

# Measuring What Works to Achieve Health Equity: Metrics for the Determinants of Health

## EXECUTIVE SUMMARY

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In spring 2014, the Robert Wood Johnson Foundation (RWJF) commissioned Prevention Institute to develop a set of metrics to inform its broader set of metrics for its Culture of Health. In its original form, this document served as a background document for RWJF staff to inform discussion around disparity metrics for the Foundation and the nation. This version has been slightly modified for broader dissemination, including adding an executive summary.

**Prevention Institute** is a nonprofit, national center dedicated to improving community health and wellbeing by building momentum for effective primary prevention. Primary prevention means taking action to build resilience and to prevent problems before they occur. The Institute's work is characterized by a strong commitment to community participation and promotion of equitable health outcomes among all social and economic groups. Since its founding in 1997, the organization has focused on community prevention, injury and violence prevention, health equity, healthy eating and active living, positive youth development, health system transformation and mental health and wellbeing.

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## INTRODUCTION

The Robert Wood Johnson Foundation (RWJF) has laid out a bold and ambitious agenda of achieving a Culture of Health in the U.S. RWJF's new vision of a Culture of Health requires that the Foundation become more explicit about the need to expand the opportunity for good health for all. As such, RWJF has adopted health disparities<sup>i</sup> as a major priority. RWJF recognizes that persistent health disparities linked with disadvantages experienced by particular populations undercut our nation's founding principle of equal opportunity to life, liberty, and the pursuit of happiness. The Foundation has set an ambitious goal of measurably reducing health disadvantages and disparities.

In spring 2014, RWJF commissioned Prevention Institute to develop a set metrics to inform its broader set of metrics for its Culture of Health. This paper is the outcome of that work. It provides a framework for understanding how disparities in health outcomes are produced and how health equity can be achieved, particularly by addressing the determinants of health. It lays out the determinants of health – structural drivers, community determinants, and healthcare – that must be improved to achieve health equity. It also describes the methods and criteria that Prevention Institute applied to identify health equity metrics. Finally, the paper delineates a set of metrics that could reflect progress toward achieving health equity.

We count what matters. Metrics that measure and track our progress on the determinants of health can help set priorities and inform necessary actions to keep *all* Americans healthy, lower the cost of healthcare, increase productivity, improve quality of life, and ensure that everyone has an equal opportunity to prosper and achieve his or her full potential.

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## UNDERSTANDING HEALTH INEQUITY AND HEALTH EQUITY

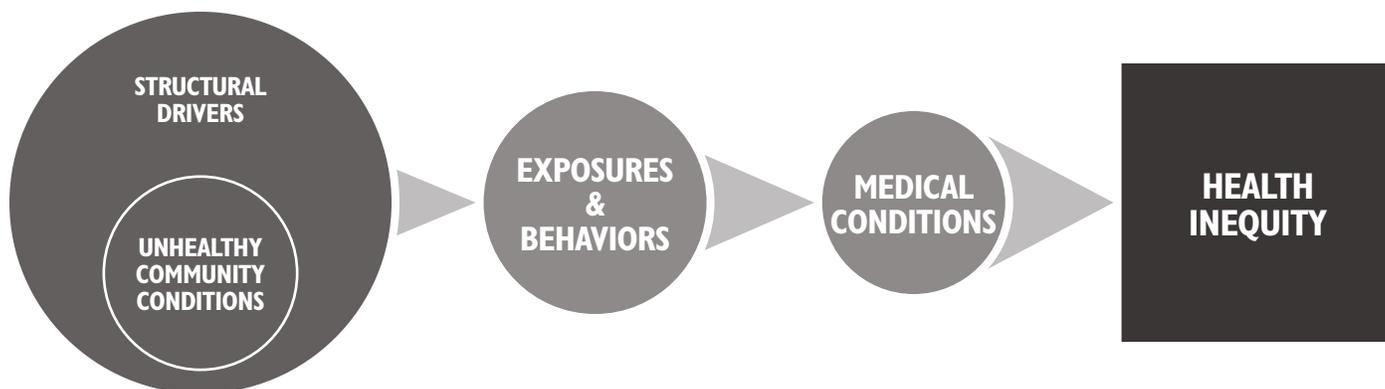
Good health is precious. It enables us to enjoy our lives and focus on what is important to us—our families, friends, and communities. It fosters productivity and learning, and it allows us to capitalize on opportunities. However, good health is not experienced evenly across society. Health inequity is related both to a legacy of overt discriminatory actions on the part of government and the larger society, as well as present day practices and policies of public and private institutions that continue to perpetuate a system of diminished opportunity for certain populations.

