

**U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES (HHS)  
COVID-19 HEALTH EQUITY TASK FORCE (HETF)**

**6<sup>th</sup> MEETING (Virtual)**

**July 30, 2021**

**Members Present**

Marcella Nunez-Smith, M.D., M.H.S. (Chair)  
Sara Bleich, Ph.D.\*  
Jessica Cardichon, Ed.D., J.D.\*  
Richard Cho, Ph.D., M.P.H.  
Jamila Gleason, J.D.\*  
James Hildreth, Ph.D., M.D.  
Andrew Imparato, J.D.  
Jo Linda Johnson, J.D.\*  
Victor Joseph  
Joneigh Khaldun, M.D., M.P.H., F.A.C.E.P.  
Rachel Levine, M.D.\*  
Octavio Martinez, M.D., M.P.H., M.B.A., F.A.P.A.  
Shannon Pazur, J.D.\*  
Tim Putnam, D.H.A., E.M.S.  
Vincent Toranzo  
Mary Turner, R.N.  
Homer Venters, M.D.  
Bobby Watts, M.P.H., M.S.  
Haeyoung Yoon, J.D.

**Members Absent**

Mayra Alvarez, M.H.A.  
Pritesh Gandhi, M.D., M.P.H.\*

\*Federal ex-officio members

**Federal Staff**

CAPT Samuel Wu, Pharm.D., Designated Federal Officer, Office of Minority Health  
Martha Okafor, Ph.D., Executive Director, Office of the Assistant Secretary for Health

**Invited Presenters**

Lori Tremmel Freeman, M.B.A., Chief Executive Officer  
National Association of County and City Health Officials  
Michael Fraser, M.D., Chief Executive Officer  
Association of State and Territorial Health Officials

Gerald E. Harmon, M.D., President  
American Medical Association  
David Skorton, M.D., President and Chief Executive Officer  
Association of American Medical Colleges

## **Call to Order, Welcome and Introductions**

*CAPT Samuel Wu*  
*Designated Federal Officer, Office of Minority Health*

CAPT Wu opened the sixth meeting of the COVID-19 Health Equity Task Force (HETF) and shared the focus of the meeting: future pandemic preparedness, mitigation, and the resilience needed to ensure equitable response and recovery in communities of color and other underserved populations. He reminded attendees that the meeting was being live streamed and recorded and that the recording would be available for viewing at a later time. Additionally, all materials presented in the meeting would be available at [minorityhealth.hhs.gov/hetf](https://minorityhealth.hhs.gov/hetf). CAPT Wu noted that American Sign Language (ASL) interpreter services were available for the meeting and closed captioning was available at both [hhs.gov/live](https://hhs.gov/live) and the Office of Minority Health (OMH) YouTube channel. CAPT Wu welcomed members of the public to provide comments as stated in the meeting notice published in the Federal Register by emailing [COVID19HETF@hhs.gov](mailto:COVID19HETF@hhs.gov) no later than 7 days after the meeting.

## **Opening Remarks**

*Marcella Nunez-Smith, M.D., M.H.S.*  
*Chair, COVID-19 Health Equity Task Force*

Dr. Nunez-Smith began by reminding the HETF members and audience of the charge to provide recommendations for mitigating health inequities that have been caused or exacerbated by the COVID-19 pandemic. She also mentioned key topics covered at previous meetings. She explained that attention has now turned to the future and future pandemics and identifying interim recommendations specific to pandemic preparedness and response planning. Dr. Nunez-Smith went on to state that since last convening, the more-contagious delta variant has become the dominant strain of the virus in the United States, but we can make personal choices and collective decisions to get safely to the other side sooner. She noted that we must shift to a proactive framework to anticipate basic needs, but our response has been stymied by the lack of standardized disaggregated data, outdated infrastructure, and an inadequate public health workforce. To further this point, she noted that everyone deserves access to accurate information and life preserving resources.

Dr. Nunez-Smith shared that life expectancy in the United States has declined 1.5 years on average, with 2- and 3-year declines noted in Black and Hispanic communities. She explained that while these calculations reflect the toll of the COVID-19 pandemic, this downward trend predates the virus. Dr. Nunez-Smith detailed that despite trillions of dollars spent on healthcare in the United States, there is a need for a health-in-all-policies strategy as we think now about investments that will reap benefit over generations. Dr. Nunez-Smith reminded the Task Force and audience that this is our work—the reimagining of a different and better post pandemic reality.

After Dr. Nunez-Smith's opening remarks, CAPT Wu performed a roll call of the HETF members and announced a quorum for the meeting.

### **Introduction of Ex-officio Member**

The new HETF member, Jamila Gleason, introduced herself, summarized her background, and highlighted experiences relevant to the HETF charge.

Ms. Gleason is an attorney at the Department of Labor (DOL), responsible for advising the Solicitor of Labor on issues related to occupational health and safety and the DOL's equity enforcement programs and employee benefits program enforcement work.

### **Panel Presentations and Discussion**

Four members of the public health community were invited to provide the Task Force with recommendations addressing future pandemic preparedness, mitigation, and resilience needed to ensure equitable response and recovery in communities of color and other underserved populations. Ms. Lori Tremmel Freeman and Dr. Michael Fraser addressed the roles of local, State, and Territorial health departments in their recommendations, and Dr. Gerald E. Harmon's and Dr. David Skorton's recommendations centered around the equity in the medical profession and medical education and training. The presentations were each followed by a brief discussion period.

#### ***Pandemic Lessons and Opportunities to Address Health Equity: The Important Role of Local Health Departments***

*Lori Tremmel Freeman, M.B.A*

*CEO, National Association of County and City Health Officials*

Ms. Tremmel Freeman provided an overview of the role of the National Association of County and City Health Officials (NACCHO), a professional organization that provides technical assistance and advocacy support to the estimated 3,000 local health departments (LHDs) throughout the United States. Most LHDs are autonomous or have mixed governance. Governance variance, she noted, has been a challenge to executing a uniformed pandemic response.

Ms. Tremmel Freeman added that while upwards of 90 percent of all LHDs provide immunization services, half of the nation's LHDs reported vaccine hesitancy and confidence as barriers to vaccine uptake prior to the pandemic. She emphasized that this is an area that needs improvement among historically marginalized and disenfranchised communities. Regarding the COVID-19 response, she shared that 90 percent of LHDs reported having to reassign their immunization staff to focus on COVID-19 efforts. However, they could only redirect about 17% of their funding to support COVID-19 activities, creating a funding disparity among LHDs. Ms. Tremmel Freeman also noted that immunization rates have fallen throughout the pandemic, leaving vulnerable communities at greater risk for illness and disease, and that health disparities are often more impactful in rural and frontier communities. In terms of addressing equity, Ms. Tremmel Freeman stated that targeting allocations, supporting vaccine efforts, supporting transportation to vaccine appointments, community-led outreach conducted by people who look

like the communities that they are serving, strong communication campaigns, and data at the most granular level are important.

Ms. Tremmel Freeman highlighted LHD efforts across the country to reach and achieve optimal COVID-19 vaccination uptake and reduce hesitancy factors before outlining recommendations to the HETF. NACCHO's recommendations include partnering with LHDs and community-based organizations, integrating LHDs into local planning, improving data and utilization where and when possible, integrating community voices in the planning and process, going beyond "Health in All Policies" to "Health and Racial Equity in All Policies," and incorporating sustainability in planning. Broader recommendations include supporting LHDs on the frontlines of the COVID-19 response; strengthening the governmental public health partnerships to harness and leverage expertise from the local level in national planning; investing in ground-level COVID-19 vaccine deployment and infrastructure; restoring support and trust in public health; investing long term to protect the public and strengthen health equity in public health infrastructure, the workforce, health and racial equity in all policies, and data modernization; and maintaining and growing COVID-19 and public health innovations and associated investments.

*Michael Fraser, M.D.*  
*CEO, Association of State and Territorial Health Officials*

Dr. Fraser introduced the Task Force members and audience to the Association of State and Territorial Health Officials (ASTHO) and their vision to help State and Territorial agencies achieve and advance optimal health equity for all through technical assistance, advocacy, leader development, and community building. He shared that the Board of Directors recently passed a policy statement containing four components that, while not COVID specific, apply to COVID and what we need to do better as we prepare for our next pandemic. The policy statement recognizes structural racism as a fundamental cause of health disparities and (1) recognizes the role that public health agencies play in eliminating racism, (2) recommends that State and Territorial health agencies lead internal organizational change efforts to address structural racism within their own organizations to support racial healing and transformation, (3) supports jurisdictional efforts to eliminate structural racism and advance health equity, and (4) recommends partnerships and collaborations that support local, Territorial, Tribal and State initiatives to address structural racism and eliminate health disparities. Within the context of this work, he stated that the policy statement is ASTHOs "North Star" when it comes to health and racial equity.

Dr. Fraser highlighted the following issues relevant to future preparedness readiness in the Atlantic and Pacific territories. The HETF may want to make special note of the issues that impact equity in the Atlantic and Pacific territories as Medicaid and other Federal policies are different for Americans living in these areas. He explained that the Veterans Administration and the Department of Interior health policy and pandemic preparedness are different in the Atlantic and Pacific regions than the rest of the nation. He also noted that the entire Pacific region had been declared a chronic disease or noninfectious disease emergency due to taxes from sea level rise and infectious and noninfectious disease threats prior to COVID-19, and COVID only added to the disease burden.

Dr. Fraser enumerated multiple initiatives aimed at increasing capacity of public health leadership, building resiliency, and demonstrating best practices related to health and racial equity. He noted that previous preparedness plans for the country did not include health and racial equity, even though the disparities witnessed during COVID are the same disparities observed in natural disasters, emergency events, and noninfectious disease emergencies. To ensure that the nation's future preparedness plans place health and racial equity at the core of its preparedness strategy, Dr. Fraser made recommendations regarding involvement with community members and partners in preparedness planning; building trust in public health and science; the need for medical professional to explain why race and ethnicity data are important when asking patients to disclose their identities; diversity in clinical practice, public health leadership, and committee and task force memberships as well as in preparedness planning to eliminate bias and ensure representation at all levels; Federal guidance to States by way of recommendations and policy standards for collecting race and ethnicity data; and formally organize an after-action review of the Federal COVID-19 response with an equity assessment at its core.

### Discussion

Dr. Martinez shared that many public health officials at the city, county, and local level have stepped down or out of public health due to the vilification of those positions and asked the speakers to suggest the top one or two things needed to infuse trust back into the public health infrastructure.

Ms. Tremmel Freeman responded that over 250 officials have left their positions and noted not only the significance of losing leadership at a time when it is needed most but the loss of long-tenured individuals who know their business and how to work in their communities. She shared that one of the challenges has been the alignment in messaging—getting information out to the public as simultaneously as possible—due to changes in administration. Ms. Tremmel Freeman suggested that more Federal-level guidance supported at State and local levels will result in fewer kinks in trust and at the ground level from the public as to why changes are being made.

