# VIEWPOINT

# The Quintuple Aim for Health Care Improvement A New Imperative to Advance Health Equity

#### Shantanu Nundy, MD, MBA

George Washington University Milken Institute School of Public Health, Washington, DC; and Accolade Inc, Plymouth Meeting, Pennsylvania.

#### Lisa A. Cooper, MD, MPH

Department of Medicine, Johns Hopkins University School of Medicine, Baltimore, Maryland; and Bloomberg School of Public Health, Department of Health, Behavior and Society, Johns Hopkins University, Baltimore, Maryland.

#### Kedar S. Mate. MD

Department of Medicine, Weill Cornell Medical College, New York, New York; and Institute for Healthcare Improvement, Boston, Massachusetts.

 $\leftarrow$ 

Viewpoint page 519



Supplemental content

Corresponding Author: Shantanu Nundy, MD, MBA, George Washington University Milken Institute School of Public Health, 950 New Hampshire Ave NW, #2, Washington, DC 20052 (shantanu.nundy@gmail.com). The COVID-19 pandemic has brought long-overdue and much-needed attention to the lack of health equity in the US and around the world. Nearly everywhere, socially marginalized populations, including racial and ethnic minoritized groups, older adults, and individuals living in poverty, experienced higher rates of COVID-19 and morbidity and mortality from infection, as well as greater disruptions to their preventive and chronic care. Although the reasons are myriad, the fact remains that these differences, which persisted long before the pandemic, are unacceptable and avoidable. The challenge now is translating this heightened social consciousness into action, particularly in communities, clinics, and health systems.

The triple aim—improving population health, enhancing the care experience, and reducing costs—was first described in 2008 by Berwick and colleagues<sup>2</sup> as a "North Star" for health care improvement. Before the triple aim, these aims were often held in opposition (eg, creating a better experience would necessarily increase costs). The breakthrough was the proposition that the aims could be reinforcing of one another. In 2014, these goals were expanded to the quadruple aim

The pursuit of health equity ought to be elevated as the fifth aim for health care improvement, purposefully including with all improvement and innovation efforts a focus on individuals and communities who need them most.

in recognition of the growing challenge of burnout (ie, exhaustion, cynicism, and professional dissatisfaction) among physicians and other members of the health care workforce.<sup>3</sup> Evidence of the framework's broad acceptance in health care includes (as of October 21, 2021) the number of peer-reviewed citations of the original articles describing the triple and quadruple aims (1542), the number of peer-reviewed publications with *triple* or *quadruple aim* in the title (199), Google search results (320 700), and recognition by accrediting bodies such as the National Committee for Quality Assurance and the Joint Commission, physician societies, and industry groups. This Viewpoint proposes expanding the quadruple aim to the quintuple aim, adding a fifth aim of advancing health equity.

Health equity is defined as "the state in which everyone has the opportunity to attain their full health potential and no one is disadvantaged from achieving this potential because of social position or other socially determined circumstances." Health inequities affect many populations, including individuals who identify as Black, Latino, Native American, or LGBTQ; individuals in rural communities; individuals living in poverty; individuals with disabilities; and older persons. The reasons for health inequities are multifold, including structural racism, which shapes numerous opportunities that influence health, including educational attainment, employment, access to safe environments, affordable housing, healthful food, access to care, social relationships, and networks.

The focus on health equity is certainly not new. The 2001 Institute of Medicine (now the National Academy of Medicine) report *Crossing the Quality Chasm:* A New Health System for the 21st Century cited equity as 1 of the 6 aims for improvement, alongside timeliness, patient-centeredness, efficacy, safety, and efficiency. Two years later, the 2003 National Academy of Medicine report *Unequal Treatment* defined and described health care disparities and provided several recommendations related to improvements in health care financing, allocation of care, availability of language translation, community-based care, cross-

cultural education of health professionals, and data collection and research initiatives. However, there has not been substantial progress in achieving equity in the 20 years since the first report was published. Part of the reason is the challenge of translating high-level policy aspirations into change in health care delivery and clinical practice. Practitioners have been adequately charged with improving health outcomes, patient sat-

isfaction, and process measures, but health equity requires a more fundamental transformation toward addressing upstream determinants of health. The result is that the promise of quality improvement has been realized inequitably.

Part of the effectiveness of the triple or quadruple aim is its conciseness. When the fourth aim was added, the authors effectively argued that by failing to address burnout (or worse, by contributing to it) quality improvement would ultimately be unsustainable. In short, it would be a hollow victory. The reasoning for adding equity as a fifth aim is similar: quality improvement without equity is a hollow victory. It is tempting to argue that health equity is already covered in 2 of the aims, better experience of care and better health for populations. But neither is guaranteed unless health equity is made an explicit goal. Quality improvement efforts without a focus on disparity reduction may have limited effects on health disparities and in fact unintentionally worsen

them. <sup>5,6</sup> In addition, the inclusion of health equity as an explicit goal of quality improvement may spur new efforts that may not otherwise be taken (ie, efforts for which the primary objective is intended to improve health equity). Thus, with the incorporation of health equity, the quintuple aim has the potential to meaningfully shift quality improvement efforts (Supplement).