The Trajectory of Health Inequity (Diagram A) depicts how inequity in health outcomes are produced. It shows the relationships between structural drivers and unhealthy community conditions (community determinants), exposures and behaviors, medical conditions and health inequity. Structural drivers and community determinants generate inequity, which are exacerbated by exposures and behaviors, and further exacerbated by how medical conditions are addressed in

<sup>i</sup> At the time of the final production of this paper the RWJF Eliminating Health Disparities team has changed its name to the Achieving Health Equity team. This paper reflects the language in use at the time of the project.

healthcare. The accumulation of inequity across the trajectory is represented by the increasing size of the arrows moving from left to right, indicating that inequity in health outcomes increase at each stage. The diminishing size of the circles from left to right indicates a diminishing contribution to health inequity. The determinants of health have the biggest impact on inequities in health outcomes.

**Diagram A: Trajectory of Health Inequity**



The Trajectory of Health Inequity (Diagram A) reflects Prevention Institute’s Two Steps to Prevention methodology, which traces a pathway from medical conditions to the behaviors and exposures that led to them, and then to the structural drivers and community determinants that are at the root of the behaviors and exposures. Prevention Institute’s analysis started with identifying leading medical conditions that reflect health inequity and are leading causes of death, illness and injury. The first step of the Two Steps approach is from examining these leading medical conditions to identifying exposures and behaviors associated with them. Limiting unhealthy exposures and behaviors enhances health and reduces the likelihood and severity of disease. Through an analysis of the factors contributing to medical conditions that cause people to seek care, researchers have identified a set of nine behaviors and exposures strongly linked to the major causes of death: tobacco, diet and activity patterns, alcohol, microbial agents, toxic agents, firearms, sexual behavior, motor vehicles, and inappropriate drug use.<sup>1</sup> These behaviors and exposures are linked to multiple medical diagnoses and addressing them can improve health broadly.

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Exposures and behaviors are determined or shaped by the environments in which they are present. The second step is from the exposures and behaviors to the environment, identified here as the determinants of health (structural drivers, community determinants, and healthcare). Taking the second step from exposures and behaviors to the environment presents a tremendous opportunity to reduce health inequities by preventing illness and injury before their onset. In analyzing the social determinants of health and health inequities, the World Health Organization (WHO) has identified structural drivers—the inequitable distribution of power, money, opportunity and resources—as a key determinant of inequity in health and safety outcomes.<sup>2</sup> Poverty, racism, and lack of educational and economic opportunities are among the fundamental determinants of poor health, lack of safety, and health inequity, contributing to chronic stress and building upon one another to create a weathering effect, whereby health greatly reflects cumulative experience rather than chronological or developmental age.<sup>3</sup>

Structural drivers deeply shape community conditions – the places where people live, learn, work and play.<sup>4</sup> On the whole, a person’s zip code is a better predictor of his/her health status and life expectancy than his/her genetic code.<sup>5</sup> Prevention Institute’s THRIVE (Tool for Health and Resilience in Vulnerable Environments) framework delineates community determinants that fall into three interrelated clusters: the social-cultural environment (people cluster), the physical/built environment (place cluster), and the economic environment (equitable opportunity cluster). These community determinants fundamentally impact health and health inequity and represent an important place for action to achieve health equality.

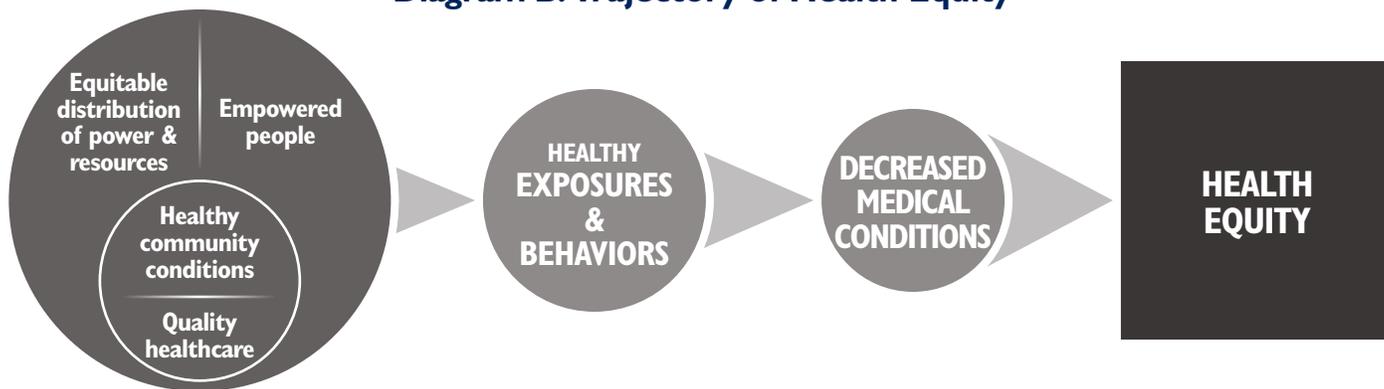
Access to quality healthcare services is also an important determinant of health. People want and need high-quality medical care, including good medical, mental health, and dental services, and access to quality, culturally and linguistically appropriate medical and dental care, and emergency medical responses.