Dr. Fraser noted two things important to developing trust: Health departments have to “walk the talk.” Although health departments have been talking about equity for a long time, communities want to see it practiced. He noted it can't be assumed that a community's priorities are the grant topics that are received; there are other things communities want to see remediated so they can feel healthy and safe. This was seen with COVID-19, and the same factors that predict outcomes for COVID-19 are going to be the same as for diabetes, tobacco use, and substance use.

Mr. Imperato picked up on the opportunity for the public health and emergency preparedness and response worlds to come together. He noted that California and the Federal Emergency Management Agency have offices dedicated to helping people with access and functional needs or disabilities and wondered if it would be helpful for public health entities to also build out that capacity to better serve communities during a pandemic or disaster.

Dr. Fraser shared that he learned if you create a system that works well for people with special healthcare needs, you create a good system that will be better for everyone. He noted there is a project at the Centers for Disease Control and Prevention (CDC) related to COVID-19 response

putting people in health departments to support planning specifically for individuals with disabilities; so, proof of concept is in progress to make this someone's job in routine and emergency operations.

Ms. Tremmel Freeman noted some of the richest examples she witnessed of how to do things right were in maternal and child health with the use of family navigators who did nothing but help families navigate complex medical systems to give their child a good life. She shared that she has been encouraged by the hiring of health equity strategists on the ground and the influx of county and city legislation to declare racism as a public health emergency focused on actionable steps.

Ms. Yoon was curious about an evaluation of the pandemic that was mentioned by Dr. Fraser and if anything was in writing.

Dr. Fraser touched on his support of a commission like the 9/11 Congressional Commission on lessons learned from the COVID-19 pandemic. He suggested that if there were not an after-action review—since the crisis is ongoing—leadership could consider an in-progress review, which can be done Federally, by States, or by communities. Dr. Fraser recommended bipartisan, nonpartisan, objective, and fair assessments of what happened and using those lessons for the future. He also mentioned, however, that they have had after-action reviews for H1N1, Ebola, Zika, and SARS, and 80 to 90 percent of the recommendations have been about State, local, and Federal communication and equity and about communities disproportionately being impacted. It is not clear if the problem is due to knowledge or is an implementation/execution problem. Dr. Fraser recommended producing a robust advocacy agenda to support recommendations in the future.

Ms. Turner asked about needs for increasing and improving public health infrastructure. She asked specifically about what was happening prior to the pandemic to weaken this infrastructure, in particular defunding and closures, especially in communities of color and those with high health needs.

Ms. Tremmel Freeman touched on the disinvestment in emergency response after the ramp-up in services after 9/11, which was followed by a rapid decline in the 12 years since as the money went away or was earmarked for other services. As a result, there was a significant impact to the workforce in public health and a system based on disease funding that could not improve and sustain the infrastructure needed to support IT systems, data sharing, integration of systems, etc., at the State, local, and Federal levels.

Dr. Fraser noted COVID-19 has exacerbated capacity needs, particularly around workforce, data systems and reporting needs, and other sectors. He highlighted that what we cannot do is create a \$340B boom for 2 years and then revert to where we were in 2019. He mentioned how someone asked him what we will do with the community health worker (CHW) contact tracers and COVID-19 investigators hired. His response was, “Why can't we redeploy CHWs for diabetes, addiction, and other health issues?” This is an opportunity for upstream investment.

## ***Future Pandemic Preparedness Centered in Equity***

*Gerald E. Harmon, M.D.*

*President, American Medical Association*

Dr. Harmon reviewed the American Medical Association's (AMA's) recognition of the longstanding inequalities in healthcare and throughout our society and the AMA's mission to promote the art and science of medicine and the betterment of public health. He noted that equity is a cross-enterprise accelerator that is embedded in all efforts and reflected in outcomes. He shared the AMA mission's strategic arc to support professional development, remove obstacles to patient care, and improve health outcomes by addressing chronic disease through innovation, equity, and advocacy.

Dr. Harmon talked about how education and training of physicians and residents during the pandemic were often plagued by preexisting and challenging conditions that magnified these inequities and how research, mentorship, and internship opportunities were lost during the pandemic. While this was difficult for everyone, he stated, it was particularly difficult for students from historically marginalized communities. Noting the AMA's master file data, Dr. Harmon shared that 361 U.S. physicians died from COVID-19 during the pandemic and that Latinx physicians experienced a mortality rate that is 2.5 times greater than other racial and ethnic groups. He also noted that Black doctors reported seeing disproportionately more patients with COVID-19 and having less access to adequate testing and treatment options as well as personal protective equipment.

Dr. Harmon shared that telehealth and telemedicine became critical to delivering needed care during the pandemic, especially among patients with travel barriers in underserved and rural communities. He recommended that we find ways to sustain telehealth and telemedicine beyond the pandemic to help close the gap of access to care for historically marginalized populations. Dr. Harmon detailed how the AMA has used its influence to advocate for equitable access to care delivery and robust resources to advance education and proactive care. He also elaborated on the AMA's history of embedding equity in its strategic plan long before COVID-19.

He proposed the following recommendations: (1) strengthen the alignment and coordination of clinical medicine and public health; (2) address physician shortages as well as those in the public health workforce and burnout; (3) educate and train doctors, medical students, and other healthcare providers on antiracism, structural competency, and public health; (4) develop equity-centered data infrastructure, systems, and accountability; (5) invest in and improve digital health infrastructure to ensure equity; and (6) center and formally structure the people and ideas of those most historically marginalized in preparedness and response systems and efforts and restore trust in public health. Regarding AMA's role in supporting these recommendations, Dr. Harmon noted that the AMA can be extraordinarily effective at convening, communicating, educating, and advocating at the Federal, State, and local levels for policy changes.

*David Skorton, M.D.*

*President and CEO, Association of American Medical Colleges*

Dr. Skorton introduced the HETF and audience to the Association of American Medical Colleges (AAMC) and how the medical schools, teaching hospitals, and academic societies define the frontline response to the pandemic and in preparing the clinical workforce.

Shifting to recommendations, Dr. Skorton noted that the AAMC submitted a comprehensive letter to the Senate Health and House Energy and Commerce committees on addressing future pandemics that accompanies an AAMC-produced paper that proposes a health equity framework. Dr. Skorton stated that copies have been submitted to the HETF for consideration.

Dr. Skorton presented several foundational issues that the AAMC believes must underly the nation's health preparedness. He noted that as new therapeutics and vaccines emerge, they cannot be effective if the health experts are not seen as trustworthy by a considerable proportion of people. Dr. Skorton acknowledged that deeply rooted distrust in government stems from our nation's long history of systemic racism. He also underscored the need to address the social determinants of health by bolstering educational opportunities for all and addressing poverty, which is strongly correlated with a person's health. Regarding access to healthcare, Dr. Skorton emphasized the need for medical providers with similar lived experiences to their patients as a crucial factor to achieving health equity and supporting policies such as creating a diverse physician workforce that reflects the collective diversity that is seen in patients. Dr. Skorton shared the need for a national standardized, comprehensive, routine collection of sociodemographic data for people and communities supported by resources, incentives, and community engagement to ensure validity of data collection. He underscored the importance of including disaggregate race and ethnicity data, social risk data for individuals, and social determinant data for communities. Dr. Skorton highlighted the need to address telehealth access and equity, provider training, and telehealth program design and implementation, as it became such a vital tool to accessing clinical care during the pandemic.

In conclusion, Dr. Skorton emphasized the availability of the AAMC to the HETF as an ongoing resource to help problem-solve these important challenges.

### Discussion

Dr Venters asked if the presenters' organizations have identified mass incarceration as a threat to public health and whether they have strategies or programs to create paths for physicians who have the lived experience of incarceration given comments about the need to diversify the workforce.

Dr. Skorton noted that while the AAMC does not have a specific pathway for physicians with this experience, they do have an interest in and focus on carceral health through their Center for Health Justice and other areas. He expressed his hope that the Task Force, using Dr. Venter's expertise, follows the work of the Aspen Health Strategy Group in their upcoming report.



Dr. Harmon shared he was not aware of any efforts or organization within the AMA talking about this particular lived experience but expressed his interest in the report from Aspen Health Strategy Group.

Dr. Hildreth put forth two thoughts: Physicians have been resisting allowing advanced practitioners to practice to the full extent of their abilities and licenses. It would do enormous good in terms of expanding access to healthcare for disadvantaged communities if leadership in these organizations could get physicians to resist less. There is also a need to make an effort to allow persons of color greater access to specialties they have not traditionally been admitted to.

Dr. Skorton noted that the needle on the diversity issue has not moved far enough yet and emphasized that pipeline programs are especially important; however, by the time someone is a sophomore/junior in college it may be too far along in their education, and earlier intervention will be much more effective. On the issue of advanced practitioners, Dr. Skorton expressed that we do need to allow and encourage others to work at the top of their licenses and get obstacles out of the way of that happening.

Dr. Harmon echoed Dr. Skorton's sentiment regarding getting students interested in medical professions before high school. He mentioned AMA's program, Doctors Back to School, where they reach out to middle schools to encourage student interest in medical school and healthcare professions. Regarding expanding scope of practice, particularly primary care in underserved communities, Dr. Harmon shared he believes that doctors have been resistant not due to economic competition but quality concerns. He stated that physician-led, team-based care is crucial to the AMA and healthcare for America.

Dr. Martinez asked how we can encourage children of color to consider the health professions when educational debt is a primary concern.

Dr. Skorton stated that he addressed faculty from the Latinx community on this topic earlier that day. He agreed that debt is a concern and explained that the AAMC provides information to colleges about steps to be taken to lessen the financial burden and that he will follow up with the HETF on the details.

Dr. Harmon agreed. The AMA is also working hard on improving financial support sooner rather than later.

Ms. Turner appreciated that the subject of burnout was brought up. She also noted the importance of telehealth during the pandemic but questioned how we can ensure that the lack of hospitals and clinics in communities of color is also addressed. She expressed concern that this imbalance could create a system of haves and have nots.

Dr. Skorton advised looking at everything through an equity lens; both ends of the argument have a problem. If we trade off a higher level of care for something less effective, that would be a bad bargain. He noted that the application of telehealth is a problem for the people in this country who don't have internet access or can't afford it, and there is also the issue of rural healthcare. Dr. Skorton highlighted the need for infrastructure funding and internet access

everywhere to guarantee access to as many people as possible and to ensure we are not substituting the optimal level of care for expediency.

Dr. Skorton thanked Ms. Turner for bringing up burnout as well. He noted his support of the Lorna Breen Act and expressed that those who have had counseling, like himself, need to step forward as role models so there will be less of a stigma in for asking for help because, if it is not recognized and acceptable to bring up, tragedies will continue to occur.

