

**Comments to NIH-OSTP session on ARPA-H (minority health and disparities, and nursing),
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Science (IAPHS)**

Thank you for this opportunity to speak on behalf of the Interdisciplinary Association of Population Health Science, an organization representing scientists from over 30 disciplines. All of these disciplines, from medicine to biological science to public health and social science, have expertise essential to advancing the science of population health and health equity, and all will be essential in advancing the goals of ARPA-H.

Crucial to advancing health equity, is the work of the social sciences. Economists, sociologists, criminologists, anthropologists, public policy experts have the expertise to address the roots of health disadvantage embedded in our systems of education, the law, labor market, government, health care, housing, and criminal justice.

These scientists have made enormous strides in developing novel data and methods to not only understand these complex social systems but have also forged intellectual partnerships across the health sciences to elucidate how their effects translate into biology and disease.

Here's one example of why this is important. Even before COVID, life expectancy in the US was declining due to rising death rates in the prime working ages—and rates were rising most rapidly among the poor, less educated, and recently among racial and ethnic minorities. The causes included drug overdose, suicide, and CVDs like hypertension, hyperlipidemia and diabetes.

Breakthroughs in biomedical science have provided the means to save some of these lives NOW:

- we have medications to treat opioid use disorder and reverse opioid overdose.
- We have life-saving drugs for hypertension and hyperlipidemia.
- But the most advantaged populations often benefit earliest and most from these medical advances.
- One thing ARPA-H must do to advance health equity is to ensure that medical innovations actually reach and benefit these high-risk populations.
- Because this requires understanding the conditions of their lives, it is a job for teams integrating social science with health services research, medicine, and behavioral science.

But that's not enough. ARPA-H also needs to fund innovative research on how to disrupt the consequences of structural disadvantage for health – research that identifies how poverty or racial injustice translates into higher risks for CVD, substance use disorder, and other diseases, and tests interventions that counter them. This requires an integration of the social, health, and biological sciences that members in our org are primed for.

Some examples of opportunities that could be leveraged via ARPA-H:

- Provide interdisciplinary teams with the resources needed to harness naturally occurring data (e.g., cell phone movements, consumer expenditures, twitter feeds, health care records, police records, zoning and foreclosure data) and integrate it with rigorous population-level data and analytics to better characterize the linkages between health care delivery and social systems.
- Support new technologies like machine learning that are being used to identify the predictors of rare events like suicide and applied to research findings to identify health inequities in health care delivery to inform interventions.

ARPA-H investments should be guided as well by input from communities, especially from minority- and low-income communities, who experience health inequity firsthand. ARPA-H should:

- Extend ongoing grants on critical health issues, like substance use disorder, for another year beyond their grant period to allow for meetings of investigators and community members to conduct a “meta-analysis” of their results to develop interventions or programs that would save lives and reduce disparities;
- Institute expectations (and funding) for dissemination purposes;
- Partner with media platforms and other commercial social network platforms to communicate research-driven messaging about new medical interventions and target communication to vulnerable populations to promote health equity.