Annual Review of Public Health

Addressing Health Equity in Public Health Practice: Frameworks, Promising Strategies, and Measurement Considerations

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Annu. Rev. Public Health 2020. 41:417–32

First published as a Review in Advance on January 3, 2020

The *Annual Review of Public Health* is online at publhealth.annualreviews.org

https://doi.org/10.1146/annurev-publhealth-040119-094119

Keywords

health equity, public health practice, health equity measurement, health equity policy, health equity practice, health equity frameworks

Abstract

This review describes the context of health equity and options for integrating equity into public health practice. We first discuss how the conceptualization of health equity and how equity considerations in US public health practice have been shaped by multidisciplinary engagements. We then discuss specific ways to address equity in core public health functions, provide examples of relevant frameworks and promising strategies, and discuss conceptual and measurement issues relevant to assessing progress in moving toward health equity. Challenges and opportunities and their implications for future directions are identified.

INTRODUCTION

Advancing health equity is increasingly emphasized as a central goal of public health practice (40). Though debates abound about its definition, appropriate metrics, ethical and social justice considerations, and practice and policy implications, achieving health equity can be beneficial for all in society. Health equity is defined by the US Department of Health and Human Services as "the attainment of the highest level of health for all people." The definition goes on to say that "achieving health equity requires valuing everyone equally with focused and ongoing societal efforts to address avoidable inequities, historical and contemporary injustices and the elimination of health and healthcare disparities" (**https://www.minorityhealth.hhs.gov/npa/templates/browse.aspx?lvl=1&lvlid=34**). Tackling contemporary health issues such as violence prevention, ending the HIV epidemic, and reducing the burden of largely preventable chronic diseases requires a comprehensive, societal approach if we are to create environments where all people can be healthy.

Inherent in this and most definitions of health equity are ethical judgments and a commitment to social justice (29). The World Health Organization (WHO) links health equity and social justice at the global level, stating that "the enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without distinction of race, religion, and political belief, economic or social condition" (77). The WHO Commission on the Social Determinants of Health documented the need to direct attention toward improving the social determinants of health globally (62, 76).

Pursuing health equity through action on social determinants of health is particularly relevant for those who engage daily in the battle to overcome racial and ethnic and other health disparities—health differences that are closely linked with current or historical social, economic, and/or environmental disadvantage. Health equity goals focus on eliminating disparities as well as improving the overall health of populations affected by disparities. In the United States, the landmark 1985 *Report of the Secretary's Task Force on Black and Minority Health* (the Heckler Report) (67) continues to anchor the federal call-to-action to reduce and eliminate racial and ethnic health disparities (28, 41, 45). In the 30+ years since the release of the Heckler Report, we have seen a growing body of research documenting strong associations between a range of social factors and racial and ethnic health outcomes that are disparate (for examples of supportive reviews, see 7, 14, 15, 33, 35, 38, 68–70, 77–79). Recognition of the need to address health equity issues related to other sources of social disadvantage has also increased in recent decades.

This review, which has been undertaken primarily from the perspective of US governmental public health (i.e., practice in federal, state, and local agencies), examines considerations, approaches, and challenges for integrating health equity into the current structures and processes. The literature search focused on identifying journal articles published during approximately the past 2 decades (January 1998 to April 2019) that were available in English and that addressed both health equity and public health in primarily a US context. The search was limited to SCOPUS. SCOPUS was chosen because it includes content from both health and life sciences journals and humanities, social science, and multidisciplinary journals. The latter collection of journals might contain scholarship from disciplines that may be less likely to publish in journals traditionally captured in biomedical databases. Search parameters varied by topic (i.e., practice context, measurement, challenges).

Here we describe how concepts and approaches to achieving health equity—as one stream—and those that underpin the broad field of public health practice—as an overlapping but separate stream—complement and strengthen each other and discuss why it is essential to make public health investments in achieving health equity. Examination of these as two, related fields

of endeavor illustrates areas where health equity objectives have been or could be meaningfully integrated into one or more core functions of public health practice. We describe examples of relevant frameworks, including one based on our experience in the Office of Minority Health and Health Equity (OMHHE) at the Centers for Disease Control and Prevention (CDC). We then discuss approaches to assessing progress and conclude with suggestions for future directions.

