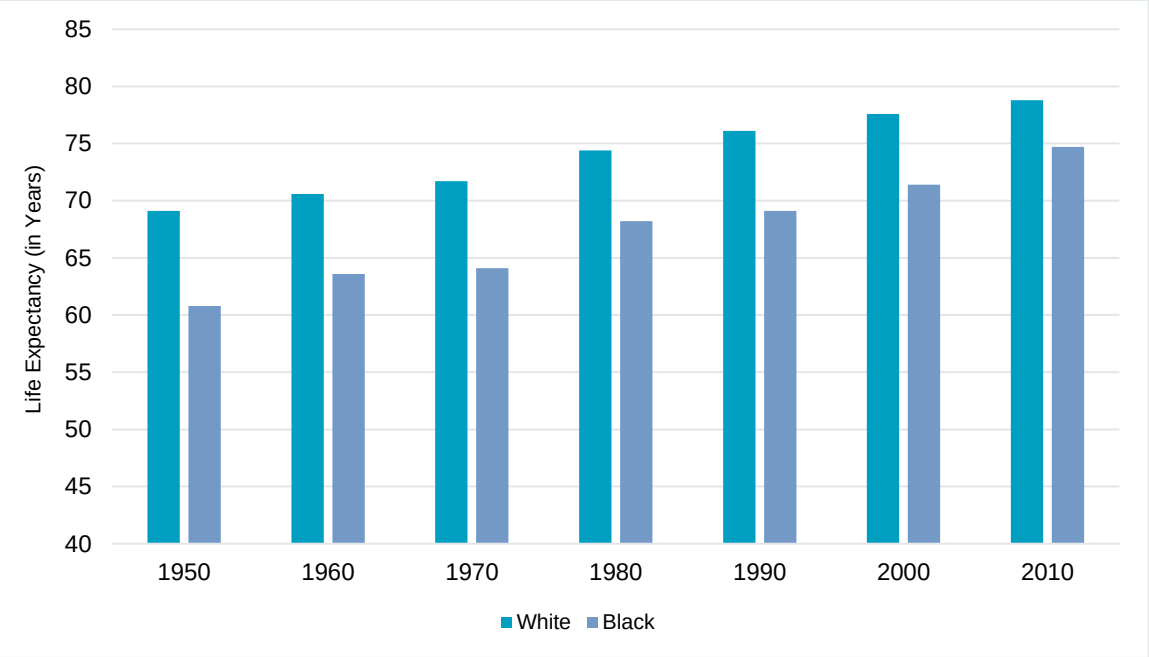
Introduction

Tommy Cannon died at the age of 62. A black American, he lived his entire life on Highway 29 in Perry County, near Marion, Alabama, in a region known as the Black Belt. He was deeply religious, a hard worker, honest, and generous.

In his late 50s, he was diagnosed with type 2 diabetes. Like many other older black Americans, then and now, he had no source of regular preventive health care. One day in 1973 when Tommy became very ill, he waited hours in a segregated doctor's office waiting room trying to receive care. When he was finally seen, the physician told him to go to a hospital 50 miles away because he was so sick. Tommy Cannon died the next day at age 62 from sepsis due to a ruptured appendix at a hospital in Selma, Alabama, without ever being seen by a physician.[1]

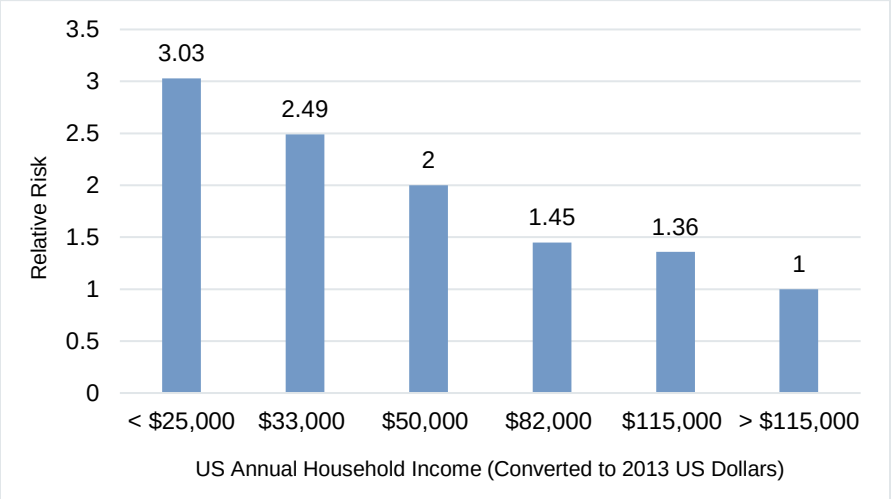
In 2013 the life expectancy at birth for men in Perry County, Alabama, was 67.4 years[2] — compared to 76.3 years, the national average for males in the US for the same year.[3] Perry County is rural, very poor, and its citizens are primarily black. Geography, income, and race are three important determinants of health in the US. Men in Perry County should be living longer today, and Tommy Cannon's death in 1973 might have been prevented if he had received care sooner. Figure 1 shows that, even with improvements over time, life expectancy for black Americans has lagged behind that of white Americans since 1950; indeed, life expectancy of black Americans in 2010 was equal to that of white Americans in 1980.

Figure 1. Life Expectancy of Blacks and Whites in the US (1950-2010)[4]



Health disparities are not limited to race and ethnicity. Figure 2 shows the gradient of relative risk of mortality for different income levels among US households. Compared to households with annual incomes greater than $115,000 (referent), households with lower incomes have a higher relative risk of mortality, which increases with decreasing income.

Figure 2. Relative Risk* of All-Cause Mortality by US Annual Household Income Level[5,6]



**NOTE: Relative risk is defined as a measure of the risk of a certain event happening in one group compared to the risk of the same event happening in another group.*

Even in 2016, significant disparities in life expectancy and other health outcomes persist across the United States.[7] These health inequities are observed across many intersecting demographics. The goal of this white paper is to provide guidance on how health care organizations can reduce health disparities related to "racial or ethnic group; religion; socioeconomic status; gender; age; mental health; cognitive, sensory, or physical disability; sexual orientation or gender identity; geographic location; or other characteristics historically linked to discrimination or exclusion."[8]

These factors are, of course, closely linked. Populations are often separated into distinct groups: heterosexual or LGBTQ; black or white; women or minorities. Making these distinctions is important for understanding differences between various populations. However, these distinctions present a significant problem, as individuals simultaneously possess many characteristics. Women who are Hispanic and LGBTQ are, at the same time and with the same significance, women *and* Hispanic *and* LBGTQ. Thinking about an individual through only one of those lenses does not capture a complete understanding. This idea is called "intersectionality" — a framework for understanding how "multiple social identities such as race, gender, sexual orientation, socioeconomic status, and disability intersect at the micro level of individual experience to reflect interlocking systems of privilege and oppression."[9] A growing body of research examining the relative effects of different sociodemographic characteristics on health (for example, the relative effects of race and socioeconomic status on risk of mortality) will continue to elucidate the joint and independent effects of various characteristics on health outcomes.[10] For now, understanding the relative impact that, for example, race/ethnicity has over socioeconomic status, or gender has over race, or income has over gender, remains an open question for researchers.

Evidence suggests that health care's proportional contribution to premature death is only approximately 10 percent, with the remainder due to multiple, non-medical determinants: behaviors (40 percent); genetic predisposition (30 percent); social circumstances such as employment, housing, transportation, and poverty (15 percent); and environmental exposure (5 percent).[11] These factors do not exist in isolation; for example, the ability to engage in healthy behaviors (e.g., healthy eating) is determined by an individual's social circumstances (e.g., access to affordable, healthy food). Health care organizations alone do not have the power to improve all of the multiple determinants of

health for all of society, but they do have the power to address disparities directly at the point of care, and to impact many of the determinants that create these disparities.

Health care has a significant role to play in achieving health equity. The intent of this white paper is to provide guidance for health care organizations to make health equity a strategic priority, create the governance structure and processes to support this work, tackle the multiple determinants of health on which these organizations can have an impact, recognize and decrease institutional racism in their own organizations, and build partnerships with others in the community to improve health equity.

Definitions

It is important to establish clear definitions of the terms used in this white paper: population health, social determinants of health, health equity, health disparity, health inequity, and health care disparity.

- **Population health:** Defined in a 2003 article in the *American Journal of Public Health* by David Kindig, MD, PhD, and Greg Stoddart, PhD, as "the health outcomes of a group of individuals, including the distribution of such outcomes within the group."[12] Health care organizations generally define population in two different ways: either the communities in their geographic service area or the patients actually seen in their organization.

- **Social determinants of health:** Defined by the World Health Organization (WHO) as "the circumstances in which people are born, grow up, live, work and age, and the systems put in place to deal with illness. These circumstances are in turn shaped by a wider set of forces: economics, social policies, and politics."[13]

- **Health equity:** To define health equity, we turn to the work of Professor Margaret Whitehead, head of the WHO Collaborating Centre for Policy Research on the Social Determinants of Health. Most countries use the term "inequalities" to refer to socioeconomic differences in health — that is, health differences "which are unnecessary and avoidable but, in addition, are also considered unfair and unjust." Whitehead goes on to state that, when there is equity in health, "ideally everyone should have a fair opportunity to attain their full health potential and, more pragmatically, no one should be disadvantaged from achieving this potential, if it can be avoided."[14] This is the definition IHI uses to guide our work on improving health equity.