Table A shows the determinants of health, the related sample behaviors and exposures, and the medical conditions. Community determinants are organized into three interrelated clusters: the social-cultural environment (people cluster), the physical/built environment (the place cluster), and the economic environment (equitable opportunity cluster).

<b>Table A: Determinants of Health, Related Behaviors and Exposures, and Medical Conditions</b>		
<b>Determinants of Health</b>	<b>Behaviors and Exposures</b>	<b>Medical Conditions</b>
<p><b>STRUCTURAL DRIVERS</b></p> <ul style="list-style-type: none"> <li>■ Inequitable distribution of power, money, opportunity and resources</li> <li>■ Disempowered people</li> </ul> <p><b>COMMUNITY DETERMINANTS</b></p> <p><b>Social-cultural environment (people cluster)</b></p> <ul style="list-style-type: none"> <li>■ Social networks &amp; trust</li> <li>■ Participation &amp; willingness to act for the common good</li> <li>■ Norms &amp; culture</li> </ul> <p><b>Physical/built environment (place cluster)</b></p> <ul style="list-style-type: none"> <li>■ What’s sold &amp; how it’s promoted</li> <li>■ Look, feel &amp; safety</li> <li>■ Parks &amp; open space</li> <li>■ Getting around</li> <li>■ Housing</li> <li>■ Air, water &amp; soil</li> <li>■ Arts &amp; cultural expression</li> </ul> <p><b>Economic environment (equitable opportunity cluster)</b></p> <ul style="list-style-type: none"> <li>■ Education</li> <li>■ Living wages &amp; local wealth</li> </ul> <p><b>QUALITY HEALTHCARE</b></p>	<p>Tobacco/smoking</p> <p>Excessive alcohol</p> <p>Diet/Nutrition</p> <p>Physical activity</p> <p>Chemical exposures and air pollution</p> <p>Sexual behaviors</p> <p>Infections pollens, dust</p> <p>Automobiles</p> <p>Falls</p> <p>Poisoning</p> <p>Weapons</p> <p>Violence</p> <p>Drug use and abuse</p> <p>Trauma and adverse experiences</p>	<p>Heart Disease</p> <p>Cerebrovascular</p> <p>Diabetes Mellitus</p> <p>Malignant Neoplasms</p> <p>Chronic Lower Respiratory Disease</p> <p>Unintentional Injury</p> <p>Suicide</p> <p>Homicide</p> <p>HIV</p> <p>Infant mortality</p> <p>Liver disease</p> <p>Nephritis</p> <p>Mental health conditions and trauma</p> <p>Occupational exposures</p> <p>Drug/substance use and abuse</p>

The Trajectory of Health Equity (Diagram B) shows how improving the determinants of health will generate health equity. Improving structural drivers focuses on equitable distribution of power and resources and empowered people. Improving community determinants leads to healthy community conditions. Healthcare is also determinant of health. Improving this determinant results in quality healthcare. The Trajectory of Health Equity reflects that improving the determinants of health contribute to healthy exposures and behaviors, and decreased medical conditions. The contributions to greater health equity across the trajectory are represented by the increasing size of the arrows moving from left to right.

**Diagram B: Trajectory of Health Equity**



## METRICS FOR HEALTH EQUITY

Altering the determinants of health (structural drivers, community determinants and healthcare) supports health equity. Therefore, the recommended health equality metrics are focused on the determinants of health. Metrics that capture the determinants of health can account for inequity across multiple dimensions including not only race/ethnicity and socio-economics but also geography-, gender-, sexual orientation- and disability-based inequity.

Building on the understanding of health inequity, and the determinants that need to be improved to achieve health equity, Prevention Institute developed a set of metrics. In May and June of 2014, Prevention Institute reviewed existing metrics and measurement projects, particularly for social determinants of health, and interviewed 17 people, including academics, people implementing place-based strategies, researchers who have or are developing metrics and indicator sets, and experts in specific topical areas. Prevention Institute considered health equity principles, terminology used in association with measurements, and criteria to assess individual metrics as well as the composite set of metrics. Numerous considerations were taken into account, including the strengths and limitations of indicators, indexes, and composite measures, the distribution of metrics across the determinants of health, and the need to frame the metrics in a manner that illuminates potential solutions.

### Terminology

There are many terms used in association with measurements, including index, measures, metrics, and indicators. For the purpose of this paper, the following terminology is used:

- **Indicator:** An indicator is a single measurement.
- **Index:** An index is a measurement that includes multiple indicators and is in use by others – particularly for research purposes.
- **Composite measure:** A composite measure includes multiple indicators and is not necessarily in use by others but includes specific indicators that correlate strongly with health outcomes.