### **Subcommittee Presentations and Discussion**

Dr. Martha Okafor highlighted the purpose and mission of the subcommittees and reviewed that the purpose of the four sub-subcommittees is to provide:

- (1) Recommendations for how agencies and State, local, Tribal, and Territorial (SLTT) officials can best allocate COVID-19 resources in light of disproportionately high rates of COVID-19 infection, hospitalization, and mortality in certain communities and disparities in COVID-19 outcomes by race, ethnicity, and other factors, to the extent permitted by law;
- (2) Recommendations for agencies with responsibility for disbursing COVID-19 relief funding regarding how to disburse funds in a manner that advances equity; and
- (3) Recommendations for agencies regarding effective, culturally aligned communication, messaging, and outreach to communities of color and other underserved populations in addition to addressing equity data shortfalls.

Dr. Okafor lifted up the following common themes.

#### **Incentivizing equity through data-and community-driven approaches to better prepare for future pandemics**

- Incentivize equity in healthcare systems by encouraging data- and community-driven approaches focused on decreasing distrust in the healthcare system for marginalized, minoritized, and medically underserved communities.
- Create standardized expectations around disaggregated data collection and include incentives to collect and report disaggregated data.
- Develop and issue research grants focused on equity-related interventions that have been used in previous public health emergencies and grants
- Incentivize novel partnerships and data use (including administrative data) to better reflect these groups and address equity in preparedness.
- Practice, and incentivize healthcare companies to practice, bidirectionally engaging patients and community members across race, gender, and cultural differences as equal partners in the work to develop appropriate sociodemographic and social-needs products and solutions.
- Assess opportunities to use data to close equity gaps in special pathogens care delivery.

## **Expand and diversify the healthcare workforce pipeline to address shortages and improve equitable treatment during pandemics**

- Expand federally funded National Public Health Corps to address healthcare worker shortages. Prioritize training and hiring of members of vulnerable communities.
- Explore strategies that meet local and regional staffing needs during pandemic response to rapidly expedite staffing reinforcement and cross-training in areas with chronic health workforce shortages.
- Expand access to entry level and other positions with 2 years or less training programs for licensed and certified positions in healthcare while also maintaining quality of care in order to combat the shortage of healthcare workers and to increase the number of licensed health professionals from underrepresented populations.
- Dramatically increase funding for education in medical fields, graduate medical education, and first responders, to train future medical professionals from local, underrepresented, and first-generation populations from minoritized and underrepresented communities.
- Increase the amount of racial, ethnic, and disability data on the healthcare workforce and educational pipeline, across healthcare professions, and centralize it in an easy-to-access and financially-maintained database.
- Fund the National Health Care Workforce Commission to provide data on the healthcare workforce, train healthcare workers, and provide policy advice and recommendations to both Congress and the administration.
- Provide guidance to public health agencies on the collaboration between government and non-governmental entities that have stronger relationships with minoritized, marginalized and medically underserved communities, and work to build a pipeline for talent of individuals that come from these communities.

## **Encouraging science-based, evidence-based solutions**

- Invest in evidence-based solutions, such as telemedicine and interdisciplinary approaches that expand telehealth specialist access to primary care, behavioral health, and specialty care services that combine in-person and virtual care for patients.
- Identify and establish partnerships with state and local policy organizations affiliated with other populations of focus to develop evidence-based strategies for reducing frontline and essential workers' exposure to the virus that causes COVID-19.
- Appoint an independent, Blue Ribbon panel to conduct a COVID-19 pandemic after-action analysis for the whole of government.
- Ensure equal representation and equal number of votes where relevant in government-led infectious disease guideline development

## **Mandate Standardized, Equitable, Data Collection through Research, Analysis & Reporting**

- Develop a health equity framework, inclusive of formal metrics and processes to monitor factors including, but not limited to, social determinants of health, quality of care, and trust in the healthcare system, to effectively decrease health inequality throughout the healthcare delivery system.
- Develop standards and expectations to collect and require reporting of disaggregated data for all groups.
- Assess compliance with existing standards related to data capabilities, collecting feedback on challenges and barriers to compliance.
- Analyze data to improve both healthcare quality and the patient experience across these communities.
- Set more rigorous standards to protect against data misuse or political interventions that interfere with access to data.

## **Create Safety Nets for Healthcare to help communities equitably recover from pandemics**

- Recognize healthcare as a human right and establish policies and funding to support this declaration via the use of an Executive Order.
- Create a comprehensive and effective health care systems that cover the costs of essential healthcare and provide quality of life services to address patient comorbidities, pre-existing conditions as well as the full scope of patient care to address healthcare needs during a pandemic.
- During a pandemic, expand access to COBRA coverage, ensure that it is affordable, and mandate that coverage cannot be terminated for those who have lost their jobs due to the economic impacts of the pandemic.
- Reduce the disproportionate reliance on employer-sponsored health insurance while increasing access to high quality care by doing the following:
  - Expand the eligibility criteria for federally sponsored or subsidized insurance programs (Medicaid, CHIP, etc.)
  - Reduce the age of Medicare eligibility to cover the 55-64-year-old age group to address health inequities driven by lack of insurance and underinsurance.
  - Expand all government health insurance programs to ensure that people currently uninsured, underinsured have equitable access to care.
  - In order to provide high quality health care during a pandemic, providers across every specialty should be available in their region and accept all forms of health coverage, including Medicaid plans.

## ***Healthcare Access and Quality Subcommittee***

*Tim Putnam, D.H.A., E.M.S.*

**Problem Statement 1:** Prior to the pandemic, existing disparities in physical and behavioral health, social determinants of health, healthcare access, coverage, and a variation in quality of care led to disproportionate rates of chronic disease in marginalized, minoritized, and medically underserved communities. During COVID-19, these chronic diseases led to worse outcomes for individuals who contracted the illness across these communities.

To address the problem statement, the subcommittee presented the following recommendations:

1. The Federal Government should:
  - a. Develop a health equity framework, inclusive of formal metrics and processes to monitor factors including, but not limited to, social determinants of health, quality of care, and trust in the healthcare system, to effectively decrease health inequality throughout the healthcare delivery system.
  - b. Incentivize equity in healthcare systems by encouraging data- and community-driven approaches focused on decreasing distrust in the healthcare system for marginalized, minoritized, and medically underserved communities.
  - c. Analyze data to improve both healthcare quality and the patient experience across these communities.
2. Invest in evidence-based solutions, such as telemedicine and interdisciplinary approaches that expand telehealth specialist access to primary care, behavioral health, and specialty care services that combine in-person and virtual care for patients.
3. The Federal Government should evaluate the link between the comorbidities (e.g., diabetes, hypertension, and unhealthy cholesterol levels), which exist at a higher rate in minoritized populations and increased COVID-19 mortality and leverage the results to create targeted solutions to actively resolve these comorbidities. Additionally, the Federal Government should consider access to healthy food as a tool to combat these comorbidities by expanding access to affordable and healthy food options for all Americans, especially those in marginalized and rural communities that often have limited access to such options.

**Problem Statement 2:** The pandemic exacerbated a shortage of skilled healthcare workers, increased hospital closures and decreased access to primary care and behavioral health services in communities with the highest health needs, leading to a lapse in the continuation of care for marginalized, minoritized, and medically underserved populations. The lack of diverse providers who reflect the communities they serve is compounded in health professional shortage areas (HPSAs) and has led to a lack of confidence in the healthcare system across these communities.

To address the problem statement, the subcommittee presented the following recommendations:

1. Expand federally funded National Public Health Corps to address healthcare worker shortages. Prioritize training and hiring of members of vulnerable communities.

2. Explore strategies that meet local and regional staffing needs during pandemic response to rapidly expedite staffing reinforcement and cross-training in areas with chronic health workforce shortages. Standardize cross-training that allows traveling medical staff to effectively treat patients using emergency protocols at these temporary treatment sites, while maintaining evidence-based standards of care.
3. Expand access to entry level and other positions with 2 years or less training programs for licensed and certified positions in healthcare while also maintaining quality of care in order to combat the shortage of healthcare workers and to increase the number of licensed health professionals from underrepresented populations. This will primarily increase inclusivity in the healthcare workforce so that staff and providers accurately reflect the needs of the communities that they serve and provide expanded career opportunities for these communities.
4. The Federal Government should dramatically increase funding for education in medical fields, graduate medical education, and first responders, to train future medical professionals from local, underrepresented, and first-generation populations from minoritized and underrepresented communities. Increased funding should target people who speak languages other than English and first-generation populations. Increased funding distribution should go through diversity grants, scholarships, and loan forgiveness, prioritizing HBCUs, TCUs, and institutions that graduate licensed health professionals from minoritized communities equal to or greater than their share of the general population. The federal government should provide additional resources to US graduate schools that have a track record of graduating board eligible and licensed health professionals that represent the full diversity of the U.S. population.
5. Form a federal commission to curtail hospital closures that negatively impact vulnerable populations. This commission shall do the following:
  - a. Perform a detailed analysis on every hospital serving vulnerable populations in urban and rural settings that have closed in the last decade. This analysis should determine the root cause, contributing factors, and impact on the health and economic viability of the region.
  - b. Implement immediate short-term measures to curtail the imminent closure of hospitals serving vulnerable populations while long-term solutions are developed.
  - c. Propose long-term solutions that make these critical and essential hospitals economically sustainable and capable of delivering quality care.
  - d. Support preventive care; upgrading and building public hospitals, clinics, and treatment centers; community purchase of struggling or closed hospitals, clinics, and treatment centers; and financial and technical support to keep those that are essential open.
6. Fund the National Health Care Workforce Commission to provide data on the healthcare workforce, train healthcare workers, and provide policy advice and recommendations to both Congress and the administration.

**Problem Statement 3:** Congregate settings that struggle with providing isolation for disease outbreaks, including homeless shelters, migrant worker groups, and those under the control of law enforcement agencies such as jails, prisons and immigration detention facilities lack many of the basic elements of health care quality, transparency and pandemic preparedness. The lack of

access to quality health care led to disproportionately higher and faster spreading COVID-19 outbreaks across these settings.

To address the problem statement, the subcommittee presented the following recommendations:

1. Expand adequate and evidence-based healthcare access to treat patients in congregate settings.
2. Fund infrastructure to build quarantine space to house ill patients that reside in congregate settings.
3. Implement policies that grant the release or reduction of sentence for low-risk individuals under the control of law enforcement agencies to reduce the high transmissibility of infectious disease throughout congregate settings during a pandemic.
4. Expand access to hospital stepdown care during pandemics to provide adequate treatment and recovery for patients that require treatment between general and intensive care that prevents them from residing in their residential congregate setting.
5. Provide federal funding to ensure that contagious patients and those who are exposed and potentially contagious have the ability to isolate themselves while receiving care or quarantining.
6. Ensure that testing is accompanied from the start by a robust system of contact tracing.