- **Health disparity and health inequity:** Health disparity is defined as the difference in health outcomes between groups within a population. While the terms may seem interchangeable, "health disparity" is different from "health inequity." "Health disparity" denotes differences, whether unjust or not. "Health inequity," on the other hand, denotes differences in health outcomes that are systematic, avoidable, and unjust.

- **Health care disparity:** Defined by the Institute of Medicine as "racial or ethnic differences in the quality of health care that are not due to access-related factors or clinical needs, preferences, and appropriateness of intervention."[15] This white paper focuses on disparities in health outcomes rather than the provision of health care; however, the equitable provision of health care is essential to reducing disparities in health outcomes.

Health care organizations have a significant opportunity to improve health equity in the communities they serve. As Antony Sheehan, former president of the Church Health Center in

Memphis, Tennessee, said in an interview, "Health services should be a conduit to mitigating the social determinants that stand in the way of health and wellbeing."

Methods

As part of our effort to understand how health systems can impact health equity in their communities, IHI led four 90-day Innovation Projects on health equity in 2015.[16] The purpose of these sequential 90-day cycles was to design and test a framework for health systems to impact the multiple determinants of health and make significant improvements in health equity in the communities they serve. IHI developed the framework described in this white paper based on the work of these Innovation Projects, which included scans of the current published literature on health equity; more than 30 expert interviews, including interviews with patients; site visits; and learning from exemplary health care systems on the cutting edge of working to improve health equity in their communities (see Appendix A).

The Business Case for Health Equity

In addition to the moral argument for achieving health equity and the fact that improving health care quality and population health will require reducing health disparities, there is a strong business case for accelerating this work at the national, state, and individual health system levels. Health disparities not only result in poorer health outcomes for historically marginalized populations; this excess disease burden also leads to increased costs for health systems, insurers, employers, and patients and families, as well as lower worker productivity due to higher rates of absenteeism and presenteeism (i.e., working while sick).[17,18]

Health disparities lead to significant financial waste in the US health care system. The total cost of racial/ethnic disparities in 2009 was approximately $82 billion — $60 billion in excess health care costs and $22 billion in lost productivity.[19] The economic burden of these health disparities in the US is projected to increase to $126 billion in 2020 and to $353 billion in 2050 if the disparities remain unchanged. A 2009 analysis by the Urban Institute projected that, between 2009 and 2018, racial disparities in health will cost US health insurers approximately $337 billion, including $220 billion for Medicare due to higher rates of chronic diseases among African Americans and Hispanics and the aging of the population.[20] Additionally, there is an opportunity cost of not reducing health disparities; for example, if death rates and health outcomes of individuals with a high school education were equivalent to those of individuals with college degrees, the improvements in life expectancy and health would translate into $1.02 trillion in savings annually in the US.[21]

Patients with complex health needs account for a disproportionate share of health care spending in the US,[22] and racial/ethnic minorities and individuals with lower socioeconomic status are more likely to have multiple chronic health conditions, and thus higher health care costs.[23] Additionally, racial/ethnic minorities and individuals with limited English proficiency in the US are more likely to suffer an adverse event, have inappropriate and often costly tests ordered, have a longer length of stay in the hospital, be readmitted to the hospital, and have ambulatory-sensitive hospitalizations (i.e., admissions due to illnesses that can often be managed effectively in an outpatient setting and generally do not result in hospitalization if managed properly).[24] This is largely due to a US health care system with ineffective communication processes, limited ability to adapt to different cultures, and an inability to meet people where they are, often identified as "health literacy." These events drive up costs and drive down scores on quality metrics.

Focusing efforts on prevention, improving care for these populations, and reducing these gaps in care can save health care organizations and insurers a significant sum, particularly as demographics continue to change and racial and ethnic minorities make up a larger share of the US population.[25] Large and small employers alike are very concerned with how to stem the tide of rising health care costs. As large employers in their communities, health care organizations also have a financial stake in reducing health disparities among their own employees, as well in the patient populations they serve. Healthy employees are more productive at work, take fewer sick days, and consume less health care, resulting in lower spending for employer-provided health coverage.

As health systems become increasingly focused on managing the health of populations and new payment structures hold them accountable for partial or full risk for the health of every patient they serve, these systems will need to consider the financial risk associated with continuing disparities in health outcomes. Meeting pay-for-performance targets for common chronic conditions such as diabetes will not be achievable without reducing disparities. While making the business case for health equity can be challenging, suggested approaches to address some important financial issues related to reducing disparities are included throughout the health equity framework section that follows.

A Framework for Health Care Organizations to Achieve Health Equity

In the article, "Producing Health, Consuming Health Care," Evans and Stoddart begin with a simplistic straw model: People have a disease and health care can cure it. Therefore, if individuals have access to health care, their health will improve.[26] However, evidence suggests that access to health care alone is insufficient to reduce health disparities. The authors build on that simplistic model and go on to develop a more nuanced approach that takes into consideration the social, physical, and economic environments, along with genetic factors, individual behaviors, and the interactions between them.[27]

In our work with health care organizations seeking to improve health equity, IHI adapted this more complex approach that considers the multiple determinants of health, as reflected in the health equity framework described below. Currently, most health systems are designed to produce inequitable outcomes. As Dr. Paul Batalden stated, "Every system is perfectly designed to get the results it gets."[28] Any organization that wants to improve equity must be prepared to fundamentally change the current system that is producing disparities in health outcomes. Thus, any health care organization that prioritizes decreasing health disparities must be prepared to make health equity a system property — that is, a system-level priority at all levels of the organization — and to profoundly alter the current system that is producing inequitable results. This is not an issue that can be delegated; addressing health equity requires a major commitment from top-level leadership. (See Appendix B for a case study of Henry Ford Health System, which describes their leadership commitment to health equity at all levels of the organization.)

For those health care organizations that are ready to begin or accelerate this work, we describe a framework of five core ideas, based on our research, to guide organizations in making health equity a system property (see Figure 3). The IHI Health Equity Self-Assessment Tool for Health Care Organizations (see Appendix C) helps organizations evaluate their current focus on health equity and improvement efforts related to the five components in the health equity framework.

Figure 3. A Framework for Health Care Organizations to Achieve Health Equity

1. Make Health Equity a Strategic Priority
- Leadership Commitment
- Sustainable Funding

1. Make Health Equity a Strategic Priority for the Health Care Organization

Demonstrate Leadership Commitment to Improving Health Equity at All Levels of the Organization

Health care leaders must be explicit that improving health equity is an organizational priority, both to support resource allocation for this work and to demonstrate that the organization is serious about reducing health disparities. For example, Bernard Tyson, CEO of Kaiser Permanente (KP), has been a strong advocate for the elimination of health care disparities.[29] Health care organizations need senior leaders to advocate for change and to establish health equity as a system property. One way to signal that health equity is a strategic priority is to build it into the executive compensation plan. At Robert Wood Johnson University Hospital (RWJUH), for example, 15 percent of executive compensation is linked to achieving health equity goals; performance against these goals is a key measure for all employees at the director level and above. In addition, to ensure that employees are working on equity goals cross-departmentally rather than in isolation, RWJUH aligns individual goals horizontally at the director level and above. In addition, in the strategic plan, equity is incorporated into all of the strategic organizational pillars.

Organizations should consider integrating improving health equity and impacting the multiple determinants of health into the organization's business plan. Leaders at HealthPartners in Minnesota, for example, have successfully adopted a community business model involving multisectoral partnerships across the community to address the non-medical social determinants

1. Make Health Equity a Strategic Priority
- Leadership Commitment
- Sustainable Funding

of health to accelerate improvement of public health in the Minneapolis-St. Paul area.[30] As part of this, their leadership reprioritized improving community health and equity from "nice-to-haves" to "must-haves" in their business plan.

Secure Sustainable Funding Through New Payment Models

Making health equity a strategic priority is greatly facilitated by sustainable funding through new payment systems at both the federal and state levels. Health care organizations in predominantly fee-for-service environments are not typically incentivized to invest in keeping people healthy; rather, the system is designed to reward volume and to address health care issues after people become sick. Organizations that are taking on financial risk under population-based payment models can do more. Funding methods such as those used for accountable care organizations are a step in the right direction because they reward interventions that improve the health of the population, but even more robust payment models such as full capitation will probably be needed. Bundled payment models that account for the health care needs of marginalized populations and do not penalize safety net providers have the potential to improve health equity by redirecting resources toward population health and value.[31]

As health systems take on population-level financial risk, reducing disparities in health outcomes will become a requirement for managing this risk. Examining financial models and contracts with payers to identify outcomes that can be or are currently tied to financial incentives for reducing disparities in that outcome can help identify areas of focus for disparities reduction under these new payment models. With the appropriate payment systems in place, organizations will be better equipped to implement population-level interventions to improve health equity.