FOUNDATIONS FOR ADDRESSING HEALTH EQUITY IN PUBLIC HEALTH PRACTICE

Health Equity as a National Public Health Goal

Healthy People 2030, the US Department of Health and Human Services' national health objectives initiative, includes among its overarching goals language to achieve health equity (text from **https://www.healthypeople.gov/2020/about-healthy-people/development-healthy-people-2030/framework**):

- Eliminate health disparities, achieve health equity, and attain health literacy to improve the health and well-being of all.
- Create social, physical, and economic environments that promote attaining full potential for health and well-being for all.
- Engage leadership, key constituents, and the public across multiple sectors to take action and design policies that improve the health and well-being of all.

Such goals endorse and encourage a health equity focus in public health and are formal bases for coordinated public health action. In addition, the following selected principles underlying the Healthy People 2030 framework further integrate health equity as a national aspiration (text from **https://www.healthypeople.gov/2020/about-healthy-people/development-healthy-people-2030/framework**):

- Health and well-being of all people and communities are essential to a thriving, equitable society.
- Investing to achieve the full potential for health and well-being for all provides valuable benefits to society.
- Healthy physical, social, and economic environments strengthen the potential to achieve health and well-being.
- Achieving health and well-being requires eliminating health disparities, achieving health equity, and attaining health literacy.

Together these principles articulate solid public health rationales for investing in health equity. Thus, governmental public health has a central role in facilitating attainment of the highest level of health for all people. Professionals performing core functions of public health and national, state, tribal, and local public health systems can collaborate to increase opportunities for all people to pursue optimal health (39).

Foundational Health Equity Concepts

In our review of the literature, we found that diverse disciplines have contributed to the emerging science and practice of health equity and may continuously influence its foci and approaches:

philosophy, bioethics, nursing, environmental health, humanities, health services research, sociology, economics, population health, medicine, law, and genomics (see 24, 28, 56, 59, 71 as representative examples). From a public health practice perspective, US health equity efforts have been an outgrowth of health disparities–centered initiatives (28, 41, 45). Health equity considerations raise tensions because they introduce historical and political concerns related to identifying and naming social stratification processes that arguably perpetuate health disparities, as well as experiences, environments, and mechanisms that assign social advantage and disadvantage differentially to population groups. These processes of social stratification affect health and social status across the life course and across generations (2, 12, 58, 71). In addition, critical yet contentious issues such as what is fair, avoidable, equitable, and moral and the value systems and institutions that structure how these issues are defined and subsequently shape public policy are among historical concerns not easily reconciled. We cannot avoid grappling with these issues because mechanisms and determinants of health inequity must be considered if we are to ensure that all populations thrive (5, 74).

Proponents of health equity may argue for the implementation of social/distributive justice strategies or approaches grounded within social justice principles. Such strategies include more equitable distribution of basic social goods (5, 8, 16, 18, 56). Environmental interventions to increase the availability, accessibility, acceptability, and quality of health-promoting assets and amenities, such as access to healthy foods and the elimination of food deserts, are also seen as critical to advancing health equity (64). These interventions can fortify environments and systems by reducing resource and service barriers disproportionately experienced by socially disadvantaged populations (64). Last, the literature on this topic includes strong support for multisectoral action informed by health impact and community needs assessments, rigorous policy analyses and evaluations, and data on trends, patterns, and community assets that can be used to mobilize action to overcome health disparities and mitigate determinants of health (17, 24, 44, 54, 60, 74, 81). Multisectoral partnerships link the provision of public health services with other sectors such as education, transportation, public safety, and labor to achieve a more comprehensive impact on community health.