**Problem Statement 4:** The politicization of science, sub-optimal hospital system coordination and communication, and underinvestment in pandemic preparedness hindered the ability to execute an effective pandemic preparedness and response plan in the following ways:

- A. The politicization of science and statutory agencies during the pandemic undermined public health, safety, and complicated the ability of these agencies to launch a nationally effective response and recovery plan for COVID-19.
- B. The elevation of politics over science led to diminished trust in the healthcare system and willingness to comply with evidence-based measures to combat the spread of the virus.
- C. The lack of hospital system coordination and investment in pandemic preparedness and response left health systems unavoidably overwhelmed and without the ability to mitigate capacity surges, leaving patients with limited access to care during the early stages of the pandemic.

To address the problem statement, the subcommittee presented the following recommendations:

1. Create a pandemic preparedness team model to do the following:
  - a. Form a federal authority that will act as the definitive authority on the disease. Use the Federal Reserve Board as an apolitical model, inclusive of apolitical representatives with scientific and technical expertise that represents all vital stakeholders.
  - b. Create the initial two-way communications plan based on their existing processes like the National Oceanic and Atmospheric Administration/National Weather Service model of information flow.

- c. Coordinate, fund, and communicate necessary and timely research to answer the most important questions regarding diagnosis, treatment, disease control, therapeutics, etc. that is fast and effective.
- d. Ensure that research is ethical and inclusive of minoritized populations.
- e. Support a permanent infectious disease standard by the end of 2021 that requires pandemic preparedness plans and funded science-based training.

**Problem Statement 5:** Healthcare coverage tied to employment led to a disproportionate impact of marginalized, minoritized, medically underserved communities losing access to quality healthcare. There is substantial evidence that a lack of insurance in the 55-64-year-old population led to more deaths associated with COVID-19. Despite government sponsored or subsidized insurance, there are documented disparities in quality of care across patient payer types. This exacerbated the impact of the pandemic by causing delayed diagnoses, treatment, and increased spread of the virus losing access to quality health care during the pandemic.

To address the problem statement, the subcommittee presented the following recommendations:

1. The U.S. should recognize healthcare as a human right and establish policies and funding to support this declaration via the use of an Executive Order. It should be enacted through legislation and regulations that leverage access and coverage as vital means to establish healthcare as a human right, regardless of immigration status, especially during a pandemic to reduce the possibility of infection.
  - a. The government should engage the public and make the economic benefit case to support comprehensive healthcare reform for all.
2. The Federal Government should reduce the disproportionate reliance on employer-sponsored health insurance while increasing access to high quality care by doing the following:
  - a. Expand the eligibility criteria for federally sponsored or subsidized insurance programs (Medicaid, CHIP, etc.)
  - b. Reduce the age of Medicare eligibility to cover the 55-64-year-old age group to address health inequities driven by lack of insurance and underinsurance.
  - c. Expand all government health insurance programs to ensure that people currently uninsured, underinsured have equitable access to care.
  - d. In order to provide high quality health care during a pandemic, providers across every specialty should be available in their region and accept all forms of health coverage, including Medicaid plans.
3. The government should create comprehensive and effective health care systems that cover the costs of essential healthcare and provide quality of life services to address patient comorbidities, pre-existing conditions as well as the full scope of patient care (e.g., medical, dental, vision services, and home and community-based long-term services and supports) to address healthcare needs during a pandemic.
4. During a pandemic, expand access to COBRA coverage, ensure that it is affordable, and mandate that coverage cannot be terminated for those who have lost their jobs due to the economic impacts of the pandemic.



The Task Force is conducting additional research around recommendations regarding:

- Addressing needs in long term care and assisted living settings and
- Expanding access to people in home and community-based support services in lieu of congregate care settings.

These recommendations will be included in the Final HETF Report.

### Discussion

Mr. Toranzo touched on how the politicization of the virus has been extremely detrimental to our local, State, and Federal responses to the pandemic. He highlighted the amount of politically motivated disinformation about vaccines, testing, and the virus itself has spread like wildfire on social media, in the news, and elsewhere and how healthcare workers have been ridiculed and mocked while risking their lives to save patients fighting for their lives. Mr. Toranzo suggested we need a definitive Federal authority on this disease inclusive of apolitical representatives with scientific and technical expertise to ensure the country is ready for the next pandemic.

Ms. Turner noted how their recommendations about healthcare access always come back to inequities created by our fragmented and unequal healthcare system. She expressed that most of the problems stem from treating healthcare as a consumer good and not a human right and that to build equity and to protect public health, our country needs a healthcare system where no patient is ever denied care they need. She commended the recommendations to improve and expand Medicare and lower the eligibility age to 55. She also stated that Medicare for All is the next step.

Dr. Venters lifted up the recommendations regarding release and lowering the number of people behind bars because it is a public health intervention. He noted that one cannot manage an outbreak behind bars without having adequate space to do that. Dr. Venters expressed that this is a critical moment today because 4,000 people who were released from Federal prisons due to being a high COVID risk due to their health are now in peril of being sent back.

Mr. Imperato shared that the disability community has been working for years to get rid of the institutional bias in the Medicaid program where States are required to provide care in nursing homes and congregate settings, but it is optional to provide care in the community. He highlighted that there are good public health reasons to take care of people at home, which is where most want to be taken care of if given a choice, in addition to there being civil rights reasons to do so.

### ***Structural Drivers and Xenophobia Subcommittee***

*Haeyoung Yoon, J.D.*

**Problem Statement 1:** Pandemics underscored the need for robust government-provided safety nets —food, transportation/travel, housing/shelter, education, income support, and family care — to protect working families, and the most high-risk populations. Programs rolled out in response to COVID-19 took time to develop and launch; moving forward we must anticipate the most basic needs before a crisis begins.

To address the problem statement, the subcommittee presented the following recommendations:

1. Building on the COVID19 response strategies in a future pandemic the federal government should use its full executive authority and work with Congress to provide safety nets to ensure people are experiencing food, housing/shelter, and job security as well as having support with healthcare, travel, and lodging as well as family care needs.

**Problem Statement 2:** There are institutionally-driven increases in pandemic-related health risks and worsened health outcomes, including deaths, potentially resulting from climate change as well as: lack of quality control; inequitable access to clean natural resources such as water and air; and mismanagement and/or lack of public utilities such as modern waste management.

To address the problem statement, the subcommittee presented the following recommendations:

1. Institute a national moratorium on water and utility shutoffs to improve sanitation efforts and address immediate, emergency needs in future pandemics.
2. Allocate federal funding for grants and funding for cities, states, and tribes and technical assistance to replace household plumbing and lead services lines in advance of a future pandemic.
3. Establish a permanent low-income utility – water, electricity, waste management – assistance program akin to the Low-Income Home Energy Assistance Program.
4. The federal government must ensure that, through public utilities, every dwelling in the US has access to clean water and sanitation. They should also:
  - a. Use a reliable indicator – such as the Health Social Vulnerability Index (SVI) and/or CDC SVI – to accurately assess the level of exposure to hazards within our most at risk communities, including but not limited to Tribal Nations.
  - b. Establish and adjust national standards as well as strategically target funding for water, sewage, and air quality to where it's needed, based on data from reliable equity indicators.

**Problem Statement 3:** The continued practices and legacy of systemic racism, sexism, violence, and betrayal by American medicine and research have contributed to disparities in health outcomes as well as decreased institutional engagement and collaboration which will be necessary in responding to future pandemics.

To address the problem statement, the subcommittee presented the following recommendations:

1. The federal government should both practice, and incentivize healthcare companies to practice, bidirectionally engaging patients and community members, across race, gender, and cultural differences as equal partners in the work to develop appropriate sociodemographic and social needs products and solutions, including: screening methods, valid healthcare data, surveillance and risk reduction strategies, as well as medical tools, devices, and technologies.

**Problem Statement 4:** Many US — state, territories, Tribal Nations — Pre-K-12 schools and postsecondary institutions lack infrastructure and adequate funding to support quick, frequent, or sustained shifts to virtual classes that future pandemics may demand, as evidenced by disparities in broadband, internet, and technology access during the COVID-19 pandemic, particularly for Black, Latinx, and American Indian/Alaska Native communities. Diminished access to education because of this digital divide may further reinforce educational disparities by race and/or ethnicity.

To address the problem statement, the subcommittee presented the following recommendations:

1. The federal government should provide for appropriate technology and training to students, teachers, and faculty in order to enable and assure quality education and related services, as well as dynamically shift between in-classroom and remote teaching contexts as required by future pandemics. This should include training on the use of and best practices for both hardware and software, as well as providing a home internet stipend that covers the total cost during any stay-at-home order issued in response to a pandemic, and other essential educational materials.

**Problem Statement 5:** There is a clear lack of minoritized, marginalized, and medically underserved populations within the healthcare pipeline, educational, and mentorship programs, leading to a gap in the healthcare workforce. The current demographics of the healthcare workforce do not encapsulate the diversity of the United States and are even less representative of the minority populations —particularly for Black, Latinx, American Indian/Alaska Native, and disability communities —who historically experience worse outcomes during pandemics. Because concordance between patients and their care providers has been repeatedly associated with superior clinical outcomes, developing and retaining a diverse scientific workforce has been encouraged as a key strategy for resolving health disparities during COVID-19 and future pandemics.

To address the problem statement, the subcommittee presented the following recommendations:

1. Increase the amount of racial, ethnic, and disability data on the healthcare workforce and educational pipeline, across healthcare professions, and centralize it in an easy-to-access and financially-maintained database. Doing so may facilitate research into factors contributing to increased workforce diversity as well as understanding the association between these factors and health outcomes.

### Discussion

Ms. Turner commended the subcommittee members for asserting that when it comes to pandemic preparedness and response, we need to act on the basis of science, not politics, with the common goal of preventing and ending pandemics. She added the importance of ensuring that public health guidance is based on the expertise of infectious disease and occupational health and safety experts, including experts in airborne diseases. Ms. Turner stated that with the new variant and current uncertainties, we cannot afford to wait until the next pandemic—we need to act now. She emphasized the need to support and enforce science-based guidelines and protocols for testing, treatment, and vaccine access throughout the country. She further stated that we need

to act on the precautionary principle during this and any future pandemics. Ms. Turner added that we must ensure the highest level of protection for all workers. Adding to her recommendations, she advocated for equitable global distribution of vaccines to prevent new variants or antibody resistance from prolonging the pandemic.

Mr. Watts expressed appreciation for some of the recommendations and the language used to reward and incentivize equity, as what gets rewarded, incentivized, and measured gets done. He also lauded the subcommittee for using the phrase “practice and legacy of racism,” as legacy is something rooted in the past that affects us now and into the future but is over, which is not true for racism. Mr. Watts underscored that the practices of racism are continuing, as are other sources of inequities.

Dr. Khaldun added a finer point to the healthcare workforce pipeline recommendations. She stressed the importance of diversity in the pipeline by encouraging people to become physicians but also ensuring that minority physicians are supported in their roles and that we have more people from minoritized, marginalized communities who are in leadership roles in academic institutions to help with that pipeline. Dr. Khaldun also noted that many minority academic physicians are leaving the field, and this has significant impacts not just on treating individual patients but also on research that is done on further pipeline and mentorship programs.