2. Develop Structure and Processes
- Establish a Governance Committee
- Dedicate Resources

2. Develop Structure and Processes to Support Health Equity Work

Establish a Governance Committee to Oversee and Manage Equity Work across the Organization

A health equity strategy requires a supporting organizational structure that can manage the work. Because many equity-related elements need to be considered in the strategy (e.g., hiring, procurement of supplies, planning for new buildings, internal staff training, care redesign), organizations will need an oversight committee structure to enable people throughout the organization to work together on shared health equity goals. Tyler Norris, Vice President of Total Health Partnerships at KP, notes that organizations need an "all in" strategy to make this happen. At one level, health equity should be everyone's business. However, without a clear leader and governance structure for improving health equity organization-wide, it is less likely that the resources and attention will be sufficient to make a significant impact. For example, at Henry Ford Health System (HFHS), Kimberlydawn Wisdom, MD, MS, Senior Vice President, Community Health and Equity, and Chief Wellness and Diversity Officer, provides leadership to staff across the organization and ensures that they have significant resources to impact health equity. HFHS will soon be establishing a dedicated Center for Healthcare Equity.

Dedicate Resources in the Budget to Support Equity Work

In another example of building equity into the corporate structure, RWJUH has seven Business Resource Groups (BRGs) composed of staff across divisions.[32] Each BRG has an annual equity budget and is expected to use these funds to engage in health equity activities that impact the

workforce, patients, and the community. More than 5 percent of employees are members of at least one BRG. Each BRG has an executive sponsor, demonstrating that these units are built into the organizational structure with support from senior leadership. An additional benefit to the hospital is that employees who are members of BRGs have the highest Employee Engagement Scores.

These examples from KP, HFHS, and RWJUH illustrate how organizations have established structures to support and provide resources for their equity work.

3. Deploy Strategies to Address Determinants of Health
- Health Care Services
- Socioeconomic Status
- Physical Environment
- Healthy Behaviors

3. Deploy Specific Strategies to Address the Multiple Determinants of Health on Which Health Care Organizations Can Have a Direct Impact

To support the execution of the strategic priority of health equity, health care organizations need to develop specific activities to address the determinants of health on which they can have a direct impact, including health care services, socioeconomic status, physical environment, and healthy behaviors. While a discussion of key issues in the equitable provision of care such as health literacy, cultural competency and sensitivity, and availability of high-quality interpreter services is beyond the scope of this paper, these issues are essential to improving health and health care equity and must be considered in the design of care delivery for disadvantaged populations.[33,34,35,36]

Health Care Services

Collect and analyze data to understand where disparities exist.

To improve health equity, organizations first need to understand where disparities exist. This requires the accurate collection of race, ethnicity, and language (REAL) data, along with the resources to analyze it.[37] Health care organizations have not always collected these data. The American Recovery and Reinvestment Act of 2009 incentivized the adoption and meaningful use of interoperable health information technology by hospitals and eligible health care professionals. Stage 1 implementation required recorded demographic data, which included preferred language, gender, race, ethnicity, and date of birth.[38]

Organizations are still struggling to effectively collect and analyze these data, sometimes lacking effective processes for collecting the information from patients, or having information systems that do not incorporate the information across all computer interfaces. To address this problem, Henry Ford Health System implemented the "We Ask Because We Care" approach (see Appendix B case study).[39] RWJUH, for example, collected REAL data, but not reliably for all data elements (e.g., race/ethnicity data were collected reliably, but language preference data were not). Upon discovering that one cause of this variation related to how data were collected and stored in their various information systems, RWJUH undertook a Lean improvement initiative to fix its IT systems, conducted training sessions with both patient access (registration) and nursing staff, and rolled out an improved process in December 2015. The new process includes the creation of a standing order that populates the nursing flow sheet whenever "Yes" is checked for "Interpreter Required? Y/N." As required by New Jersey state statute, RWJUH also documents the preferred language for the family caregiver and whether an interpreter is required for the family caregiver in addition to the patient. While there are some resources to support training staff to collect these data, challenges remain.

Once health systems collect REAL data, they need to analyze it to identify disparities in care and, more importantly, health outcomes. HealthPartners in Minnesota provides a good example of an

3. Deploy Strategies to Address Determinants of Health
- Health Care Services
- Socioeconomic Status
- Physical Environment
- Healthy Behaviors

organization that used their data to identify disparities in mammography and colonoscopy screening rates based on racial groups and insurance types, and then implemented improvements to close these gaps (see Figure 4). Their results are impressive: they reduced screening gaps for breast cancer by 4 percent between racial groups and by 5 percent between insurance types; and they reduced screening gaps for colorectal cancer by 13 percent between racial groups and by 2 percent between insurance types.[40]

Figure 4. HealthPartners Colorectal Cancer and Breast Cancer Screening Rates by Race and Income

* Black and Native American patients start screening at age 45; age 50 for all other races.

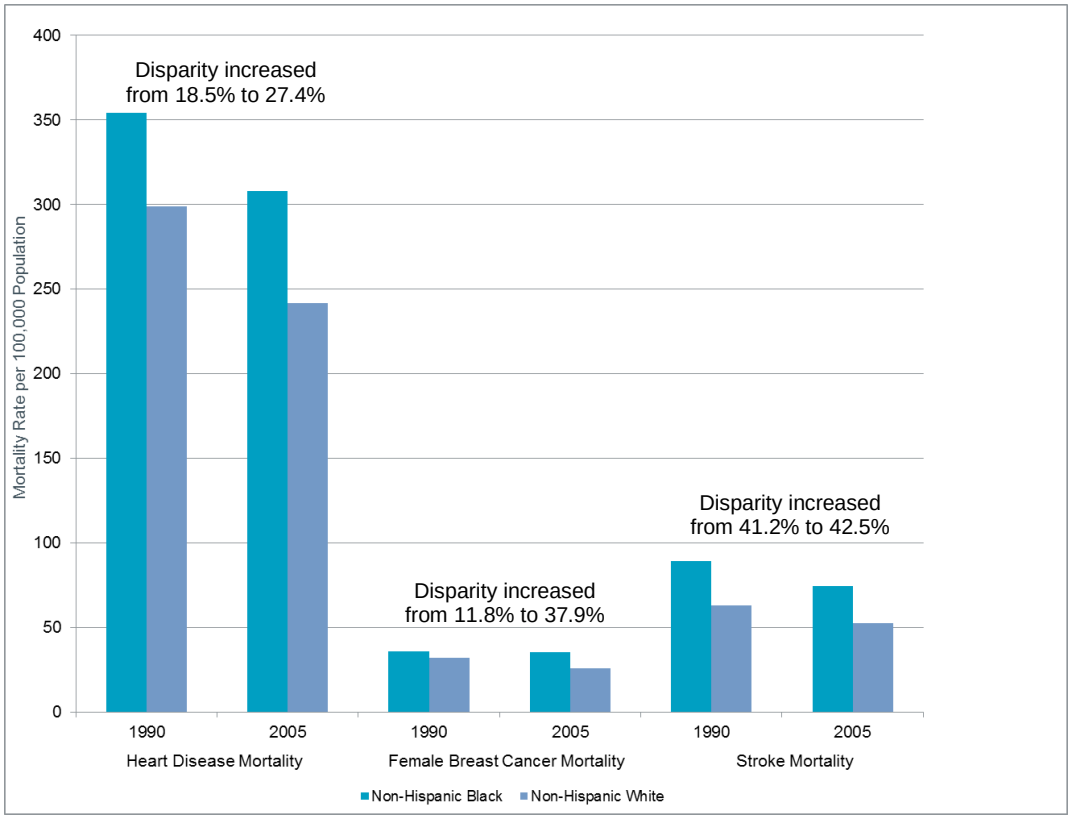
3. Deploy Strategies to Address Determinants of Health

- Health Care Services
- Socioeconomic Status
- Physical Environment
- Healthy Behaviors

Tailor quality improvement efforts to meet the needs of marginalized populations.

Quality improvement can sometimes unintentionally worsen health disparities for some subpopulations.[41] For example, when quality improves for one racial group (often the group[s] already doing better) at a faster rate than for others (often the group[s] already doing worse), quality for the whole population improves, but the gap between subpopulations widens. Focusing on the whole population rate obscures the fact that the disparities for some subpopulations are actually worse than before. For example, Figure 5 shows that, between 1990 and 2005, the disparity in mortality rates between black and white individuals in the US for three health status indicators increased, despite overall improvements.[42]

Figure 5. Disparities in Mortality Rates for Three Health Status Indicators: Black and White Americans (1990 and 2005)



In order to avoid this worsening of disparities, we recommend five key activities related to health care services to support improving health equity:

- **Begin improvement work by considering the needs and issues faced by populations experiencing worse health outcomes.**

  Focusing first on populations experiencing worse health outcomes and using data to identify disparities helps target specific high-leverage opportunities for improvement. In some cases, the improvements may even result in better care processes for the population as a whole; at HealthPartners, for example, the improvement involved providing multiple services during a single medical visit and improved care processes for all patients.