The broad field of public health encapsulates all "organized efforts of society to keep people healthy and prevent injury, illness, and premature death" (42), "the science and art of preventing disease, prolonging life, and promoting health through the organized efforts and informed choices of society, organizations, public and private communities, and individuals" (72, p. 27), and "all public, private, and voluntary entities that contribute to the delivery of essential public health services in a jurisdiction" (21, p. i). Fulfilling the overall public health mission while incorporating approaches to achieving health equity for specific populations further increases the inherent complexity of designing and delivering public health services.

Core Functions of Public Health as Applied to Health Equity

There are three core functions of public health: assurance, assessment, and policy development. Following are examples of how health equity initiatives can be integrated in the development and implementation of these functions (see **Table 1** for examples of services that each function might encompass).

Assurance. Public health's assurance function involves working to guarantee services necessary to realize health and well-being goals through a number of methods such as direct service provision, action through regulation, or partner engagement (34). As expected, this function includes seeking equitable access to high-quality health facilities, medicines, goods, and services. To promote health equity, the assurance function can include securing access to safe, stable, and nurturing material

Table 1 Core functions and essential services of public health: possibilities for addressing health equity

Assurance	Assessment	Policy development
■ Considering the positioning of public health systems relative to other systems and actors that influence attaining health equity. ■ Working with other sectors to address external structural and environmental conditions that, when not addressed, lead to gaps in programs and disparities in population health. ■ Identifying programmatic and systems facilitators and barriers to advancing health equity that may be present in a given public health system, agency, or department. ■ Identifying assets, resources, or relationships that can be developed or adapted to address social and environmental determinants of health that can hinder the impact of public health programs. ■ Developing, or contributing to the development of, health equity goals, objectives, and strategies. ■ Encouraging use of "dual or blended approaches" (20, 23, 47, 49, 57, 61) that couple universal interventions for improving the health of whole populations with interventions targeting resources and supports based on the unique needs, strengths, and social position of population subgroups. ■ Encouraging health systems to develop and implement strategic plans and strategies that are inclusive in their engagement of stakeholders. ■ Gathering formative, process, and outcome evaluation data to refine services intending to reduce inequities in determinants of health (including social determinants of health).	■ Defining pathways and processes through which influences of structural determinants of health inequity are transmitted and patterned. ■ Improving data collection systems and monitoring health equity indicators. ■ Promoting collection and analysis of data at levels, units, and granularities allowing characterization of area-level, systems/sectoral, and environmental influences and differentiation of unique subgroup needs that can be masked by the use of broad categories (e.g., Hispanic ethnicity without regard for subgroups or rural residence without regard to degree of rurality). ■ As appropriate, encouraging interpretation of variables such as socioeconomic status (SES), sex/gender, or race/ethnicity as structural stratifiers or relational (i.e., describing relationships between and social positions among societal groups) versus individual characteristics (in all cases, considering that race, gender, and social status associated with higher SES are socially constructed).	■ Supporting integration of goals, objectives, and activities explicitly aimed at advancing health equity in public policy. ■ Facilitating policy-focused health impact assessments. ■ Mobilizing and organizing inclusive collaborations, partnerships, and shared governance arrangements to maximize potential for collective impact and efficacy in institutional and system change. ■ Conducting policy surveillance and research to identify and describe policy instruments and strategies with evidence or promise of effectiveness in promoting health equity. ■ Applying and evaluating evidence-based strategies for using one's own funding and budget mechanisms to substantively integrate health equity considerations into activities while optimizing financial options for program implementation.

and psychosocial environments that promote healthy lifestyles. Public health practice here entails venturing beyond our boundaries to address matters intimately linked to health disparities such as housing, labor market or employment conditions, civic participation, and forms of discrimination (7, 11, 19, 30, 39, 48, 50, 80, 81).

Assessment. Every governmental public health agency is charged with systematically collecting, compiling, analyzing, and disseminating epidemiologic data describing their jurisdiction (34), which represents the assessment function of public health. In terms of health equity, performing public health's assessment function calls for analysis of a range of determinants of health and other structural factors associated with persistent health disparities (39, 62). Data from these and related activities can suggest targets for strategies to reduce both health gradients and gaps (29). See also the section on Assessing Health Equity for further considerations related to assessment.