A set of health equity principles provided guidance and informed the criteria for the selection of the recommended metrics, including, but not limited to, understanding historical forces that have left a legacy of racism and segregation and the acknowledgment of the cumulative impact of stressful experiences and environments. Criteria were developed and applied to evaluate and prioritize potential individual metrics as well as the composite set of metrics. The criteria used to evaluate and prioritize individual metrics consisted of, but was not limited to, such factors as feasibility, measurability, and validity. The criteria used to evaluate and prioritize the set of metrics consisted of, but was not limited to, such factors as whether they align with a Culture of Health metrics and are grounded in health equity principles.

Consideration was given to the strengths and limitations of indicators, indexes, and composite measures. For example, indicators can be straightforward in what they express and can convey direction for policy and action. However, because they are single measures, they don't necessarily reflect complexity. Because indexes include multiple indicators, they are able to account for more complexity than a set of single indicators; yet at face value, they may not appear as actionable as single indicators. Composite measures can account for complexity and fill a gap in the field, but also may not appear as actionable as single indicators. The recommended metrics reflect a mix that maximizes the strengths and minimizes the limitations of indicators, indexes, and composite measures. It is recommended that additional composite measures be developed to fill gaps in the field. For example, a composite measure is recommended to address the strong relationship between community safety and health inequity in a manner that accounts for the complexity of community safety.

Determining how to distribute the metrics across the determinants (structural drivers, community determinants, and healthcare) is important. The recommended metrics reflect the overall set of determinants while giving balanced consideration to the distribution: about one-third of the set of metrics reflect the structural drivers, about one-half of the set of metrics reflect community determinants, and one-sixth of the set of metrics reflect healthcare. The recommended metrics for structural drivers include attention to: 1) the equitable/inequitable distribution of resources, power, money and opportunity; and, 2) empowered/disempowered people. The recommended metrics for community determinants include: 1) the social-cultural environment (people factors); 2) the physical/built environment (place factors); and, 3) the economic environment (equitable opportunity factors). The recommended metrics for healthcare include attention to access.

Metrics are important both as a tool for measurement of health inequity for the country as well as for clarifying the sources of inequity and fostering understanding of solutions. The recommended metrics also consider the need for effective framing that communicates clear direction and spurs action.

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The following recommended health equity metrics reflect the determinants of health (structural drivers, community determinants, and healthcare).

## STRUCTURAL DRIVERS

1. Neighborhood Disinvestment Index (index)
2. Gini Index<sup>6</sup> (index)
3. Index of Dissimilarity<sup>7</sup> (indicator)
4. Rates of incarceration by race/ethnicity (indicator)
5. Percent of residents from traditionally marginalized communities in positions of influence (indicator)
6. Geographic distribution of health: life expectancy by zip code (indicator)
7. Community Trauma (composite measure)
8. Community Readiness (composite measure)
9. Number of communities with indicator projects (indicator)

## COMMUNITY DETERMINANTS

### *Social-cultural environment*

10. Collective efficacy<sup>8</sup> (index)
11. Civic engagement (composite measure)

### *Physical/built environment*

12. Physical activity environment<sup>9</sup> (index)
13. Retail Food Environment Index (index)
14. Food Marketing to Kids Group (index)
15. Housing Index<sup>10</sup> (index)
16. Affordability of Transportation and Housing<sup>11</sup> (index)
17. Pollution Burden Score<sup>12</sup> (index)
18. Mobility and Transportation<sup>13</sup> (index)
19. Opportunities for engagement with arts, music and culture<sup>14</sup> (index)
20. Per capita dollars spent for park space per city/neighborhood (indicator)
21. Safe place to walk within 10 minutes of home (indicator)
22. Alcohol outlet density (indicator)
23. Number of comprehensive smoke-free policies in places that prohibit smoking in all indoor areas of work-sites and public places (indicator)
24. Community Safety Scorecard<sup>15</sup> (index)
25. Number of cities with a comprehensive, multi-sector violence prevention plan (indicator)

### *Economic environment*

26. Number of living wage policies in place (indicator)
27. Academic achievement (composite measure)
28. Local wealth (composite measure)
29. Complete and livable communities<sup>16</sup> (index)
30. School Environment<sup>17</sup> (index)
31. Percent of families who say it's hard to find the child care they need (indicator)
32. Workplace safety (composite measure)

## HEALTHCARE SERVICES

33. Percent of patients that can access a place they call their “medical care home” within two weeks’ time (indicator)
34. Patient satisfaction with medical encounters as a measure of culturally and linguistically appropriate care (indicator)
35. Number of medical schools that integrate healthcare disparities and community learning throughout entire curriculum and training (indicator)

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