3. Deploy Strategies to Address Determinants of Health

- Health Care Services
- Socioeconomic Status
- Physical Environment
- Healthy Behaviors

Typically, organizations start improvement work by focusing first on making improvements for patients with less complex needs. Once they are successful with this initial patient population, teams then turn their attention to implementing the improvements for patients with more complex needs, only to discover that the initial improvement design is inadequate to be effective for this latter population. Achieving comparable health outcomes for different populations, particularly disadvantaged groups, requires different inputs and strategies to improve the determinants of health on which health care has a direct impact for those populations. Improvement strategies that are effective for more advantaged populations aren't necessarily effective for less advantaged populations without further adaptation to address that population's specific needs. Improvement work needs to be designed from the start to meet the needs of marginalized populations — focused, targeted, and culturally tailored, rather than a generic, "one size fits all" approach.[43]

- **When devising improvement strategies, take into consideration the resources available to particular populations such as where they live, their financial situation, level of education, and access to transportation.**

  For example, reducing hypertension in a population of uninsured or underinsured persons requires a care design that takes into account the cost of hypertensive medications, access to transportation for medical appointments, access to healthy food, community safety, and access to sidewalks and public parks/green spaces (if recommending increased exercise through walking). Improvement work must also account for cultural considerations that can be barriers or facilitators to the success of the intervention. For example, individuals from different cultures may have various preferences when discussing important medical decisions, such as who is in the room for those discussions.

- **Establish trust between providers and patients, particularly when co-designing new processes and care designs in partnership with patients.**

  This is particularly important in work to improve health equity. The health care system has generated a lack of trust for some patients of color due to past experiences and historical events (e.g., the 1932 Tuskegee Institute "Study of Syphilis in the Untreated Male"[44] and genetic research among the Havasupai Tribe in Arizona[45]), which has kept some patients from seeking out services for health, wellness, and care. The experience of Henrietta Lacks, a black woman whose tissue sample was used to develop the first cell line for research, without the permission of her family, has also led some patients of color to wonder if white patients are receiving higher-quality care.[46] Additionally, previous poor experiences with health care providers and concerns about incompetence, racism (most often, systemic racism rather than bigotry), a focus on profit, and the expectation of experimentation all contribute to a lack of trust of health care providers.[47,48] Sadly, this distrust is warranted. Thus, addressing trust is an integral part of improvement initiatives to reduce disparities.

  One way that health care organizations can build trust is to invest in the development and advancement of the community. HFHS collaborated with the Michigan Roundtable for Diversity and Inclusion to conduct focus groups with racial/ethnic and cultural community groups. HFHS disseminated the findings broadly with the community and applied them to their own organization's patient-focused care initiatives, faith-based outreach efforts, and cultural and linguistic competency work to meet the Enhanced

3. Deploy Strategies to Address Determinants of Health

- Health Care Services
- Socioeconomic Status
- Physical Environment
- Healthy Behaviors

National Culturally and Linguistically Appropriate Services (CLAS) Standards for Health and Health Care from the US Department of Health and Human Services, Office of Minority Health (original standards 2001, enhanced 2013).[49,50]

- **Provide accessible primary care focused on meeting the needs of marginalized individuals in the community.**

  Primary care can have a greater impact on the lifelong health of particular populations. By expanding their role in both prenatal and early childhood care, for example, primary care providers can seek to identify children who are at risk for social, developmental, and physical needs early in life and connect them with the needed support and services. Primary care services can also be distributed into the community, working with community members and organizations to engage individuals in managing their health, such as the Centers for Disease Control and Prevention (CDC) National Diabetes Prevention Program,[51] training barbers in black neighborhoods to screen for hypertension,[52] and providing cancer screening education at churches.[53]

  Safety net providers and clinics are already playing a critical role in providing access to affordable primary care to underserved communities and should be included in any effort to expand primary care services. The Henry Ford Health System-led multisector collaborative effort, the Women-Inspired Neighborhood (WIN) Network: Detroit, is a good example of improving primary care access for underserved populations. The network engages community health workers, who offer mentoring, make home visits, help women with education and life planning, and connect them to community resources to address the social determinants of health.

- **Use the required Community Health Needs Assessment (CHNA) as an opportunity to coordinate assessment activity within a community, and to assess the health care organization's cost and health equity issues using a more coordinated approach.**

  Under the US Affordable Care Act (ACA), the IRS requires not-for-profit hospitals to conduct a CHNA at least once every three years. Hospitals then develop and execute an implementation strategy along with a set of performance metrics to meet the needs identified in the CHNA. The CHNA reports must describe the community served, identify existing health care resources, and prioritize community health needs. At the same time, the Public Health Accreditation Board requires that health departments complete a Community Health Assessment with community collaboration that results in a Community Health Improvement Plan. The combined efforts of health systems, public health, and community-based organizations to produce one comprehensive community assessment is an important opportunity to improve the health of disadvantaged populations. Robert Wood Johnson University Hospital is an example of an organization that went beyond the basic requirement to develop a joint CHNA and Community Health Improvement Plan with a competing hospital that serves the same population.[54]

Socioeconomic Status

Provide economic and development opportunities for staff at all levels.

Health care organizations should recruit, retain, and develop all staff, particularly lower-level support staff, to help ensure meaningful contributions at all levels toward health equity. Wage levels for the lowest-skilled workers, along with career guidance for those same workers, can make

3. Deploy Strategies to Address Determinants of Health

- Health Care Services
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- Healthy Behaviors

a positive impact on their longer-term socioeconomic status. The health care industry employs approximately 10 percent of the nation's workforce and represents 17.5 percent of the US Gross Domestic Product; thus, if health care organizations focused on the health and wellbeing of their own employees they could make a huge impact on US population health overall. Employer-sponsored health and wellness programs (e.g., smoking cessation, promoting healthy eating and exercise) are well intentioned and do have some effect, but these organizations might achieve greater impact by undertaking meaningful service delivery redesign that eliminates waste and prioritizes preventative care to improve health while decreasing overall costs. Health care organizations should pursue these savings and then transfer them back to their employees in the form of increased wages.

As "anchor" institutions in most communities, health care organizations as employers can influence the economic health of the community in a number of ways. Robert Wood Johnson University Hospital, for example, offers English language classes to employees who are not proficient in English, providing time off from work (relief time) to take those classes.[55] Ten students have graduated from the program thus far. This type of skill building helps increase the opportunities available to these employees to qualify for higher-paying jobs within the organization. In addition, in 1999, the New Brunswick Health Sciences Technology High School, a magnet-designated public high school in New Jersey focused on preparing students for careers in medicine and health care, was founded in partnership with the New Brunswick Board of Education, Innovative Educational Programs, and RWJUH. Students learn skills that prepare them to pursue vocational training and higher education in the health professions; many have been hired at RWJUH. These students also participate in the Health Professions Scholars Program.[56]

Wake Forest Baptist Health in Winston-Salem, North Carolina, considered outsourcing its housekeeping services, but decided against it once leaders realized there is a significant overlap between the neighborhoods in which the housekeepers live and the most socially complex patients the health system serves. Four housekeepers were redeployed in a new position, called "supporters of health service," in which these workers helped individuals with complex needs better manage their health.[57]

Procure supplies and services from women- and minority-owned businesses.

Encouraging procurement practices from women- and minority-owned suppliers is another way in which health care organizations can contribute to health equity in a community. In 2014, Kaiser Permanente purchased $1.5 billion of supplies and services from women- and minority-owned businesses.[58] RWJUH and HFHS place a priority on procurement from women- and minority-owned businesses, and encourage businesses they hire to use hiring practices that promote diversity and inclusion.

Build health care facilities in underserved communities.

The location of new medical facilities can also make a difference to the community. Health care organizations often build facilities in more affluent areas to seek market share; by also building in less affluent areas of the community, these organizations can better serve underserved populations. For example, the Church Health Center in Memphis, Tennessee, is relocating its entire health care facility to a long-vacant retail building in the city, to help revitalize this section of the community.[59] In addition, when health care organizations build new facilities, they should consider employing women- and minority-owned builders.

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Physical Environment

The physical space and environmental practices of a health care organization have many impacts on the community. Health care generates a significant amount of medical waste and pollution that can be decreased. Health care organizations can improve the local neighborhood by creating walking paths on their own campuses and sponsoring improvement in surrounding neighborhoods by creating community spaces, parks, and walking trails. Health care organizations are also starting to make financial investments in the community beyond their community benefit funding to work on upstream determinants of health. Dignity Health in California, for example, created a separate community investment fund in 1994, which they invest in both community clinics and social determinants such as affordable housing.[60] Trinity Health in Michigan developed a community investment program for marginalized populations in its community to fund housing, revitalize urban and rural areas, provide child care, support businesses owned by low-income individuals, improve the physical environment, and promote healthy communities.[61]

Healthy Behaviors

Although many aspects of an individual's health are influenced by their socioeconomic circumstances, individuals can change some behaviors to improve their health. The most obvious population to start with is the health organization's own employees. Bellin Health in Wisconsin developed a portfolio of activities for its employees, including "health insurance benefit design, health care coaching, high participation in an annual health risk appraisal (HRA), supportive primary care, and population segmentation in order to redesign services for high-cost patients with complex needs."[62] Because of this initiative, Bellin employees have steadily improved their overall health score as measured by an annual physiologic health risk appraisal.

Another good example of a health care organization working on healthy behavior changes is the South Side Diabetes Project of Chicago, which involves the University of Chicago. One of several initiatives in this project is physicians writing "food prescriptions that recommend specific dietary goals (e.g., low-fat, low-carbohydrate diets) and have a redeemable cash value (coupon or voucher) for healthy food at participating Walgreens locations or the farmer's market."[63] Other community partners in Chicago such as the food pantry are also involved in developing partnerships for healthy activities.