Policy development. As construed by the Institute of Medicine, policy development addresses the responsibility for supporting bodies and processes that produce or influence public health policy (34). While once constrained to public health policies, this domain now embraces a collaborative Health In All Policies (HiAP) approach, which crosses sectors and systematically accounts for the health implications of policy decisions in nonhealth sectors, pursues sectoral synergies, and attempts to avoid or eliminate harmful health impacts to protect and improve population health and health equity (22, 75).

Practice of this type can leverage policy and relationships as two of the nation's most powerful tools for fostering health equity.

FRAMEWORKS AND PROMISING STRATEGIES

Health Equity Frameworks

From our review of the literature, we discuss two frameworks: the R4P Framework, which systematically examined health equity in program-planning efforts focused on African Americans (43), and ConNECT, which addresses health equity in the area of behavioral medicine and establishes methodological and theoretical guidelines to inform translational research and practice and policy to achieve health equity (1).

R4P. This framework delves heavily into the origins of health inequities among African Americans from the standpoint of structural racism, noting that toxic stress is not randomly distributed. Guided by dimensionality research, R4P considers the interaction of social determinants of health with race-related stress in combination with other axes of oppression such as sexism to better understand health inequities among African Americans (32). The R4P framework offers concrete strategies that institutions can implement to engage communities in thinking through the issues of health equity. R4P consists of five components: remove, repair, restructure, remediate, and provide. Remove requires practitioners to identify and remove any structures, attitudes, beliefs, and practices that may be placing specific groups and/or communities at a disadvantage. Repair involves recognition of historical exposures, including social-environmental factors that may have produced the initial damage that creates conditions that limit a population's access to health care and to obtain or maintain healthy lifestyle practices. Restructure involves taking an in-depth look at institutional policies and practices that may sustain the systemic exclusion of populations owing to sociodemographic characteristics. Remediation includes instituting remedial factors to counter the negative effects of institutional bias on individuals. And finally, the framework highlights the importance of providing services and resources in a way that is culturally and economically feasible.

ConNECT. The ConNECT framework emphasizes integrating context (e.g., social determinants), fostering a norm of inclusion where medically vulnerable and marginalized population groups are included in research, ensuring that the diffusion of innovation is equally accessible to all groups [e.g., racial and ethnic populations, LGBTQ (lesbian, gay, bisexual, trans, queer/questioning) people, people with disabilities], harnessing communication technology so that individuals' health and/or health care is not negatively affected by the digital divide, and prioritizing training so that health equity expertise is gained through mentoring and education.

There are several shared tenets in these frameworks related to an increased focus on the impact of social determinants of health on disadvantaged or vulnerable populations. In both frameworks, health equity takes into consideration the complex interplay of multiple social, environmental,

sociohistorical, cultural, and intra- and interpersonal factors and emphasizes targeted, evidence-based interventions that positively impact these determinants. These frameworks demonstrate how to integrate health equity into processes of intervention development/design, research, and care delivery in addition to conventional approaches that rely more on tracking health disparities and explicitly seek to close specific gaps. Multisectoral approaches and thinking about population groups from an intersectional (e.g., considering the ways in which several "isms" work in tandem) perspective is another shared aspect of these frameworks. In addition, both frameworks incorporate principles of social justice to help ensure all are served without bias due to sociodemographic characteristics. Taken together, these frameworks advance a comprehensive understanding of health and health care that incorporates linkages between health and personal, sociopolitical, economic, and environmental conditions (25).