### ***Communications and Collaboration Subcommittee***

*Andrew Imparato, J.D.*

**Problem Statement 1:** The inadequate communication and collaboration between public health officials and public emergency management, coupled with shrinking budgets for public health, led to inefficiencies in emergency response.

To address the problem statement, the subcommittee presented the following recommendations:

1. Foster a culture of collaboration between public health officials and public emergency management at every level of government. Leveraging these collaborations, develop an adaptive pandemic preparedness and response plan and commit to exercising it at appropriate intervals and against various scenarios. Ensure adequate funding for the planning process, steady-state collaboration, and exercises.

**Problem Statement 2:** Pandemic preparedness is a core function of federal and state governments and requires global coordination with the international system and private sector at the highest level. It is not a responsibility of the health sector alone to prepare and respond to pandemics.

To address the problem statement, the subcommittee presented the following recommendations:

1. The U.S. should take an active leadership role in bringing an equity lens to international pandemic preparedness efforts and should encourage American healthcare leaders to take a global approach to global problems . The U.S. should develop a policy point of view on the international proposals (ex. The U.S. should review and identify appropriate recommendations from the Independent Panel for Pandemic Preparedness and Response).

**Problem Statement 3:** Due to chronic underfunding of public health and disjointed federal, state and regional response, COVID-19 demonstrated a lack of coordinated equitable response from acute care delivery, long-term care, EMS, public health, pharmaceutical companies, healthcare equipment manufacturers, resulting in an inequitable distribution of treatment resources.

To address the problem statement, the subcommittee presented the following recommendations:

1. The Federal Government should appoint an independent, Blue Ribbon panel to conduct a COVID- 19 pandemic after-action analysis for the whole of government. This analysis should include a review of performance of public authorities at the federal, state, local and tribal levels, their respective roles in pandemic response, and should seek input from diverse, non-governmental stakeholders.

**Problem Statement 4:** Lack of a unified, science-based, non-political, trusted voice to educate the public about PPE, therapeutics and testing contributed to inconsistent communications that increased risk for front line workers and minoritized, marginalized and medically underserved populations.

To address the problem statement, the subcommittee presented the following recommendations:

1. In future pandemics, the Federal Government should establish consistent communication to educate the public about PPE, therapeutics and testing using science-based, nonpolitical sources. The federal government should create a unified, national response that may involve directing a lead agency to work in close collaboration with trusted state, local leaders and trusted private sector entities to ensure the message is clear, credible, consistent and adapted to the cultural context of marginalized populations.

**Problem Statement 5:** Chronically underfunded national pandemic preparedness complicates efficient pandemic detection and response. The impact of these deficits disproportionately impacts minoritized, marginalized, rural, and medically underserved communities.

To address the problem statement, the subcommittee presented the following recommendations:

1. The Federal Government should establish consistent funding for pandemic response.

**Problem Statement 6:** Public messaging does not adequately consider the cultural, linguistic, and geographic context for minoritized, marginalized and medically underrepresented communities, especially Indigenous populations.

To address the problem statement, the subcommittee presented the following recommendations:

1. The Federal Government should provide guidance to state, local, tribal, and territorial government as well as Federally Qualified Health Centers, on health communications strategies with culturally and linguistically responsive materials and messengers. These communicators should disseminate accurate information in plain language and minimize the harms associated with miscommunication.
2. The Federal government should provide guidance on the creation of preparedness plans and the involvement of community-based providers and organizations that are familiar with minoritized, marginalized and underrepresented communities, their family communication and social network dynamics.
3. The Federal Government should identify and establish partnerships with state and local policy organizations affiliated with other populations of focus to develop evidence-based strategies for reducing frontline and essential workers' exposure to the virus that causes COVID19.

**Problem Statement 7:** Unfamiliarity and/or lack of trust between public health officials and the communities they serve results in significant emergency response challenges.

To address the problem statement, the subcommittee presented the following recommendations:

1. The Federal Government should provide guidance to public health officials on establishing expectations that staff and management engage in activities designed to advance health equity (e.g., training requirements, workgroup participation)The Federal government should provide guidance on the creation of preparedness plans and the involvement of community based providers and organizations that are familiar with minoritized, marginalized and underrepresented communities, their family communication and social network dynamics.
2. The Federal Government should provide guidance to public health officials on establishing and maintaining strong and authentic relationships with communities experiencing health inequities before funding opportunities arise or urgent health issues develop.
3. The Federal Government should provide guidance to public health agencies on the collaboration between government and nongovernmental entities that have stronger relationships with minoritized, marginalized and medically underserved communities, and work to build a pipeline for talent of individuals that come from these communities.

### Discussion

Dr. Martinez commented on the importance of word selection and practices used to convey concepts and ideas. Dr. Martinez highlighted the need to model behavior to maximize opportunities for collaboration and effective communication.

Dr. Khaldun added to the recommendation that State and local health departments need to engage with their communities by noting that while this guidance is sound, consideration must be made to the longstanding funding and staffing issues. Drawing upon her past leadership experience in State and local public health, there is a strong correlation between optimal funding and community engagement, which is a core function of public health practice.

Dr. Hildreth remarked on Problem Statement 2 regarding the United States taking an active leadership role in future pandemic preparedness by adding that while the nation's medical research and healthcare enterprises are the envy of the world, room can be made for lessons learned from other countries. Dr. Hildreth noted that had the country paid attention to and learned from India, Australia, and other countries in their response to the delta variant, the United States could have been better prepared in meeting the challenges that we face today. He added the recommendation that the United States be intentional about learning from others and do this with humility.

### ***Data, Analytics, and Research Subcommittee***

*Joneigh Khaldun, M.D., M.P.H., F.A.C.E.P.*

**Problem Statement 1:** Structures, related to real time data systems, created in the immediate response to Ebola Virus, H1N1, and other recent outbreaks were not sufficient and/or have not been sustained afterwards due to inconsistent funding and an inconsistent governmental commitment to preparedness.

To address the problem statement, the subcommittee presented the following recommendations:

1. Invest in national special pathogen preparedness and response and specifically invest in data sharing solutions and data capabilities as the new care delivery network is stood up.
2. Assess opportunities to use data to close equity gaps in special pathogens care delivery.

**Problem Statement 2:** Many healthcare professionals, medical providers, social service workers, and essential workers lacked adequate PPE and necessary supplies during the COVID-19 pandemic. Data infrastructure is needed to track PPE availability, supply chain shortages of resources and materials, expiration of PPE, ensure adequate training in donning and doffing of PPE for different types of pathogens, and equitable access to PPE for all facilities impacted by the CMS emergency preparedness rule.

To address the problem statement, the subcommittee presented the following recommendations:

1. Develop a tool for facilities and health systems to help track PPE and other essential supplies availability.
2. Strengthen, streamline, and make more transparent data collection processes to enable reporting on PPE and other essential supplies availability to SLTT and federal public health authorities to support tracking of local supplies.
3. Properly maintain PPE and other essential supplies in local stockpiles and using sharing agreements.

4. Incentivize training on PPE donning and doffing on a regular schedule and monitor training compliance.
5. Conduct a retrospective analysis to determine recommendations for federal and STTL stockpiles.
6. Leverage existing frameworks that explore the equity gap between PPE supply and demand and distribute the resources to those who lack protection in pandemic response.

**Problem Statement 3:** There are few systems and expectations in place to gather disaggregated, quality data, whether that's based on research from other countries or from within the US, or outcomes that could inform special pathogen preparedness at the state, local, tribal, and/or territorial (SLTT) level. The general lack of a timely, reliable, data dashboard at the SLTT levels as well as the absence of standardized, real-time threat information-sharing, case investigation, and contact tracing data has hindered an effective and trusted special pathogens response.

To address the problem statement, the subcommittee presented the following recommendations:

1. Create standardized expectations around disaggregated data collection and include incentives to collect and report disaggregated data.
2. Leverage existing SLTT and federal data to create a centralized dashboard that displays timely, reliable, transparent, and accessible data.
3. Invest in SLTT data and surveillance infrastructure to ensure real time threat information can be shared quickly.
4. Promote robust information sharing transnationally that allows for better design of health information systems that will help with data sharing, understanding risks for vulnerable communities, and enable a more comprehensive response.

**Problem Statement 4:** Data remain largely unavailable for demographic subgroups, including people who are American Indian or Alaska Native (AI/AN) and Native Hawaiian or Other Pacific Islander (NHOPI), or veterans, or people with disabilities, or people in carceral settings, limiting the ability to identify impacts for these populations. Certain groups are also siloed from data collection and reporting chains like AI/AN and veterans, who receive care in siloed medical delivery systems, like the Indian Health Service and the Veteran's Administration. Thus, data often collected does not provide for a complete understanding of impacts for these groups.

To address the problem statement, the subcommittee presented the following recommendations:

1. Incentivize novel partnerships and data use (including administrative data) to better reflect these groups and address equity in preparedness.
2. Develop novel partnerships and data use (including administrative data) to better reflect these groups and address equity in preparedness.
3. Set more rigorous standards to protect against data misuse or political interventions that interfere with access to data (e.g., for undocumented people, mixed status families, or people with histories of incarceration).



**Problem Statement 5:** Standards for data capabilities exist but they are not often executed. Trainings and exercises for special pathogen events remain largely focused on direct medical preparedness, leaving out opportunities to test and proactively improve execution of data standards, and overall data sharing and data collection capabilities.

To address the problem statement, the subcommittee presented the following recommendations:

1. Assess compliance with existing standards related to data capabilities, collecting feedback on challenges and barriers to compliance
2. Include the interest and/or priorities of community organizations and leaders outside of the traditional medical setting to ensure that trainings and exercises for special pathogen events identify subpopulations that may be underserved.

**Problem Statement 6:** Data systems are not integrated at the federal, state, local, tribal, territorial government level as well as between providers, health systems, labs etc. This causes duplicative data requests and collection efforts, unclear expectations, and an overall slower response or nonresponse. The type of data (e.g., capacity data, operational data etc.) is not centrally collected, understood, or utilized. This inhibits collaboration, collective awareness, data sharing, and data streamlining.

To address the problem statement, the subcommittee presented the following recommendations:

1. Conduct an environmental scan to understand various reporting requirements and find areas for potential standardization and alignment.
2. Leverage existing data reporting processes on specific data types and set expectations and create new process to enable real time data reporting in a centralized and standardized manner.
3. Use improved data to improve collaboration, care coordination, and resource allocation in future pandemics.
4. Streamline data requests and collection efforts to make informed decisions about addressing health needs.

**Problem Statement 7:** Systematic lack of inclusion of minoritized, marginalized, and medically underserved individuals in biomedical, health systems, clinical, and public health research, from research subjects to researcher leads, coupled with insufficient and unsustainable funding devoted research on equity-related interventions has resulted in greater vulnerability of these communities in future pandemics of every kind.

