



VIRTUAL NATIONAL SUMMIT
OCTOBER 20, 2020 | ASTC.ORG/NEWFRONTIERS

Health Innovation and Security

Centering Equity in Health Innovation

In 2020, health outcomes in America are staggeringly unequal between populations: race, income, and zip code consistently predict life expectancy.^{1,2,3} The COVID-19 pandemic, which has disproportionately hurt communities of color, has added an alarming new dimension to this crisis. And yet, there remains a dearth of research on social disparities in health.⁴ There also are troubling inequities in leadership and participation in biomedical academic research and among health care practitioners.⁵ Centering equity and social justice in health care delivery and biomedical research is critical to addressing these disparities and improving public health preparedness.⁶

Conversations at the frontier of health care in America involve a range of new practices, capabilities, and technologies: precision medicine informed by genetic variants and other types of health information; cutting-edge biomedical devices that monitor and treat disease (with potential to affect privacy and even redefine what it means to be human); and telemedicine, health data, and effective electronic health records that optimize health care delivery. Alongside these developments are critical ongoing dialogues on systemic racism and injustices in health care, including the problematic history of biomedical research, demographic underrepresentation in biomedical science and health fields, and the disproportionate impact of social factors on health outcomes.

This session will explore how innovation is conceptualized, incentivized, and implemented to specifically center equity in medicine and health. We will engage in a dialogue on how health innovation is utilized to care for those most vulnerable due to gaps in our current health and medical system—something that traditionally has been lacking in the way that medical science is conducted and funded. We will explore the way health care is delivered—including in safety-net settings—the research questions we ask about health, the technologies we develop, and the pathways to learning and work that will foster the health care ecosystem needed to create a more equitable future.

¹ www.kff.org/report-section/key-facts-on-health-and-health-care-by-race-and-ethnicity-health-status/

² <https://ajph.aphapublications.org/doi/10.2105/AJPH.2019.305243>

³ www.cdc.gov/nchs/data-visualization/life-expectancy/

⁴ <https://jamanetwork.com/journals/jama/article-abstract/2757851>

⁵ www.pnas.org/content/117/17/9284

⁶ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4724388/>

Track Themes and Questions for Participants

1. **Delivering equitable health futures:** How can design thinking and innovations in health care delivery—including telemedicine—help address gaps in our current health care system that leave so many patients vulnerable?
2. **Generating big ideas:** How do we help solve problems of inequity in health care by addressing what research questions are elevated—and who is asking those questions? How do we center equity in all aspects of disease research, from the scientists posing questions, to the institutions providing operational support, to the governmental and private entities funding research? How can community-based participatory research models be applied to improve health outcomes?
3. **Redefining what it means to be human:** Novel health technologies, including gene-editing tools and neurotechnologies, offer tremendous promise for treating and alleviating the burden of previously incurable diseases. What are the ethical dimensions and ramifications of widening the use and application of these technologies? How can they be used to fight health inequities and expand health care access?
4. **Pathways to the health and science workforce we need:** How do we build a community of researchers and practitioners that will develop innovative and effective health care solutions and approaches? How can we alleviate the fundamental barriers that cause staggering underrepresentation in science and medicine—including educational inequity that starts in preschool, bias in higher education admissions, outsized expenses of entering the health care workforce, and enormous opportunity costs and financial burdens of higher learning in biomedicine and health care?

Further Reading

- [Communities in Action: Pathways to Health Equity](#), *National Academies of Medicine*
- [Diversity in Health Care Is a Matter of Life & Death](#), Donald Warne, MD, *The Aspen Institute*
- [From the NIH: A Systems Approach to Increasing the Diversity of the Biomedical Research Workforce](#), Hannah A. Valantine, MD; P. Kay Lund, PhD; Alison E. Grammie, PhD, *Life Sciences Education*
- [Health Equity – Are We Finally on the Edge of a New Frontier?](#) Michele K. Evans, MD, *New England Journal of Medicine*

Glossary of Terms

1. **Precision medicine** – A form of medicine that uses information about a person's own genes or proteins to prevent, diagnose, or treat disease. One example of precision medicine is in cancer care where specific information about a person's tumor to help make a diagnosis, plan treatment, find out how well treatment is working, or make a prognosis. Also called personalized medicine. Adapted from the [National Cancer Institute](#)
2. **Community-based participatory research models** – Collaborative approach to research that equitably involves all partners in the research process and recognizes the unique strengths that each brings. CBPR begins with a research topic of importance to the community and has the aim of combining knowledge with action and achieving social change to improve health outcomes and eliminate health disparities. Adapted from [W.K. Kellogg Foundation Community Health Scholars Program](#)
3. **Gene-editing tools** – Technologies used for the manipulation of an organism's genes by introducing, eliminating, or rearranging specific genes using the methods of modern molecular biology. Common tools for editing genes include CRISPR/Cas9, which won the 2020 Nobel Prize in Chemistry. Adapted from the [U.S. Department of Agriculture](#)
4. **Neurotechnology** – A range of methods and instruments that enable a direct connection of technical components, such as prostheses or computers, with the nervous system. In particular, this connection may be used to record brain signals or stimulate brain activity. Adapted from [Neurotechnology: Current Developments and Ethical Issues](#)

*Special thanks to Frontier Ambassador Fellow **Noemie Levy** for all her work to shape and curate the content, including this brief, for the Health Innovation and Security track of the 2020 New Frontiers Virtual National Summit.*



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