CDC OMHHE framework. In addition to the two examples above, the framework developed by the OMHHE at the CDC created operational principles for health equity that could be actionable through departments of public health. This framework built upon previously referenced Healthy People goals and the three core functions of public health. The authors organized these principles from the standpoint of four domains of public health practice: data and measurement (55); program implementation (27); policy implementation and HiAP approaches, among others (31); and development and maintenance of a public health infrastructure with supportive leadership, staff with appropriate skills, data systems that include health equity variables, and the establishment of multisectoral and community partnerships (26). The four grounding papers cited here (as well as additional supporting articles) can be accessed in a special supplement of the *Journal of Public Health Management and Practice* (**https://journals.lww.com/jphmp/toc/2016/01001**) that was sponsored by the OMHHE.

The CDC OMHHE health equity framework intentionally aligns with core functions of governmental public health. Depending on the capacity of the health department, one or more of these domains can be implemented by a health department. The framework is intended to be adaptable to fit the unique circumstances, resources, and capacities of a given jurisdiction. Moving forward, both process and impact evaluations of the framework are needed to assess its effectiveness in advancing health equity, as well as to identify tools that support implementation.

In 2016, OMHHE convened the first National Health Equity Leadership Academy at the CDC to vet and gain feedback on the emerging health equity framework. More than 100 representatives of state, local, tribal, and territorial departments of public health and national health organizations attended. Preliminary unpublished feedback from these representatives reinforced the salience of several themes in our framing and in other frameworks described in this article. For example, there was agreement for encouraging greater inclusion of multidisciplinary perspectives, establishing multisectoral partnerships, and garnering authentic community engagement. In addition, representatives expressed support for a public health workforce that can keep pace with meeting the needs of an increasingly diverse populace. Adding to our guidance to understand the sociodemographic characteristics of the populations served, participants argued that practitioners should clarify in a qualitative sense who constitutes the community, learn the community's history of interacting with state and local governments both before and throughout the process of launching health equity initiatives, create processes that effectively engage the community in decision making related to policy formulation and implementation, and evaluate the impact of policies and other health equity programs on the community's health. Last, participants reiterated the utility of "using flexible health equity frameworks" because having a single framework that can account for the many nuances that characterize state, local, tribal, and even neighborhood dynamics that affect health equity is unlikely.

Examples of Strategies

Three examples of initiatives with considerable promise in addressing health equity include the Health Equity Zones Initiative of the Rhode Island Department of Health (**http://health.ri.gov/programs/detail.php?pgm_id=1108**), the Accountable Health Communities Model of the Centers for Medicare and Medicaid Services (**https://innovation.cms.gov/initiatives/ahcm/**), and the San Francisco Health Improvement Partnership (**http://www.sfhip.org/**). Although implemented by different actors, these initiatives are inherently community centered and collaborative, crossing multiple sectors; include multilevel, multicomponent strategies accounting for social and structural determinants of health; and incorporate assessment, evaluation, and dissemination components to yield evidence and insights regarding effectiveness and implementation. Sharing lessons learned from such exemplary programs may promote the use of approaches, agreements, and arrangements more likely to advance health equity.

Policy approaches with a health equity lens can take aim at a broad range of nonhealth factors that impact health equity, e.g., policies that determine transportation systems in a jurisdiction. Failure to attend to the impact of public policies on the health status of communities at high risk for health disparities can result in widening disparities and other unintentional negative consequences (31). Consistent with the policy development function in public health practice, public health can provide evidence for the formulation of policies with a multisector focus that advances health equity. For example, medical-legal partnerships have been used to develop policies that hold landlords responsible for renovating buildings to meet codes that improve indoor air quality, thereby reducing air pollutants that can cause health problems (for more on this example, see 63, 66).

Key elements in a public health infrastructure that is prepared to pursue health equity include strong, visible, and consistent leadership that views health equity as core to the mission of public health along with a diverse and culturally and linguistically competent workforce; funding algorithms that incorporate measures of health equity (37); and accountability structures that monitor the inclusion of health equity across public health programs (26). Several challenges to creating an infrastructure prepared to address health equity are discussed above.