4. Decrease Institutional Racism
- Physical Space
- Health Insurance Plans
- Reduce Implicit Bias

4. Decrease Institutional Racism within the Organization

Health care organizations must understand ways in which they contribute to structural or institutional racism. Institutional racism is not the bigotry that many people think of when they hear the term "racism." Camara Jones, Research Director on Social Determinants of Health and Equity and the CDC, explains: "Institutionalized racism is defined as differential access to the goods, services, and opportunities of society by race. Institutionalized racism is normative, sometimes legalized, and often manifests as inherited disadvantage. It is structural, having been codified in our institutions of custom, practice, and law, so there need not be an identifiable perpetrator."[64]

In trying to better understand institutional racism, we describe the structures, norms, rules, regulations, and policies that health care organizations have control over that contribute to health disparities.

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Physical Space: Buildings and Design

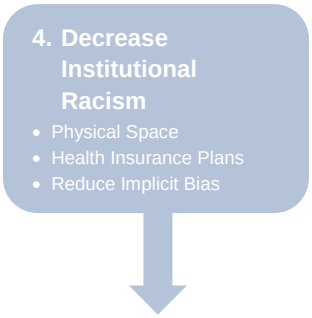
The issue of the physical space in health care as a contributor to institutional racism manifests in numerous ways — the design and condition of the buildings, difficulties in getting to the health care organization, the parking facilities, and even which patients get cared for in which buildings. Health care organizations need to think about whether they are creating a welcoming atmosphere for all patients. Some elements of physical design to consider include the following:

- **Accessibility:** Is the health care organization accessible via public transportation?
- **Décor and interior design of the facility:** Is the facility welcoming? Do posted signs convey that patients are trusted and welcome? The interior design should reflect the culture of the neighborhood being served.
- **Parking:** For urban hospitals, in particular, the parking fees can exceed what low-income individuals can afford.
- **Cleanliness:** Are all patient care areas in the facility clean and neat?
- **Waiting times:** Identify ways to improve access to care by reducing waiting times in all areas of the health care organization.
- **Design of the buildings themselves:** Many older hospitals were built for the ease of physicians' accessibility to their medical offices, not for the patients to access health care. Such buildings can be difficult to navigate, and even the ER can be located in difficult-to-reach areas of campus.
- **Provision of care services in newer facilities:** Is the allocation of newer facilities or care areas equitable to providing services for all patient populations? When institutions build new wings or buildings, sometimes they house patients with conditions that generate more revenue for the institution in the new facilities. Many hospitals now also offer special "VIP" access, often in newly built facilities, that is available only to patients who can afford these services. The Center for Health Design offers some useful resources for organizations considering how the built and community environments can impact population health.[65]

Health Insurance Plans

Another aspect of institutional racism is reflected in the type of health insurance accepted by the organization. The Affordable Care Act enables more Americans to have access to health insurance, but it does not necessarily result in access to health care organizations. Some issues to consider:

- **Medicaid pays less than Medicare or private insurance.** When health care organizations refer to "improving their patient [or payer] mix," this may be coded language for denying care to Medicaid patients — often, poor people and people of color. This is a challenging issue to overcome because of state and federal policies over which health care organizations have no control. But it is important to explore how organizations can respond to those policies in a way that promotes equity, and how health care organizations can commit to advocating for changes in laws and policies that perpetuate health inequities.
- **Health systems decide with which insurance plans to contract.** In many cases, poor people and people of color are denied access to health systems by virtue of the type of insurance accepted in these systems. This is a challenging issue because of the traditional processes governing contracting decisions, which are generally based solely on financial



considerations. It is important to explore how organizations can respond differently to meet the needs of the populations they serve.

- **New plans offered in the health insurance exchanges created by the Affordable Care Act can be confusing.** Health care organizations can do more to increase health insurance literacy by helping to explain these plans to their customers and guide them to the most appropriate options. During the annual health insurance exchange open enrollment, some health care organizations are partnering with community-based organizations to connect uninsured and underinsured patients and community members to health insurance via navigators and assisters.[66,67]

Reduce Implicit Bias

There is a growing literature about implicit bias in health care. Implicit bias, also known as unconscious bias, is "the bias in judgment and/or behavior that results from subtle cognitive processes (e.g., implicit attitudes and implicit stereotypes) that often operate at a level below conscious awareness and without intentional control."[68] In a 2015 systematic review by Hall and colleagues, researchers found that implicit bias is significantly related to patient-provider interactions, treatment decisions, treatment adherence, and patient health outcomes. The authors note that additional research is needed to examine the relationships between implicit bias and health care outcomes. They also cite several studies showing that most health care providers have implicit racial/ethnic bias at the same rates as the general population.[69] Implicit bias is not limited to race; implicit bias can exist for characteristics such as gender, age, sexual orientation, gender identity, disability status, and physical appearance such as height or weight.

Devine and colleagues emphasize that implicit bias is "automatically activated and often unintentional."[70] Burgess and colleagues make the point that if health care providers understand that stereotyping and racial prejudice are "a normal aspect of human cognition," they may be more open to learning about this phenomenon and how it impacts medical practice.[71,72]

IHI has included this element in the health equity framework because we see it as significant. Others do, too. For example, the Association of American Medical Colleges has conducted training on this issue and produced a publication about unconscious bias in medicine.[73] In addition, The Joint Commission published an issue of "Quick Safety" on this topic, and others have published extensive reviews about implicit bias.[74,75,76]

Reduce implicit bias within the organization's policies, structures, and norms.

Health care organizations also have a responsibility to mitigate the effect of implicit bias in organizational decision making. For example, implicit bias affects the hiring and promotion of staff, clinicians, and faculty.[77] This affects multiple groups, including women, racial/ethnic minorities, individuals who do not speak English as their primary language, and overweight and obese individuals, to name a few.[78,79,80] In the journal articles noted above, Burgess and Devine also describe education and training programs that can impact the behavior of health care providers and, by extension, may serve to mitigate any adverse impacts of implicit bias.

Reduce implicit bias in patient care.

To achieve health equity, health care organizations have a responsibility to mitigate the effect of implicit bias in all interactions and at all points of contact with patients. This is important because implicit bias has the potential to impact not only outcomes of care, but also whether patients will return for services or even seek care at the organization in the first place.[81] While a majority of

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research on implicit bias in health care focuses on racism, other social factors such as primary spoken language, gender, sexual orientation, education, and employment status are also associated with implicit bias and differences in communication and treatment.[82]

Implicit bias may affect how providers and other clinicians interact with patients in terms of communication, treatment protocols or recommended treatment options, or options for pain management.[83,84,85] Implicit bias can affect both perception and clinical decision making, and studies show that implicit bias is significantly related to patient-provider interactions and treatment decisions.[86] One study found that a substantial number of medical students and residents held false beliefs about biological differences between white and black individuals (such as believing that black skin is "tougher" than white skin), and found that these beliefs predict racial bias in pain treatment recommendations.[87]

Since black patients are more likely than white patients to die in the ICU receiving life-sustaining treatment rather than in hospice receiving comfort care,[88] Elliott and colleagues tested whether physicians use different verbal and/or nonverbal communication when having end-of-life care conversations with black and white patients and family members. They found that while verbal communication was similar, nonverbal communication scores were significantly lower with black patients than with white patients, with fewer positive, rapport-building behaviors. This difference can affect the outcome of the end-of-life care conversations and contribute to a higher incidence of black patients dying in the ICU while receiving life-sustaining treatments rather than dying at home.[89]

Implicit bias can negatively affect other elements of patient interaction with the health care system. A 2015 study found that racial/ethnic minorities, individuals with lower levels of education, and unemployed individuals spend significantly longer time waiting to obtain medical care, with blacks and Latinos waiting 19 and 25 minutes more, respectively, than white patients to see a doctor.[90] In addition, anxiety about interactions with people of color can result in white providers spending less time with patients.[91]

Implement strategies to reduce implicit bias.

Implicit bias in individual interactions can be addressed and countered if we become aware of our bias and take actions to redirect our responses. Devine and colleagues offer six strategies to reduce implicit bias:[92,93]

- Stereotype replacement: Recognizing that a response is based on stereotype and consciously adjusting the response
- Counter-stereotypic imaging: Imagining the individual as the opposite of the stereotype
- Individuation: Seeing the person as an individual rather than a stereotype (e.g., imaging or learning about their personal history and the context that brought them to the doctor's office or health center)
- Perspective taking: "Putting yourself in the other person's shoes"
- Increasing opportunities for contact with individuals from different groups: Expanding one's network of friends and colleagues or attending events where people of other racial and ethnic groups, gender identities, sexual orientation, and other groups may be present
- Partnership building: Reframing the interaction with the patient as one between collaborating equals, rather than between a high-status person and a low-status person

Similarly, in *Seeing Patients,* Dr. Augustus White offers these practical tips to combat implicit bias in health care:[94]

- Have a basic understanding of the cultures your patients come from.
- Don't stereotype your patients; individuate them.
- Understand and respect the tremendous power of unconscious bias.
- Recognize situations that magnify stereotyping and bias.
- Know the National Culturally and Linguistically Appropriate Services (CLAS) Standards.
- Do a "Teach Back." Teach Back is a method to confirm patient understanding of health care instructions that is associated with improved adherence, quality, and patient safety.[95]
- Assiduously practice "evidence-based medicine."