To address the problem statement, the subcommittee presented the following recommendations:

1. Conduct an analysis to determine inequities in research funding and structural barriers to access for different types of individuals and organizations.
2. Develop a research network that enables a timely sharing of research that is accessible to all, promoting greater understanding in a rapidly changing environments, and enabling

more research to be conducted specifically on minoritized, marginalized, and medically underserved groups.

3. Require federally supported biomedical research to include individuals from marginalized communities in ethical research design and as subjects of ethical research.
4. Develop and issue research grants focused on equity-related interventions that have been used in previous public health emergencies and grants focused on intersectionality aspects that incorporate a syndemic framework highlighting vulnerability among minoritized, marginalized, and medically underserved groups that result from collective (or cumulative) exposure to health risks.

**Problem Statement 8:** Clinical trials pools for COVID-19 therapeutics and vaccines lacked representative diversity from minoritized, marginalized, and medically underserved groups, which leaves gaps in understanding around how various people (especially racial/ethnic minorities) may respond. For future special pathogen responses, gaps in research such as these could leave vulnerable populations without adequate information regarding their treatment and prevention options.

To address the problem statement, the subcommittee presented the following recommendations:

1. Conduct a retrospective analysis to determine inequities in the COVID 19 clinical trials for therapeutics and vaccines and understand barriers and challenges for those who wanted to participate in trials but couldn't.
2. Develop standards and recommendations for future clinical trials for special pathogens treatments and vaccines that breaks down barriers and enables more equity.
3. Include diversity enrollment targets in clinical trials that are related to special pathogens and oversample for populations hit hard by a special pathogens event.

**Problem Statement 9:** The COVID-19 pandemic has brought to light the dangers of congregate living settings as the risks of disease transmission can increase based on proximity, size of groups, and practices (i.e., communal dining) that are associated with congregate living. There is a lack of understanding and data related to the factors that led to adverse outcomes in these settings and the effectiveness of strategies, including release and reduction, to mitigate adverse outcomes.

To address the problem statement, the subcommittee presented the following recommendations:

1. Study the overall risks of congregate settings to any infectious disease and the implications of those risks for considering how federal resources are used to prepare for and respond to infectious disease outbreaks in these settings.

## Discussion

Ms. Turner expressed her extreme gratitude to the subcommittee for their work on Problem Statement 2 and their thoughtful recommendations.

Dr. Martinez commended the subcommittee for their recommendations regarding data analytics and research infrastructure that is needed for the 21<sup>st</sup> century. The recommendations are investments that will strengthen our nation's health, economic viability, and defense as they are all interrelated.

Mr. Watts shared his appreciation for the recommendations on the impact of congregate care, capturing data on the social determinants of health, and collecting housing status among persons experiencing homelessness. Mr. Watts detailed the challenges faced by a federally qualified health center in Tennessee with capturing housing status as their electronic medical record lacked the necessary field(s) to collect this information. Mr. Watts applauded the subcommittee for their recommendation to collect such data ahead of any future preparedness needs.

## **Public Comments**

*Lillie Grieman, DIS DATA*

Hello, thank you. My name is Lillie Greiman, and I'm a project director at the Research and Training Center on Disability in Rural Communities at the University of Montana and a representative of Disability Data Activists—Advocates Taking Action, or DIS DATA. DIS DATA is a collaborative of advocates, researchers, disabled people, and service providers promoting disability data equity. DIS DATA formed in the midst of the COVID-19 pandemic as the group saw how difficult it was to access, analyze, and understand the limited data that were available on the impact of the pandemic on disabled lives. People with disabilities were already made invisible pre-pandemic across Federal policies due to lack of data collection and representation, which then means researchers, policy leaders, disability leaders, policy makers, and service providers cannot make informed decisions to improve the lives of people with disabilities.

Lack of representation means that disabled voices and lives are excluded from American society. The COVID-19 pandemic has highlighted this longstanding data disparity and emphasizes that disabled people are missing from the data but overrepresented in deaths that we know about. Addressing this data inequity is critical during the current pandemic when people with disabilities are disproportionately living and dying in congregate settings such as nursing homes, group homes, intermediate care facilities, psychiatric hospitals, detention facilities, carceral facilities, and other congregate shelters. We have very little information because of disjointed data collection about what the experiences of disabled people are in congregate settings, especially when looking at health equity and intersectional issues such as race, kinds of disability, primary language, et cetera.

However, we do know that as of July 18th, 2021, at least 133,519 disabled people have died in nursing homes, which report to the Centers for Medicaid and Medicare Services. We know that disabled people in nursing facilities continue to be at risk, with only 22 percent of the same facilities that have staff vaccination rates above 75 percent. These deaths will not end unless we recognize that congregate settings are dangerous environments where individuals are put at high

risk of disease and death. Efforts to prevent future deaths must include support of disability-led organizations, like centers for independent living, who have proven and effective strategies for transitioning and relocating individuals from congregate settings into the community. In addition, systems must be in place to prevent individuals from entering unsafe, high-risk congregate settings in the midst of a pandemic.

Finally, DIS DATA recommends improve disability recommendations across all levels of data management, and this means centering disability and all data decision-making processes via the meaningful inclusion of disabled people, disability-led organizations, disabled advocates, activists, and researchers in defining data priorities, identifying data disparities, measurement development, data collection, distribution, data analysis, knowledge translation, development of data-driven policies, strategies, and solutions. And then finally, the goal of DIS DATA is to build a network connecting advocates, researchers, service providers, and policymakers around the shared goal of improving access to and representation within disability data systems. So, thank you so much for your time, this has been wonderful to sit in, and I'm happy to have the opportunity.

*Dr. Harald Schmidt, University of Pennsylvania*

Thank you. My name is Harald Schmidt, I'm an assistant professor of medical ethics and health policy at the University of Pennsylvania [and] somewhat addicted to your work, as really any medical ethics professor should be, of course. This is, again, such important progress, and the country is so fortunate to benefit from your work. I'm also grateful for the opportunity to provide brief comments now on two points that are directly connected to today's discussion, and both of those relate to disadvantage indices, such as the Social Vulnerability Index mentioned several times earlier, that have been adopted in an unprecedented and important way in vaccine location to promote health equity and that have considerable potential to accomplish the same beyond the pandemic.

So, first, the meeting today is focused on future pandemic preparedness, but not just given the Delta variant; the pandemic isn't over and there's an active discussion about booster vaccines where it seems the group's recommendations could be immediately useful. Clearly, the question of boosters has to be driven by science and, ideally, given the unbearable global vaccine access disparities, we'd only roll out boosters if this does not compete with closing the unacceptable global vaccination gap. But if and when there is a reasonable case for boosters, initially there will again be severe scarcity.

An immediate lesson from the vaccine rollout to date is that phase allocation frameworks need to be combined with the disadvantage index, whether this is the CDC's SVI already adopted by the majority [of], but not all U.S. States, or another index. Of note, in two studies that my colleagues and I feel that—survey studies—feel that just before the end of phased allocation in April, we found that a majority of Americans supports the use of disadvantage indices as implemented, and there's only low rates of complete opposition. These studies aren't published yet, so I'm leaving it somewhat general now, but I'll share them separately, hopefully soon.

Second, the adoption of disadvantage indices in the current pandemic was unprecedented, rapid, and widespread, with at least 37 cities and jurisdictions, including 34 States, using them. They

clearly met a need, and more long term should be part of all future pandemic plans. But there were also at least eight different types of indices used, and 2 weeks ago in an important development, the Office of Minority Health and CDC launched the new minority health SVI. So, longer term, there's a need to ascertain which type of indices are best suited for which purposes, as there are important differences between indices.

For example, the Area Deprivation Index operates at the block, group, or neighborhood level, 600 to 3,000 people, where the SVI's smallest unit is the census tract, 1,200 and 8,000 people, and the new minority health SVI currently operates at the county level. But given how diverse geographies, especially in cities can be over small distances, unadjusted and overly coarse measures can really obfuscate important disparities. There are also differences in the shared communities of color that different indices capture, and a number of other trade-offs associated with integrated and particular variables that merit attention. I'll share separately a review in which colleagues and I described these and other differences in more detail.

Now, to be clear for now and for possible boosters, using any disadvantage index is vastly superior to using none, and using one is critical for both equity and public health. But disadvantage indices also hold considerable potential for promoting equity outside of the pandemic and health emergencies, as we found another review of the literature. And hence a clear understanding of the different types of trade-offs that can arise in using disadvantage indices is really important. I thank you, again, for the opportunity to provide a comment here and all the amazing work that the task force members and the staff are doing.

*Dr. Colleen Kraft, Emory University Hospital*

Thank you. Thank you for the opportunity to address this COVID-19 Health Equity Task Force. I'm an infectious disease physician and clinical microbiologist serving as the Associate Chief Medical Officer of Emory University Hospital. I've had the opportunity, since 2015 when we cared for patients with the Ebola virus disease at Emory, to participate in the national Ebola Training and Education Center, which prepared healthcare systems for pandemics. While we create infrastructure, educate, and create areas of safety for healthcare systems, starting with Ebola virus disease, this pandemic has challenged all of our systems to depend on our teamwork to not only care for our patients but also our healthcare workers on the frontline.

At Emory University we've been very, very concerned about the inequity that has occurred for persons of color in underserved communities. In April of 2021, Emory came out with a health equity dashboard, and this data can be found and analyzed from the nation down to the individual county. I think, and hope, that these types of platforms are the types of things we can get for people to understand the context around them. I think there's been very much—we struggled through this communication of public health information, and I hope that platforms and data analyses, and getting these types of things out to individuals can allow us to have a clear vision of what groups are disproportionately affected around us and how we can act.

You will see easily on this dashboard that there's an increased COVID-19 death rate per 100,000 individuals and Black Americans which is greater than COVID deaths in other ethnic groups as well as evidence of a lower vaccine uptake. We are very proud that Emory University and Grady Health System participated in studies for therapeutics and vaccination, enrolling 50 percent in the

Moderna vaccine trial specifically, that were underrepresented minorities. While we did much work reaching out to persons of color in underserved communities, it is clear the inequity cannot be abruptly solved during this particular crisis. There are longstanding concerns in these communities, and it will take relationship and trust-building in order to bring these communities where they should be. We cannot pour our resources on only for emergencies and then withdraw to the systems that existed prior. I think we've had a chronic, chronic issue that now this acute exposure is really bringing to light during this pandemic, and it does compel us to act.

This pandemic has really challenged the foundations of healthcare even today, in my hospital, where we have an extreme surge of patients with COVID-19 due to lack of vaccination and the Delta variant; and we are trying to focus on quality care for our patients and healthcare workers, and we are compelled to focus on equity for the care for our patients at all times. Thank you.

*Dr. Pamela Alston, National Dental Association*

Thank you for the opportunity to make a public comment. I am President of the National Dental Association, the NDA. The NDA supports the health and wellbeing of all populations, especially Black and other communities of color, as well as other underserved populations. The NDA supports racial, educational, and health equity. During this time of the COVID-19 pandemic, the NDA welcomes this administration's leadership in informing future pandemic preparedness and mitigation. The majority of our members provide care and resourced poor communities. And as a result, we support equitable response and recovery centered on communities most in need.