ASSESSING HEALTH EQUITY

Braveman & Gruskin (16) define health equity as "the absence of systematic disparities in health (or in the major social determinants of health) between social groups who have different levels of underlying social advantage/disadvantage—that is, different positions in a social hierarchy" (p. 254). Furthermore, Braveman & Gruskin suggest that in order to be valid and reflect fairness and justice with respect to health, measurement of health equity must include measurement of health disparities in relation to how the disparities are distributed socially (16). The OMHHE at the CDC adopted a variation of a definition of health equity from Braveman and colleagues (13) and defines health equity for the purposes of measurement as "reducing and ultimately eliminating disparities in health and its determinants that adversely affect excluded or marginalized groups" (p. 2).

To assess progress in achieving health equity it is crucial to understand how to measure health equity. Methods by which health equity is measured are varied and have changed over time. Of 555 articles and book chapters returned in a broad literature search focused not only on the intersection of health equity and public health but also on metrics and measurement, 11 were specific to health equity metrics or measurement in the United States and are included in this section. Articles that discuss health equity within the context of public health vary in which metrics they recommend to measure health equity. This section summarizes literature that both directly and indirectly captures measurement of health equity. We conclude the section with a summary of the challenges and next steps for the field of health equity measurement.

Direct Capture

Several articles outline steps to help researchers transition from conceptualization of health equity to measurement of health equity. Recommended practices for measuring and advancing health equity outlined by Penman-Aguilar and colleagues (55) include

> (1) assess differences in health and its determinants that are associated with social position; (2) assess social and structural determinants of health and consider multiple levels of measurement; (3) provide reasons for methodological choices and clarify their implications; (4) address within-group heterogeneity by comparing groups simultaneously classified by multiple social statuses; and (5) the need to communicate to a wide array of stakeholders can often be taken into consideration in the choice of measures and analytic methods. (pp. S35–36, 39)

The steps outlined by Penman-Aguilar and colleagues (55) are closely aligned with Braveman & Gruskin's (16) and the OMHHE's definition for the measurement of health equity in that they incorporate the importance of measuring health equity in the context of social hierarchy to assess and illuminate health disparities and their determinants. The definition from Penman-Aguilar et al. (55) also brings in the importance of assessing within-group differences and choosing measures and metrics that would be appealing when communicating health equity outcomes to a wide array of stakeholders.

Rust and colleagues (59) also offer measurement-focused steps for achieving health equity. Similar to Penman-Aguilar et al. (55) and Braveman & Gruskin (16), Rust et al. focus on the measurement of health disparities as a means to achieve health equity. Specifically, they include

> (1) measure disparities explicitly; (2) expect success—make health equity an objective for public health and programs; (3) measure local-area variation in disparities to find models of success in achieving health equity; (4) shift from studying risk factors and causes of disparities, to studying common elements, patterns and paths to success (i.e., questioning why certain communities have succeeded); (5) test multi-dimensional interventions based on common characteristics of successful communities until disparities are dramatically reduced; (6) build health equity coalitions in high-disparity communities; (7) create rapid-cycle feedback loops with real-time surveillance of health disparities at the local community level; (8) involve all sides of health; (9) build explicit community development, economic development, and social determinant interventions in high-disparity communities; and (10) integrate all elements above into cohesive, organized initiatives that routinely assess and act to improve their own effectiveness based on feedback loops. (59, pp. 7–8)

Unique to the steps outlined by Rust and colleagues (59), in addition to a focus on health disparities and their determinants, is the introduction of community elements, including the importance of studying elements of success that other communities have had in achieving health equity and of encouraging community and economic development.

Whereas some articles recommended broad measurement steps (55, 59), others outlined specific metrics for use when measuring health equity (3, 6, 10, 17). Health equity metrics are often divided into two main groups: those comparing two groups and those comparing more than two groups. Together these can be classified as intergroup measures of health equity (3). For the purposes of this discussion, "groups" refers to socially defined groups.