5. Develop Partnerships with Community Organizations

5. Develop Partnerships with Community Organizations to Work Together on Community Issues Related to Improving Health and Health Equity

A key focus of this paper is on identifying opportunities that health care organizations can initiate on their own to improve health and health equity. However, there is great added benefit in working with community partners to address determinants of health that are beyond the reach of health care. This includes safety net providers, who often have existing partnerships in the community and are familiar with the needs of marginalized populations. Community-based organizations already know the community and its needs and are often already engaged in related work in the community. Rather than re-inventing the wheel, health care organizations should build partnerships with other organizations and community partners. These partnerships can be either informal or formal, and they can focus on some of the equity work described in this paper or expand into other areas.[96]

Health systems can invest financial and in-kind contributions in multisectoral partnerships in the community to improve health outside of the health care setting, such as reducing childhood obesity by offering healthier lunches in schools and developing programs that provide academic support to at-risk children. One example is the Health Improvement Partnership of Santa Cruz County, California, which includes 26 member organizations in "a nonprofit coalition of public and private health care leaders dedicated to increasing access to health care and building stronger local health care systems." The Partnership has worked on a number of initiatives since its formation in 2004. One population of focus was infants insured with Medicaid; the goal was to decrease emergency room utilization in the first year of life by equipping mothers to care for their newborns and connecting them with primary care. This work led to a reduction in emergency room use and costs to Medicaid.[97] Other innovative collaborative partnerships are described in a white paper by the Commonwealth Center for Governance Studies.[98]

Measuring Health Equity

Accurate and useful measurement is essential to efforts to improve health equity. There are numerous ways to measure health disparities across different subpopulations. These measures can be divided into two categories: summary (aggregated) and stratified (disaggregated).[99] Summary measures provide an overall picture and can include multiple subpopulations in one measure,

while stratified measures provide a more detailed look at particular comparisons between groups. Each has advantages and disadvantages, but both are essential to provide a comprehensive assessment of performance on improving health equity.

Keppel and colleagues suggest the following guidelines for measuring health disparities:[100]

1. **Select and explicitly identify a reference point from which to measure disparities.** The reference point is the value from which a disparity is measured. Generally, the group with the best outcomes is used as the reference point, to emphasize the potential for improvement. Another approach is to use the group that represents the largest proportion of the population. The choice of a reference point will have implications for both the size and direction of the disparity (e.g., the group with the highest income, the group with the highest education, non-Hispanic white individuals).
2. **Measure disparities in both absolute and relative terms** to understand their magnitude, particularly when making comparisons over time or across geographic areas, populations, or indicators. Absolute measures of disparity look at differences, and relative measures of disparity look at ratios. Researchers debate the relative merits of using absolute versus relative comparisons, as they can yield different expressions of health disparities; both are correct, but have different implications for comparing across populations and for guiding interventions.[101,102] For example, the number of women receiving mammograms can increase for both black and white women (measure of absolute disparity), while the proportion of black and white women who have mammograms could remain unchanged or even decrease (measure of relative disparity).
3. **When using a relative measure of disparity to compare across different health indicators, express all indicators in terms of adverse events** (rather than favorable events) to facilitate comparisons across indicators and consistency over time. For example, expressing mammogram screening as "women who have not had a mammogram within the past year" (adverse event) versus "women who have had a mammogram in the past year" (favorable event) yields different values that can affect the interpretation of whether a disparity has increased or decreased. Adverse events are preferred, as some indicators (such as death rates) are better expressed as adverse rather than favorable events.
4. **Use pairwise comparisons to describe disparities between one or more groups and a specific reference point.** For example, compare rates of women who have not had a mammogram within the past year for white women versus women from racial/ethnic minority subpopulations, or compare rates for high-income women to those for middle- and low-income women.
5. **Use a summary measure of disparities over time for multiple populations.** Interpret the summary measure along with the group-specific rates on which they are based, and consider weights for different groups.

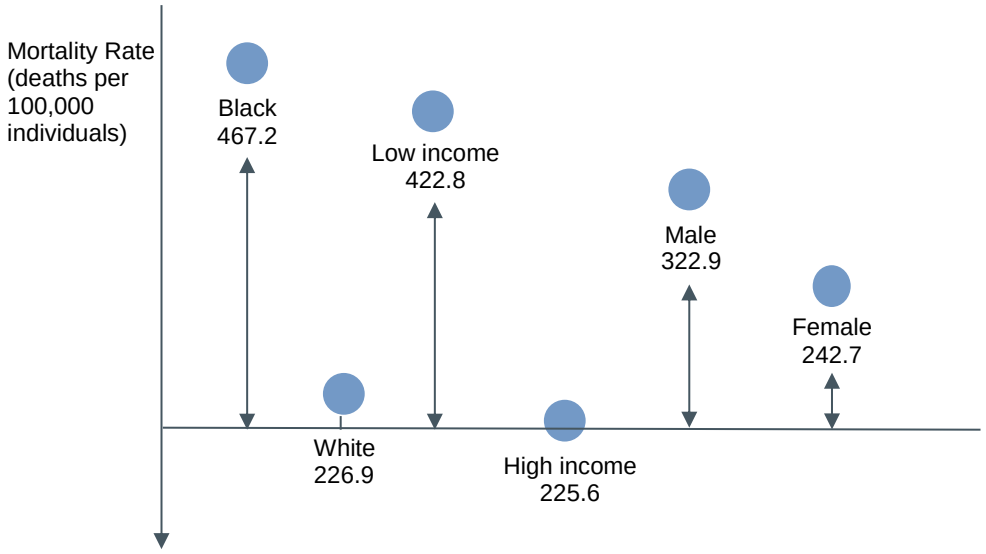
When comparing two specific groups, pairwise comparisons may be sufficient. However, we are frequently interested in comparing among multiple subpopulations, and thus, a summary measure that includes both absolute and relative measures of disparity is often needed to provide a summary across all groups.[103,104] A pairwise comparison also does not capture the intersectionality of different characteristics (e.g., black, female, low-income). A summary measure is useful for high-level reports and leadership and board accountability on health equity as a strategic priority. Many existing summary measures, such as the Index of Disparity, Index of Dissimilarity, Health Concentration Index, and Slope and Relative Index of Inequality, are focused on research rather than on practice and policymaking, and thus may be challenging for a health system, community,

or policymaker to use because conducting and interpreting analyses requires sophisticated statistical skills.[105,106,107,108]

In light of this, Dr. Yukiko Asada proposes "the bottom-up approach" to constructing a summary measure of health disparities.[109] While the bottom-up approach requires additional testing and validation, it is one of the only summary measures that is feasible to construct and interpret without advanced statistical technique and training. This approach entails the following steps:

1. Define health outcome of interest.
2. Define sociodemographic characteristics of interest.
3. Measure bivariate health disparities related to these attributes separately.
4. Combine bivariate health disparities into a summary index.
5. Use the best health level among all groups as the reference group.
6. Calculate the difference from the reference group for each group, sum them, then divide by the number of groups minus 1.

Figure 6. Example Bottom-up Approach Summary Measure Showing Disparities in Mortality Rates



- Sum of the differences: 554.5
- Sum of the differences (554.5) divided by the number of groups minus 1 (6 groups – 1 = 5): 554.5/5 = 110.9

The example in Figure 6 shows that, combining the differences in mortality rates among blacks, whites, low-income individuals, males, and females compared to the highest-income group, the average difference from the reference group is 110.9 deaths per 100,000 individuals. The greater the summary statistic, the larger the degree of inequity in a population. Taken in isolation this statistic may not be particularly useful, but organizations can use it to show improvement over time and to understand their performance compared to benchmarks.

The bottom-up measurement approach allows for the inclusion of different characteristics of interest to a health system and community, is relatively simple to calculate, and can provide a good overall picture of how well a community is doing relative to the most advantaged group. This approach has not been well tested in practical settings, but has been used at a county level.[110] When using the bottom-up approach, collect data on disparities in structure and processes, such as satisfaction of minority patients and screening rates for common cancers and chronic diseases,[111] in addition to outcomes data to identify where disparities exist in the system.

Sample sizes for different groups may affect the measure, showing small disparities when they are really just showing a small subpopulation. For example, in a community with a small black population, a racial disparity may appear small due to a small sample size, not due to an actual lack of inequality. To account for this, consider weighting the groups by population size when calculating the summary statistic.[112,113]

At this time, our research has shown that the bottom-up approach has been the most practical and useful approach to deriving a summary measure of health equity in a population, but additional testing and validation are required. It is essential that organizations use both summary and stratified measures to assess their progress on reducing disparities in different health outcomes, to provide different perspectives on progress, and to guide the targeting of interventions.

Another key issue for health care organizations is when and how to use risk adjustment (a statistical method to compare outcomes between different populations) for sociodemographic characteristics when analyzing and reporting data related to quality and performance, benchmarking, and payment. For example, to compare mortality rates between clinics serving different patient populations, a health system could control for factors such as race, socioeconomic status, and insurance status, to examine whether the differences in mortality rates persist if the clinics served similar populations. While there are benefits and drawbacks to using risk-adjusted data for different purposes, both are essential to identifying, analyzing, and addressing health disparities. First, health care organizations should stratify the population by different subpopulations and examine absolute and relative comparisons to identify disparities, and then consider using risk-adjusted outcomes data for activities such as pay-for-performance, public reporting, and benchmarking.[114]

Tips for Health Care Organizations to Measure Inequities in Their Communities

- **Ensure that organizational resources are allocated to support efforts to measure inequities.** Measurement efforts will fail without adequate supportive systems, resources, and structures.
- **Collect relevant data on sociodemographic characteristics of individuals.** While more and more organizations have data systems to collect this information and are now required to report race/ethnicity and primary spoken language data, collecting this data is a key first step to being able to measure inequities. Henry Ford Health System collects detailed demographic information from patients, including racial/ethnic subgroup.[115] Income and education data are more difficult to collect routinely, but relevant information can be found from state or local public health departments, hospital associations, resources such as County Health Rankings[116] or the Dartmouth Atlas of Health Care,[117] or inferred from other information such as US Census data.[118] Organizations should not only review clinical outcome measures, but also examine measures related to the social determinants of health.