Such a response may include collection, collecting high quality and complete data that capture accurately morbidity and mortality of COVID-19. Improved practices that include investment, education, greater access, and resources to enhance communities disproportionately impacted by COVID, as well as the inclusion of members of the dental team in coordinated recovery efforts to improve population level health. It is our hope that evidence-based approaches addressing upstream social and political determinants of health will be used. We look forward to collaborating with our stakeholders and developing new partnerships to be active participants in this nation's recovery and preparedness efforts. Thank you.

*Nick Guthe, Survivor Corps*

Thank you for having me. I am an advisor to Survivor Corps, the largest organization advocacy group in the country for people with long-haul COVID. I'm here really to talk about the mental health issues of this. Thirteen months ago, my wife, Heidi Ferrer, was a healthy 50-year-old woman who walked 90 minutes a day and was in perfect health. Long-haul COVID took away everything from her. She had excruciating pain in various parts of her body from diabetic nerve pain, though she was not a diabetic, to tachycardia, POTS, et cetera. And in the last 4 weeks of her life, she unfortunately developed terrible tremors and internal vibrations—neurological—that caused her basically to not be able to sleep at night; and she took her own life 8 weeks ago because she was so desperate and so feeling without hope. I literally came home and found her hanging in our house and had to protect my son from seeing this.

I can't tell you since then how many people have contacted me on social media because they are feeling the same way she is. They feel desperate, they have these internal tremors and vibrations, they can't sleep—and if you can't sleep, you can't heal. And they also feel like they have no real

hope right now, unfortunately because there is not enough—the research to actually come up with therapeutics is not happening fast enough. I literally talk to two to three people a day almost off the ledge. What we need is a healthcare system right now that provides mental health to them, also provides sleep and rest options like sedation. I know that may be unpopular, but some of these people may need to be sedated for several days because they're staying up 20 hours, 22 hours a day.

I can't stress enough that suicide is a very, very traumatic thing. My son will never be the same from this, and there are many families out there who are facing this. We have to get really serious about this. We have to treat this as much as an emergency as the therapeutics. But we need to basically understand that there are many more people like my wife coming down the pipe. I hear from them every single day, and it is terrifying to think that they will go through what I went through. I wouldn't wish it on anybody. I wouldn't wish it on my worst enemy. And she was a vibrant, healthy person who lost all hope because the virus took away every aspect of her life that was remotely pleasurable.

So, I want to thank you very much for having me. I cannot stress highly enough that it's an honor to talk to you. But please, as a government, we have to take this seriously. We have to start doing this because there are going to be a lot more people like my wife coming very soon.

*John William Templeton, Black Business Month*

I hope everyone shares my concern that 30 million African Americans are not vaccinated, and at a rate of 150,000 per week as the CDC site said yesterday. We're looking at 4 years before that happens. And so, I urge you to join us during the 18<sup>th</sup> annual National Black Business Month in August starting Sunday to utilize the 400,000 African American businesses that are in health and social services. We've done seven meetings leading up to our Pandemic to Prosperity Save the Black Business 18<sup>th</sup> Edition Report. And we've heard from companies that have been longtime Federal contractors in diagnostic tests and epidemiology, but they aren't being utilized by State and local agencies.

We also heard from—one of the topics you mentioned earlier—from Lezli Baskerville, the president of NAFEO, who insists that the infrastructure spending provide for five new HBCU medical schools, and in deference to our previous speaker, I would say dental schools as well. Because our research from an economic perspective and also from an educational perspective is that the one most important intervention you can make in African American communities is to increase the number of Black doctors. And that has implications for health, it has implications for education, it has economic implications as well.

And so, as many of you know, there were 13 medical schools at HBCUs in 1900, but we haven't had a new one since Morehouse in 1983. So, we need to take advantage of this opportunity and the unprecedented spending to give the same kind of resources to creating doctors as we do to nurses. We have 37 nursing schools at HBCUs, so it doesn't make sense to have 4 medical schools and 37 nursing schools. We have parity for nurses. So, we know what we need to do for doctors, and that's how we get rid of the disparities.

It also came to my attention that there is not a single medical school on any of the Indian Reservations. So those are the kinds of things that we need to do as opposed to training and papers and that sort of thing, we just need to create the facilities to produce the workforce.

*Dr. Malika Fair, American Association of Medical Colleges*

Thank you and thank you to Chair Dr. Nunez-Smith for your leadership as well as to the entire committee for advancing health equity in the pandemic as well as in our nation. I'm Dr. Malika Fair, the Senior Director of Equity and Social Accountability at the Association of American Medical Colleges. You heard from our President and CEO earlier this afternoon.

I wanted to make a few comments related to some of the questions that came up earlier in a comment. Dr. Hildreth, you mentioned earlier the importance of intentionally learning from others. And I would urge the committee to also consider that as we discuss our communities who have been marginalized and minoritized, that there are some lessons learned in this pandemic and looking at the recommendations from an asset model as opposed to a deficit model so we can ensure that these lessons learned from communities of color, as it relates to building vaccine confidence, are ones that we can then share with the next pandemic. We may find that communities of color are actually more likely to access some medical—some things that would be really interesting to see as we would just encourage you to think about an asset model.

The other thing I wanted to bring up, Dr. Hildreth, you mentioned the importance of diversity, especially as it relates to underrepresented who are going into residency programs and making sure that underrepresented individuals have access to all specialties. We completely agree and [are] thinking about the entire pipeline, both in elementary and medical school, as well as thinking about our centers of excellence in medical school. And I wanted to let you know that our Accreditation Council for Graduate Medical Education, as well as the AAMC, are working together on holistic review in graduate medical education, something that our medical schools oftentimes use, but our residency programs are beginning to use more and would love to share more information about that.

And finally, there were comments earlier about the training of physicians, ensuring that we are culturally humble, that we are thinking about cultural humility, and that we are addressing racism. Our Association of American Medical Colleges are developing Diversity, Equity, and Inclusion competencies that will be released at the end of this year. If the committee is interested in an early draft, we're happy to send those along. I think that's important as we think about future pandemic preparedness and making sure that we have a workforce that is both diverse and culturally prepared for the next pandemic. Thank you.

*Dr. Vivian Johnson, Parkland Hospital*

Thank you. Good afternoon, Dr. Nunez-Smith and members of the task force. First, I'd like to thank you for the important work that you've done. We appreciate the opportunity to share the work our system is actively doing to help underserved communities affected by COVID-19.

Parkland provides care to indigent, uninsured, and underinsured residents of Dallas County, averaging more than 60,000 hospital discharges and 1 million outpatient visits annually. Parkland's payer mix is approximately 30 percent charity, 30 percent Medicaid, 20 percent



Medicare, 10 percent self-pay, and 10 percent other. Parkland has provided care to nearly 46,000 COVID-positive patients to date. We also developed a comprehensive COVID vaccine outreach program, and we have administered more than 326,000 doses of vaccines so far. We were honored to have First Lady Jill Biden tour one of our school-based vaccination clinics. I'm here today to share Parkland's experience using health system pharmacists during the COVID-19 crisis and to offer recommendations to improve not only vaccination rates but also other services that are so desperately needed in medically underserved communities, such as HIV prophylaxis, diabetes management, and medications for opiate use disorder. What has worked well at Parkland? In addition to partnering with churches, we have attended community events and vaccinated people in the community. Also, public service announcements featuring Black and Hispanic community leaders were distributed through social media, along with local minority media interviews with Parkland providers, including pharmacists, physicians, and nurses.

The Federal Government could positively impact health equity now in three ways. First, use the PREP Act to authorize pharmacists to provide services as diabetes management nationwide, as you've done for COVID vaccination. Secondly, eliminate the X waiver, which restricts access to medications for opiate use disorder in our communities. Third, create a Medicare and Medicaid payment mechanism to support access to these services when they're offered or provided by pharmacists on healthcare teams. Pharmacists are trusted professionals and uniquely positioned to offer expertise on vaccines and help close the gaps in care.

In closing, I would like to leave you with three recommendations to improve vaccine acceptance. First, continue to partner with trusted individuals and make the vaccine readily available in the community. Second, use data geographically to target and prioritize vaccination efforts. And third, request the Federal Government to approve pharmacists to have provider status now to help improve patient outcomes and impact health equity. Parkland and ASHP urge the Task Force to draw on pharmacists' expertise as critical members of the healthcare team. Thank you for your consideration of our recommendations.

*Dr. Cheryl Grills, National Urban League for National Alliance of Ethnic Psychological Associations for Racial and Ethnic Equity*

Thank you to the COVID-19 Health Equity Task Force for this opportunity to share a few comments with you today. Again, I'm Dr. Cheryl Grylls, and for today's purposes, I'm representing in partnership with the National Urban League for National Alliance of Ethnic Psychological Associations for Racial and Ethnic Equity. The alliance led a national research effort to inform the Congressional Tri-Caucus and the Native American Caucus, among others, about COVID's impact on communities of color. The alliance is a partnership of several psychological associations, including the Asian American Psychological Association, the Association of Black Psychologists, of which I'm a past president, the National Latinx Psychological Association, the American Psychological Association, and the Indigenous Wellness Research Institute.

Our COVID-19 Communities of Color Needs Assessment was conducted between December of 2020 and April of 2021, and it was designed specifically to fill the existing COVID-19 data gaps connected to missing or small samples of racial, ethnic, and other demographic groups; the lack of disaggregated Federal, State, and local race-specific data; and the absence of community

informed, culturally nuanced insights and understanding of COVID's differential impact within and across racial groups. We, too, are seeing COVID as a syndemic, but we believe for communities of color it is a syndemic on steroids. The findings that we have from our study provide a snapshot of COVID's impact, including the adverse outcomes related to physical health, mental health, finances, employment, business, education, [and] gender differences in unpaid work, food insecurity, technology access, housing insecurity, vaccination intent and messaging, the impact on children, basic needs like utilities and Wi-Fi access, and the role of racial stress and discrimination. These findings also identify community use of culturally specific protective factors initiated by communities to mitigate COVID's adverse effects as well as exposing a number of problems with Western research methodologies with communities of color and their many subpopulations.

So, we have shared a top line statement document that gives you an overview of some of the major issues, and then separately, we will within the next week or two make available to you a full report that has a number of recommendations broken down by racial or ethnic groups because one size does not fit all, and we have to do much better. Our communities are really, really, really struggling. Thank you.

### **Interim Recommendations Vote**

Dr. Nunez-Smith introduced the voting phase for HETF members to vote on each set of interim recommendations and whether the recommendations should move forward to the next stage for refinement. Dr. Nunez-Smith opened the floor for consideration of the following interim recommendations:

- Healthcare Access and Quality Subcommittee recommendations
- Structural Drivers and Xenophobia Subcommittee recommendations
- Communications and Collaboration Subcommittee recommendations
- Data, Analytics, and Research Subcommittee recommendations

Each recommendation received a motion to approve that was seconded. Each motion carried with a majority vote to approve. The four subcommittees will consider the friendly amendments noted in the discussion sections above as they further refine the recommendations.