Braveman (10, 17) suggests monitoring health equity by estimating the size of social inequalities in health and their determinants between two groups using the rate ratio as a relative measure of disparity and the rate difference or absolute difference in rates as an absolute measure of disparity. For comparing more than two groups, the author recommends more complex measures, including calculation of relative and absolute measures of health equity using composite indices such as population attributable risk (PAR), slope index of inequality, relative index of inequality,

concentration curve, concentration index, Gini coefficient, and the index of dissimilarity (10, 17). The Gini coefficient and index of dissimilarity, while included as composite indices for measurement of health equity among more than two groups, are not recommended as first-line measures by Braveman (10). The index of dissimilarity, for example, captures the magnitude of disparities across diverse groups by summing differences between rates in each subgroup and the overall population rate. The total, therefore, is a percentage of the overall population rate. Braveman (10) notes a limitation with the index of dissimilarity being that use of the overall population rate as a reference may be problematic if large proportions of the total population are disadvantaged.

Another approach to measure health inequity was introduced by Asada and colleagues (6) in 2014. Their three-stage approach includes measuring univariate health inequality (stage one), univariate health inequity (stage two), and bivariate health inequity (stage three). Stage one, univariate health inequality, involves using individual-level data and the inequality index (or any metric that applies to univariate distribution) "to quantify the extent of inequality in the distribution of observed health across people in the population" (6, p. 2). Stage two, univariate health inequity, "measures unfair distribution of health across individuals in the population," using descriptive and normative tasks (6, p. 2). The normative task is when one judges whether components of observed health are fair or unfair by looking at the source of health inequalities and classifying the source as legitimate or acceptable versus illegitimate or ethically unacceptable. Stage three involves measuring bivariate health inequities by estimating the extent of unfair variation in health associated with race, income, or other ethically relevant attributes. Bivariate health inequities are measured using regression-based inequality indices such as the concentration index. Asada and colleagues' three-stage approach to measuring health inequity may be most useful in bridging the gap between divergent definitions and measurement of health inequity. It also allows for disentanglement and empirical comparison of measuring health inequality versus health inequity (6).

Indirect Capture

We also reviewed articles that discussed measurement of health equity in indirect terms, meaning they lacked reference to specific metrics for assessing health inequity. Instead, they offered guidelines to assess whether a program or policy was achieving its desired effect of promoting and increasing health equity. These approaches tended to be health care focused or to adopt a conceptual approach and framing. For example, Begun and colleagues (9) developed a five-point ordinal scale to assess whether a hospital's community programs and policies promoted population health and health equity. Levels of the scale developed by Begun and colleagues are based on the cliff of good health analogy by Jones and colleagues (36). The scale's levels include (*a*) acute care/tertiary prevention (i.e., medical care); (*b*) secondary prevention (i.e., postacute care services/screening/safety net programs); (*c*) primary prevention (i.e., immunization clinics/programs that promote healthy lifestyles and behaviors); (*d*) social determinants of health (i.e., housing, education, environment, access to resources and services); and (*e*) social determinants of equity (defined as population-level power and decision-making structures that influence social determinants of health. Examples of social determinants of equity include community-engaged decision making, government and organizational policies, and efforts to eliminate root causes of socioeconomic differences). Higher values on the scale indicate the potential for greater impact (9). The National Quality Forum (NQF) provided another example of steps needed for health equity measurement in their development of a road map to achieve health equity in health care (4).

Finally, models and frameworks may also be helpful in providing observation-based metrics for the measurement of health equity. More specifically, a community-based participatory research (CBPR) approach may be useful in generating metrics based on observations of health equity

processes because it offers specific approaches for promoting health equity by working directly with communities to assess and incorporate community-driven goals and vision for improving health. Although Ward (73) aimed to inform evaluation metrics for CBPR, health impact assessments, and other research that takes a partnership approach, his work may be useful in informing other aspects of health equity measurement. While not a traditional measurement approach, CBPR models and frameworks, which have often been applied in low-income and racial/ethnic minority communities, highlight equitable group dynamics, encourage equitable processes within partnerships, and focus on achieving health equity in communities through processes that involve the community and promote partnership to work toward desired health outcomes (73).