- **Select health outcome(s) of interest to measure improvements in health equity over time.** Once this process is more robust, consider adding structure and process measures.
- **Select indicator(s) of social position of interest** (e.g., race/ethnicity, socioeconomic status [income, education], gender).
- **Examine "raw" data in tabular and graphical form.** Look at both relative and absolute differences (pairwise comparisons) between different subpopulations, and examine changes over time. Select a reference point for each relative comparison that is the most advantaged (or favored) group.
- **Calculate stratified measures of disparities** for different health outcomes and social indicators of interest. This includes examining within-group differences in addition to between-group differences, such as Asian subpopulations (e.g., Chinese, Indian) and black subpopulations (e.g., US-born black vs. Haitian vs. Nigerian). Only examining differences for the overall group may mask marked differences that would identify the particular populations that could benefit from a targeted intervention.[119,120]
- **Consider using the bottom-up approach** as one option to construct a summary measure that assesses multiple parameters and groups simultaneously. The summary measure should include, at a minimum, race/ethnicity, socioeconomic status, gender, and a measure of geography such as zip code or US Census tract.

Conclusion

Tommy Cannon endured poverty and systemic, institutional racism. His life and death, like so many others, were the result of under-education, under-employment, and frank subjugation. This life led to chronic exposure to multiple risk factors, including tobacco abuse, poor nutrition, loss of self-esteem, and life-long racial oppression. These factors contributed to Tommy developing essential hypertension and type 2 diabetes mellitus. When he needed most to be rescued by the health care system and society, he was abandoned despite his attempts to manage his chronic diseases.

His life mirrors the current state of millions of people in the US who continue to struggle with connecting to the health care system, often resulting in poor health, development of chronic disease, and, for some, preventable death. As IHI President Emeritus Donald M. Berwick, MD, has said, the health care system will spend millions to save a youth after he is shot, but will not invest in keeping the bullet from reaching him in the first place.[121,122,123]

Today, health care organizations are doing more to improve health equity, but few have made it a strategic priority. A major barrier is the business case. Leaders understand the moral case for working on health equity, but they need funds to sustain the work. As providers assume more financial risk for populations, improving health equity will make more financial sense.

This white paper is a continuation of IHI's work, which began in 2007, on the Triple Aim: improving the individual experience of care, improving the health of populations, and reducing the per capita costs of care for populations.[124] Health equity is not a fourth aim, but rather an element of all three components of the Triple Aim. The objective of this white paper is to help accelerate the work of health care organizations that are pursuing the Triple Aim. The Triple Aim will not be achieved until it is achieved for all.

Appendix A: Interviews and Site Visits

To inform IHI's work on how health care organizations can improve health equity, we spoke with numerous individuals and visited several organizations whose work to address disparities and inequities in health and health care is considered among the leading edge.

Organization
American Medical Association – Commission to End Health Care Disparities, Chicago, Illinois
Ascension Health, St. Louis, Missouri
Association of Academic Health Centers, Washington, DC
Blue Cross Blue Shield of New Mexico, Albuquerque, New Mexico
Church Health Center, Memphis, Tennessee
Cincinnati Children's Hospital Medical Center, Cincinnati, Ohio
Consumers Advancing Patient Safety, Chicago, Illinois
Contra Costa Regional Medical Center, Contra Costa County, California
Dalhousie University, Halifax, Nova Scotia, Canada
Daughters of Charity Services of New Orleans, New Orleans, Louisiana
Duke University School of Medicine, Durham, North Carolina
HealthPartners, Bloomington, Minnesota
Henry Ford Health System, Detroit, Michigan
The Joint Commission, Oakbrook Terrace, Illinois
Health Share of Oregon, Portland, Oregon
Kaiser Permanente, Oakland, California
Meharry Medical College, Nashville, Tennessee
Mercy Health, Cincinnati, Ohio
Methodist Le Bonheur Healthcare, Memphis, Tennessee
Molina Healthcare of New Mexico, Albuquerque, New Mexico
Nemours Children's Health System, Jacksonville, Florida
Northern Ontario School of Medicine, Sudbury, Ontario, Canada
Qualis Health, Seattle, Washington
Robert Wood Johnson University Hospital (now RWJBarnabas Health), West Orange, New Jersey
St. Thomas Community Health Center, New Orleans, Louisiana
University of Chicago Medicine, Chicago, Illinois
University of New Mexico, Albuquerque, New Mexico
University of Wisconsin, Madison, Wisconsin

Appendix B: Case Study

Health Equity as a System Property for Health Care Organizations: Henry Ford Health System

Henry Ford Health System (HFHS) has a history of engagement in health equity, but the system entered a new phase of its work with the official launch of the HFHS Healthcare Equity Campaign in 2009. The health system CEO and other senior leaders demonstrated that health equity was a strategic priority for the organization by investing their time and resources in the campaign. The CEO was the Honorary Chair of the campaign. From the very start, the campaign was jointly led by the community health and quality areas of the health system, expanding to involve all five hospitals and more than 30 ambulatory sites, the system's managed care organization, and other business units.

The idea for the campaign evolved out of prior project work to address health disparities, along with a growing recognition of the intrinsic relationship between quality and equity. The goal of the campaign was "to increase knowledge, awareness, and opportunities to ensure health care equity is understood and practiced by Henry Ford Health System providers and other staff, the research community, and the community at large; and to link health care equity as a key, measurable aspect of clinical quality."[125]

HFHS administered a survey at the start of the campaign to measure changes in awareness of health care disparities. The campaign then rolled out in three phases over three years. HFHS now continues its health care equity efforts as a system priority, integrating what is learned in the organization and creating new initiatives.

There is support at every level of the organization for health care equity, starting with the HFHS Board. Board members received training on equity and disparities and, along with other HFHS leaders, review quality reports stratified by patient self-reported race, ethnicity, and preferred language data. HFHS tracks activities that represent system integration of equity such as educational sessions, awards, questions on Gallup employee engagement surveys, professionalism guidelines, sessions at system conferences, content in residency training, and content in employee orientation.

There are many examples of the organization's work to address the social determinants of health to improve health and health care. In 2008, HFHS led the convening of the Detroit Regional Infant Mortality Reduction Task Force, a multisector public-private partnership that developed and secured $3.4 million in funding for the Women-Inspired Neighborhood (WIN) Network: Detroit. At its core, WIN Network: Detroit engages community health workers (CHWs) who work with women at risk for low-birthweight, preterm births. The CHWs offer mentoring, make home visits, and help women with education and life planning — connecting them with community-level resources and each other. HFHS is one of four collaborating local health systems that, through the Task Force, established the WIN Network: Detroit in 2011. The initiative is unique in that it involves competing health systems in a successful partnership.

During its original funding period, WIN Network: Detroit enrolled 443 pregnant women; 364 of these women were eligible for inclusion in the evaluation component of the program, and 323 were included in the final data analysis. (Note that 41 of the 364 women were not included in the analysis because of missing data. Seventy-nine women [the difference between 443 enrolled and 364 in the evaluation component] were not included in the evaluation, most commonly because they were over age 35, Hispanic, or did not speak English fluently.) There were zero reported cases

of preventable infant death over the three-year period. Moreover, the average gestational age at birth was 38.3 weeks and only 12 percent were born at a low birthweight, compared to around 18 percent for Detroit. WIN Network: Detroit also engaged more than 1,200 non-pregnant women with its Fabulous, Young and Inspired (FYI) pre- and inter-conception health curriculum.

HFHS sees community health workers as a key component of its strategy to improve health care equity. The organization has developed a CHW Hub for training and core management of CHWs. Although CHWs have traditionally been supported by grant funds, HFHS is now making the shift to using budgeted funding from operational areas. At the same time, the organization is working at the state policy level with other organizations, led by the Michigan Community Health Worker Alliance, to advocate that CHWs be funded through Medicaid. Payment models are currently under development with a high level of collaboration among payers, health systems, and the state's Department of Health and Human Services.

A major goal of the HFHS Healthcare Equity Campaign was to identify and address disparities by race, ethnicity, and primary language. In order to reach this goal, major effort went into updating processes for collecting this self-reported data. Henry Ford implemented a program called "We Ask Because We Care" to explain to patients and families why the health system asks for information on their race, ethnicity, and preferred language. The program was adopted from RWJF's Aligning Forces for Quality initiative, with permission to use the slogan. As of March 2016, an estimated 90 percent of patients at Henry Ford's Detroit campus have information in the electronic medical record on race, ethnicity, and preferred language.