To address the fifth aim, health care leaders and practitioners must identify disparities, design and implement evidence-based interventions to reduce them, invest in equity measurement, and incentivize the achievement of equity. As has been evident time and again during the pandemic, health disparities such as reporting COVID-19 infection rates and morbidity and mortality by race remain inadequately and inconsistently documented. Health care leaders should provide practitioners the needed resources to measure and report quality and operational data stratified by the relevant social categories. At a minimum, this should include race, ethnicity, and gender identity, based on self-reported data. In addition, practitioners should be incentivized or required to collect data on social needs and barriers to care such as transportation, food insecurity, and housing.

Quality improvement efforts should be explicitly designed to improve health equity. This includes choosing interventions that are evidence based and proven to reduce health disparities, <sup>7</sup> as well as involving persons from groups and communities that are affected in the planning, designing, and delivery of interventions so they are inclusive, culturally sensitive, and structurally appropriate. <sup>8</sup> Such efforts will require overcoming challenges with addressing upstream social determinants of health, including the need for better data sharing between health care and community-based organizations, lack of clarity about who should pay for the interventions, and disincentives to cross-sector collaboration. <sup>9</sup>

Health equity is measurable, but measurement must move beyond stratifying the first 3 aims by race, ethnicity, or other social categories such as preferred language, gender, or physical or mental ability. A key design idea in the original triple aim was that the aims could be measured independently and that they varied independently. Accordingly, health care leaders and practitioners must consider primary measures of health equity, such as measures of the underlying causes of inequities (eg, racism, discrimination, mistrust, food insecurity, housing instability), in improvement efforts.

Policy makers should set health equity standards and design effective economic supports to help achieve them. <sup>10</sup> At a minimum, the accurate and timely collection of demographic identifiers and stratification of existing clinical measures discussed earlier, as well as public or transparent reporting, could be supported through incentive programs. Incentives should be based on outcome improvements and should flow to organizations that provide care to more patients from underresourced communities. In fee-for-service environments, evidence-based interventions designed to address underlying social needs that often underlie health inequities should be reimbursed so that quality improvement efforts to address these needs have a financing model. In addition, efforts should be made to accelerate value-based payment in underresourced communities in which payments reflect the greater social and medical needs of these populations.

The COVID-19 pandemic has forced practitioners, health care leaders, and policy makers to grapple with the profound health inequities present in society. The pursuit of health equity ought to be elevated as the fifth aim for health care improvement, purposefully including with all improvement and innovation efforts a focus on individuals and communities who need them most.

## ARTICLE INFORMATION

**Published Online:** January 21, 2022. doi:10.1001/jama.2021.25181

Conflict of Interest Disclosures: Dr Nundy reported that he is employed by Accolade Inc, a company that provides personalized health care services in the US, and also serves as a member of the American Medical Association external advisory group on health equity and innovation, outside the submitted work. No other disclosures were reported.

### REFERENCES

1. Centers for Disease Control and Prevention. Risk for COVID-19 infection, hospitalization, and death by race/ethnicity. Accessed December 15, 2021. https://www.cdc.gov/coronavirus/2019-ncov/covid-data/investigations-discovery/hospitalization-death-by-race-ethnicity.html

- 2. Berwick DM, Nolan TW, Whittington J. The triple aim: care, health, and cost. *Health Aff (Millwood)*. 2008;27(3):759-769. doi:10.1377/hlthaff.27.3.759
- 3. Bodenheimer T, Sinsky C. From triple to quadruple aim: care of the patient requires care of the provider. *Ann Fam Med*. 2014;12(6):573-576. doi:10.1370/afm.1713
- 4. National Academies of Sciences, Engineering and Medicine. *Communities in Action: Pathways to Health Equity*. National Academies Press; 2014. Accessed January 14, 2022. https://www.nap.edu/download/24624
- 5. Mueller M, Purnell TS, Mensah GA, Cooper LA. Reducing racial and ethnic disparities in hypertension prevention and control: what will it take to translate research into practice and policy? *Am J Hypertens*. 2015;28(6):699-716. doi:10.1093/aii//hpu233
- **6.** Pollack CE, Armstrong K. Accountable care organizations and health care disparities. *JAMA*. 2011;305(16):1706-1707. doi:10.1001/jama.2011.533

- 7. Purnell TS, Calhoun EA, Golden SH, et al. Achieving health equity: closing the gaps in health care disparities, interventions, and research. *Health Aff (Millwood)*. 2016;35(8):1410-1415. doi:10. 1377/hlthaff.2016.0158
- **8**. Lyles CR, Wachter RM, Sarkar U. Focusing on digital health equity. *JAMA*. 2021;326(18):1795-1796. doi:10.1001/jama.2021.18459
- 9. Butler SM. What is the outlook for addressing social determinants of health? *JAMA Health Forum*. 2021;2(9):e213639. doi:10.1001/jamahealthforum. 2021.3639
- **10**. Anderson AC, O'Rourke E, Chin MH, Ponce NA, Bernheim SM, Burstin H. Promoting health equity and eliminating disparities through performance measurement and payment. *Health Aff (Millwood)*. 2018;37(3):371-377. doi:10.1377/hlthaff.2017.1301