CHALLENGES AND OPPORTUNITIES

Central to the discussion of health equity measurement is the question of what constitutes evidence that health equity has been advanced or achieved. In general, public health literature operationalizes measurement of health equity by measuring gaps in health inequities or health disparities. We note that aspirational definitions of health equity focus on all people achieving their highest level of health (64). Yet optimization of health for all is not part of measurable definitions of health equity, largely because this concept has not been accounted for in gap-oriented measurement methods. For this and other reasons, there remains a continuing need for research (including evaluation research) to develop new metrics to position public health to advance and ultimately achieve health equity. A comparable literature exists regarding the measurement of health disparities. This literature was foundational to the work of Penman-Aguilar et al., as well as other works cited here. Nevertheless, we consider it appropriate to have focused more narrowly on discussions of measuring health equity in the present article because readers who are looking to advance health equity will turn to this literature.

Many challenges have been associated with effectively attaining health equity. A full elaboration of these challenges is beyond the scope of this review. However, we highlight challenges associated with securing readiness of the public health infrastructure to integrate health equity; in addition, we discuss briefly the opportunity to improve access to high-quality health care, which is also important to achieving health equity.

Current structures in governmental public health are heavily influenced by practice models that favor biomedicine, population-based clinical care, and behavioral and lifestyle-focused interventions (8). In isolation, these practice models do not reach the whole person in their social context (which in turn impacts community health status). Additionally, across international contexts, governmental public health, as a public good, may shy away from tackling root causes embedded in social systems that may be resistant to change, politically sensitive, or value laden (8, 45).

In many instances, the introduction and integration of health equity into systems of public health constitute an innovation. As public health practitioners build capacity for health equity, it is not uncommon to encounter difficulties (and the need to innovate) in the following ways:

- Finding, evaluating, and using health equity tools (including obtaining sufficient guidance on how to apply health equity tools, which may be outside of their usual approach to work);
- Applying a health equity lens to a specific scope of work (including adapting health equity frameworks to the complexities and nuances of their public health system);
- Communicating about health equity in ways that can be understood inside and outside of public health;
- Garnering leadership support for integrating health equity when there are urgent and seemingly competing priorities; and

- Securing and maintaining organizational commitment, readiness, and resources to achieve health equity (52, 53).

Overcoming these and other challenges can accelerate the readiness of health departments to more fully adopt a health equity agenda.

Public health can play a role in improving access to high-quality health care, which is key for eliminating health care disparities and advancing health equity. For example, we note opportunities to achieve greater access to and quality in the delivery of health care through stronger community–public health–hospital partnerships. The US health care system is renowned for its leadership in biomedical research and technology, but not all people have benefited (51). An integrated approach and cooperative strategy between health systems, public health departments, and community organizations and institutions can reduce health care disparities (65). Health systems challenges include (*a*) reducing racial/ethnic differences in the quality of health care received; (*b*) improving access to timely health care and preventive health services such as cancer screening and diabetes management; (*c*) overcoming health systems complexities that can limit the ability of different populations to receive the desired care or derive benefits from available services; (*d*) eliminating interpersonal and institutional biases that may prevent some populations from obtaining effective care/services; and (*e*) increasing workforce diversity in public health and health care professions (46). These and other challenges and opportunities call for coordinated and evidence-informed approaches to the science and practice of health equity.

CONCLUSION

As we approach the third decade of the twenty-first century, overcoming persistent health disparities demands an expanded view of the role and contributions of public health. The successful integration of health equity into public health is a strategic advance, an innovation in the evolution of public health practice. To effectively pursue health equity, we will be called on to abandon our silos and practice in a common space with other sectors, where we can collectively address social factors that contribute to gaps in health.

DISCLOSURE STATEMENT

The authors are not aware of any affiliations, memberships, funding, or financial holdings that might be perceived as affecting the objectivity of this review. The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

ACKNOWLEDGMENTS

We thank Naziyya Haque for her invaluable assistance with compilation, review, and examination of candidate case examples.

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