Henry Ford places diversity and inclusion among its highest priorities in hiring practices, promotions, and procurement practices. Its supply chain, supplier diversity policies, and procurement practices emphasize the value in doing business with local women- and minority-owned firms. The organization shares those values with its major suppliers, encourages them to become more inclusive in their hiring and procurement practices, and mentors suppliers. In 2015, Henry Ford Health System spent more than $57.7 million with women- and minority-owned business enterprises.

HFHS has an innovative program called Generation With Promise (GWP) that annually touches more than 37,000 youth and adult lives, focusing on nutrition, physical activity promotion, and youth leadership. The program involves building trust and partnerships in communities through high-quality, skills-based education and training in under-resourced schools and communities. Youths participating in GWP tend to become engaged not only in the program, but also in school in general, and several GWP youth are now working in the health professions.

Staff training on disparities and social determinants of health is now incorporated at every level of HFHS. They have approached the work in an informed, academic, and thoughtful way, encouraging cultural humility rather than assigning blame. Training on unconscious bias will also be incorporated as education efforts continue throughout the health system.

More than 300 employees have engaged in HFHS-developed, CME-accredited coursework to become Healthcare Equity Ambassadors; a Healthcare Equity 101 course is available in the organization's online employee learning platform, HFHS University. In addition, a Healthcare Equity Scholars Program provides skills-based training to Henry Ford Health System leaders on topics related to health care equity.

The organization's emphasis on health care equity has been a driver of employee engagement. HFHS administered the Gallup Employee Engagement survey and found that employees involved in health care equity work were seven times more engaged than other employees.

HFHS has prioritized partnerships with community organizations to address community health issues identified in its triennial Community Health Needs Assessment. An informal survey at HFHS showed the organization is involved with more than 200 community organizations.

HFHS has been generous in sharing its knowledge with others across the US. They are the recipient of multiple awards and honors for their work in health equity. The next step in HFHS's major organizational commitment to health care equity and cultural competency will be establishing a Center for Healthcare Equity, which will have a dedicated staff and budget.

Appendix C: Health Equity Assessment Tools

As health care organizations begin working to improve health equity, self-assessment tools may help guide their efforts and help them identify specific areas ready for improvement.

The **IHI Health Equity Self-Assessment Tool for Health Care Organizations** (shown on the pages that follow) is intended to help organizations evaluate their current focus on health equity and improvement efforts related to the five components in the health equity framework described in this paper.

Other assessment tools that might be helpful to this work include the following:

- **AREA Survey for measuring changes in awareness of health care disparities**

  This tool was developed by Matt Wynia and colleagues at the American Medical Association.[126] Although the tool was designed for clinicians, Henry Ford Health System modified it with permission to use for all staff.

- **Clearview Organizational Assessments–360 (COA360)**

  "The COA360 is an evidence-based, web-based cultural competency tool that evaluates the readiness of a health care organization or clinical unit to meet the needs of a rapidly diversifying US population. The COA360 is designed to assess the cultural competency of health care organizations rather than individuals." This tool was developed at the Hopkins Center for Health Disparities Solutions.[127]

- **Unconscious/Implicit Bias Test**

  Project Implicit is a collaboration of researchers who have developed tests in various domains of implicit bias to help individuals understand their own implicit bias.[128]

IHI Health Equity Self-Assessment Tool for Health Care Organizations

This self-assessment tool is intended to help organizations evaluate their current focus on health equity and improvement efforts related to the five components in the health equity framework described in this white paper, *Achieving Health Equity: A Guide for Health Care Organizations*. On a scale of 1 to 5, rate your organization's current level of focus on each framework component. Components with low scores can be used to prioritize areas in which to begin or strengthen your work.

IHI Health Equity Framework Component Self-Assessment Scale: Level 1 to 5 *(definitions noted in italics)*									
1. Make Health Equity a Strategic Priority									
Level 1 *Not strategic*	**Level 2**	**Level 3**	**Level 4**	**Level 5** *Health equity is part of strategic planning and built into operations.* *There is a sustainable funding source for health equity work.*					
Is health equity a strategic priority for the organization?					**Level:**	**1**	**2**	**3**	**4**	**5**
Is leadership committed to improving equity at all levels of the organization?					**Level:**	**1**	**2**	**3**	**4**	**5**
Is there a sustainable funding source for health equity work?					**Level:**	**1**	**2**	**3**	**4**	**5**
2. Develop Structure and Processes to Support Health Equity Work									
Level 1 *None to support this work*	**Level 2**	**Level 3**	**Level 4**	**Level 5** *The organization has well-organized departments and multi-stakeholder committees to support the work.* *The organization has dedicated resources specifically to support health equity work.*					
Is there a governance structure to support work on health equity?					**Level:**	**1**	**2**	**3**	**4**	**5**
Are there dedicated resources to support health equity work?					**Level:**	**1**	**2**	**3**	**4**	**5**

3. Deploy Specific Strategies to Address the Multiple Determinants of Health on Which Health Care Organizations Can Have a Direct Impact

Health Care Services: Collect and analyze data to understand where disparities exist				
REAL data (race, ethnicity, preferred language)				
Level 1 *No reliable data*	**Level 2**	**Level 3**	**Level 4**	**Level 5** *There is a standard process for collecting REAL data for all encounters.* *Analytical staff have dedicated time to identify disparities.*
Is there a standard process for collecting and analyzing REAL data to identify disparities?				**Level: 1 2 3 4 5**

Health Care Services: Tailor quality improvement efforts to meet the needs of marginalized populations				
Quality improvement work focused on health equity				
Level 1 *No work in this area*	**Level 2**	**Level 3**	**Level 4**	**Level 5** *Disparities data drive the improvement process.* *All work starts with a consideration of the disadvantaged populations.* *The resources of marginalized populations are considered in the design.* *Co-production and co-design are part of this work.* *Trust is considered with all of the work.*
Is the organization using disparities data to drive work to improve health equity?				**Level: 1 2 3 4 5**

3. Deploy Specific Strategies to Address the Multiple Determinants of Health on Which Health Care Organizations Can Have a Direct Impact

Health Care Services: Tailor quality improvement efforts to meet the needs of marginalized populations				
Primary care is accessible and focused on the needs of the underserved				
Level 1 *No work in this area*	**Level 2**	**Level 3**	**Level 4**	**Level 5** *Access and trust for the underserved are a priority for primary care.* *Helping individuals achieve their maximum life course is part of daily operations.*

Is the organization's primary care system working to help close health disparity gaps?	**Level:**	**1**	**2**	**3**	**4**	**5**

Socioeconomic Status: Provide economic and development opportunities for staff at all levels; Procure supplies and services from women- and minority-owned businesses; Build health care facilities in underserved communities				
Level 1 *No work in this area*	**Level 2**	**Level 3**	**Level 4**	**Level 5** *The organization explicitly focuses on staff development and hiring practices at all levels.* *The organization makes significant purchases involving minority- and women-owned suppliers and building contractors.* *The organization has practices in place to build facilities in underserved communities.*

Are there practices in place to help recruit, retain, and develop employees at all levels?	**Level:**	**1**	**2**	**3**	**4**	**5**
Are there practices in place to encourage diverse supplier procurement processes?	**Level:**	**1**	**2**	**3**	**4**	**5**
Are there practices in place to build facilities in underserved communities?	**Level:**	**1**	**2**	**3**	**4**	**5**

3. Deploy Specific Strategies to Address the Multiple Determinants of Health on Which Health Care Organizations Can Have a Direct Impact

Physical Environment				
Level 1 *No work in this area*	**Level 2**	**Level 3**	**Level 4**	**Level 5** *The organization supports the health of the community through the physical environment (buildings, parks, etc.).*

Are health facility buildings welcoming to the community?	**Level:**	**1**	**2**	**3**	**4**	**5**
Does the organization invest in creating community spaces and funding community benefits?	**Level:**	**1**	**2**	**3**	**4**	**5**

Healthy Behaviors				
Level 1 *No work in this area*	**Level 2**	**Level 3**	**Level 4**	**Level 5** *Influencing healthy behaviors of all employees and community members is critical to the organization.*

Is the organization contributing to improving healthy behaviors for employees and the community as a whole?	**Level:**	**1**	**2**	**3**	**4**	**5**

4. Decrease Institutional Racism within the Organization

Level 1 *No work in this area*	**Level 2**	**Level 3**	**Level 4**	**Level 5** *Staff are fully engaged, highly diverse, and receive adequate training on implicit bias. There is active work on multiple processes to decrease institutional racism.* *The organization's physical space is designed to be accessible and welcoming to all patients.* *All health insurance plans are accepted and health care organization staff help enroll marginalized populations in insurance plans that meet their needs.*

Does the organization incorporate elements of physical design to reduce institutional racism?	**Level:**	**1**	**2**	**3**	**4**	**5**
Does the organization accept health insurance plans that serve predominantly disadvantaged populations?	**Level:**	**1**	**2**	**3**	**4**	**5**
Is there training for staff to help them identify equity and disparity gaps?	**Level:**	**1**	**2**	**3**	**4**	**5**

5. Develop Partnerships with Community Organizations to Improve Health and Equity				
Level 1 *No work in this area*	**Level 2**	**Level 3**	**Level 4**	**Level 5** *The organization is fully engaged in a multi-stakeholder coalition in the community that is focused on a portfolio of projects to improve health and health equity.*
Is the health care organization working in partnership with others in the community to improve health equity for the population?				**Level: 1 2 3 4 5**

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