### **Closing Remarks and Next Steps**

*Marcella Nunez-Smith, M.D., M.H.S.*

Dr. Nunez-Smith thanked those involved. She noted that there will not be a meeting in August.

## Appendix A. Written Public Comments



Harald Schmidt, PhD  
*Assistant Professor, Department of Medical Ethics and Health Policy  
Research Associate, Center for Health Incentives and Behavioral Economics  
Senior Scholar, Leonard Davis Institute of Health Economics*

Health Equity Task Force  
Office of Minority Health  
Tower Oaks Building  
1101 Wootton Parkway  
Suite 100  
Rockville, MD 20852

Philadelphia, August 5, 2021

Dear Dr. Nunez-Smith and members and staff of the Health Equity Task Force,

### **Public comment – disadvantage indices in Covid-19 vaccine rationing and beyond**

I am writing to congratulate the Chair, the task force members, and the staff on the impressive and inspiring progress, and to thank you for the opportunity to provide public comment at the July meeting.

I am enclosing here two recent studies that are relevant to the meeting's focus, and relate to disadvantage indices such as the CDC's Social Vulnerability Index that was SVI mentioned several times during the meeting. Disadvantage Indices have been adopted in an unprecedented and important way in vaccine allocation to promote health equity—and hold considerable potential to accomplish the same beyond this pandemic.

The July meeting was focused on *future* pandemic preparedness. But not just given the Delta variant, the pandemic is, unfortunately, of course not over yet, and there is an active discussion about booster vaccines, where it seems that the task force's recommendations could be immediately useful.

Clearly the question of boosters has to be driven by science. And ideally, given the unbearable global vaccine access disparities, we would only roll out boosters if this does not compete with closing the unacceptable global vaccination gap. But if and when there is a reasonable case for boosters, initially, there will again be severe scarcity if not even a marginally different type of vaccine should be used, and if the same type should be used, the question also arises as to which population groups should be offered them first.

An immediate lesson from the vaccine roll out to date, is that phased allocation frameworks need to be combined with a disadvantage index, whether this is the CDC's SVI, already adopted by the majority—but *not all US* states—or another index.

Of note, in two survey studies that colleagues and I fielded just before the end of phased allocation in April, we found that 51% of Americans supports the use of disadvantage indices as implemented, and just 16% oppose them. Moreover, the amounts of additional allocations as used find robust support in the allocations the public feels are appropriate, with mean allocations between 44-52%, supporting even large increments as implemented by California (see the attached study "Race-based and Place-based Prioritization in COVID-19 Vaccine Allocation Through the Use of Disadvantage Indices:

Public Attitudes and Framing Effects”, and please note that this should not be circulated beyond the committee, as it is currently under review).

Second, the adoption of disadvantage indices in the current pandemic was unprecedented, rapid, and widespread, with at least 37 CDC jurisdictions (including 34 states) using them.<sup>1</sup> They clearly met a need, and, more longer term, should be part of all future pandemic plans.

But there were also at least 8 different types of indices in use, and 2 weeks ago, in an important development, the OMH and CDC recently launched the new *Minority Health Social Vulnerability Index*.

So, longer term, there is a need to ascertain which types of indices are best suited for which purposes, as there are important differences between indices.

For example, the ADI operates at the block group or neighborhood level, (600-3000 people) whereas the SVI's smallest unit is the census tract (1200-8000) people, and the new MH SVI currently operates at the county level (see the attached study “Social vulnerability, disadvantage, and COVID-19 vaccine rationing: A review characterizing the construction of disadvantage indices deployed to promote equitable allocation of resources in the United States“, currently also under review, and we would therefore also be grateful if this would be treated confidentially).

But given how diverse geographies—especially cities—can be over small distances: unadjusted, an overly coarse measure can needlessly obfuscate important disparities.

There are also differences in the share of communities of color that different indices capture,<sup>2</sup> and a number of other trade-offs associated with integrating particular variables that merit attention, for example the association of different indices with Covid-19 incidence, hospitalization and mortality (if of interest, I can share a soon a study in which we compare SVI, ADI and CCVI, with interesting—as likely unexpected, for most in the field—findings.

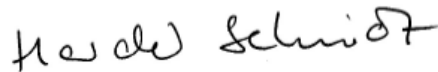
To be clear, for now, and for possible boosters, using *any* disadvantage index is vastly superior to using none—and using one is critical for both equity and public health.

But disadvantage indices also hold considerable potential for promoting equity *outside* of the pandemic and health emergencies, as we found in another ongoing review of the literature: and hence a clear understanding of the different types of trade-offs that can arise in using disadvantage indices in different settings is important.

I thank you again for the opportunity to provide a comment and for all the amazing work the Chair, the task for members, and the staff are doing.

If there would be anything that you would like to discuss further, please feel free to reach out via [schmidh@upenn.edu](mailto:schmidh@upenn.edu).

Sincerely,

  
Harald Schmidt, PhD

### **References**

1. Schmidt H, Weintraub R, Williams MA, et al. Equitable allocation of COVID-19 vaccines in the United States. *Nature Medicine*. 2021.
2. Schmidt H, Ünver, Utku, Williams, Michelle; Pathak, Parag; Sönmez, Tayfun; Gostin, Lawrence;. What Prioritizing Worse-Off Minority Groups for COVID-19 Vaccines Means Quantitatively: Practical, Legal and Ethical Implications *SSRN Working Paper*. 2020.

## **Race-based and Place-based Prioritization in COVID-19 Vaccine Allocation Through the Use of Disadvantage Indices: Public Attitudes and Framing Effects**

Harald Schmidt, PhD,\*<sup>1</sup> Sonia Jawaid Shaikh, PhD,\*<sup>2</sup> Emily Sadecki, BA,<sup>3</sup> Alison Buttenheim, PhD,<sup>4</sup> Sarah E. Gollust, PhD<sup>5</sup>

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1996 words, 1 table, 3 figures, 27 references, 1 Appendix with supplementary information

### **Summary points (316 w)**

- A central question in the design of US vaccine allocation frameworks was—and is—how to incorporate equity considerations, given Covid-19’s disproportionate impact on disadvantaged communities of color. In an unprecedented turn, the majority of US states added place-based disadvantage indices to traditional sequential prioritization frameworks, to promote equity not just across, but within priority groups. Indices were used to allocate larger shares of vaccines to more disadvantaged areas, and for other related measures.
- We report findings from a nationally representative survey experiment with n=2,003 participants that examined public support for promoting equitable vaccine allocations through disadvantage indices relative to two alternative forms of prioritization that are more narrowly tailored to racial and ethnic groups, and assessed the role that framing and expert anchors play for public approval in presenting policies.
- We find that a majority approves of the use of disadvantage indices for increasing vaccine allocations, and just one-fifth opposes any of the three equity-promoting frames we tested. Political partisanship played an important role in driving differences, with least partisan friction associated with the use of disadvantage indices.
- Informing respondents about expert recommendations and states’ actual practice in terms of additional allocations led to lower amounts in two of the three frames. However, the overall magnitude of the public’s additional allocations strongly supports expert recommendations and states’ actual practices, and calls into question the omission of within-phase prioritization in major CDC guidance.
- Our findings suggest significant public support for ongoing policies that seek to promote equitable allocation, and will likely be of relevance once vaccines are offered to children under 12 and if booster vaccines should become necessary. They should also be of interest to planners outside of the US in countries with similarly pronounced health disparities among disadvantaged communities; matter for future pandemic planning; and for the consideration of disadvantage indices to promote equity in clinical and public health outside of the pandemic setting.

## INTRODUCTION

Communities of color, particularly more disadvantaged Black, Indigenous, and Hispanic groups, have been hit harder by COVID-19 on multiple dimensions, including disease incidence, mortality, social impact, and economic burden.<sup>1-4</sup> These disparities are rooted in deep societal inequities and structural racism.<sup>5-7</sup> A comprehensive framework on equitable vaccine allocation issued by the National Academies of Science, Engineering and Medicine (NASEM) at the request of the CDC and NIH, expressly acknowledged the need to respond to the pandemic's disparate impact. In an unprecedented turn, NASEM combined a traditional phased roll-out *across* priority groups with a novel recommendation to promote equity *within* each phase.<sup>8,9</sup>

Specifically, NASEM recommended that disadvantaged geographic areas should be prioritized within each allocation phase, using a measure such as the CDC's Social Vulnerability Index (SVI).<sup>6</sup> Indices such as SVI measures the average advantage or disadvantage of residents in a given area, integrating dimensions such as income, educational attainment, and housing quality.<sup>10-13</sup> Indices capture the intersection of health and disadvantage, and the over-representation of communities of color among more disadvantaged communities due to structural racism.

Practically, the NASEM framework recommended that 10% of federal vaccines to be distributed at any given time should be set aside to be added to the amounts that disadvantaged areas would otherwise receive, based on population.<sup>6</sup> Additionally, planners should make special efforts to reach high-vulnerability areas (defined as the 25 percent highest in a state).<sup>6</sup> The proposal was rapidly and widely adopted. By late March 2021, 36 US states, i.e. the majority, used disadvantage indices for allocation and programmatic purposes, including increased allocations ranging between 5-40%.<sup>14</sup> Some states also allocated vaccine explicitly by race and ethnicity for some periods. For example, Vermont offered vaccines to all residents who identify as Black, Indigenous, or a person of color in April 2021, before opening eligibility to all adults.<sup>15</sup>

Public perceptions of race-based and place-based prioritization are important for their normative justification,<sup>16</sup> and may shape policymakers' willingness to endorse such strategies during legislative and regulatory debates. The framing and anchoring—that is, how the different

rationales underlying allocation strategies are presented, and whether information is provided with or without expert cues that can influence complex decisions outside of one’s everyday direct experience and knowledge—are of particular relevance for acceptability,<sup>17,18</sup> especially when it comes to perceptions of policy affecting particular racial and ethnic groups.<sup>17,19</sup>

To avoid pushback, especially partisan resistance, some have argued that racial justice might best be advanced by avoiding frames that are explicit about racism.<sup>20</sup> Using disadvantage indices can accomplish this, by directly capturing the interrelationship between racism and health, benefitting disadvantaged people of color, while recognizing that other forms of disadvantage also matter for social justice.<sup>9,6</sup>

Recent survey research informing respondents that people of color are at “much higher risk of getting sick with and dying from COVID-19” found that a majority agree that these groups should have access “before lower-risk groups”.<sup>21</sup> However, we are unaware of prior work eliciting attitudes in ways that foregrounds social, rather than medical risk, or that examines attitudes towards the approach underlying the actual use of disadvantage indices.

The objectives of our study were therefore to determine, in a between-subjects survey experiment:

1. Whether support for vaccine prioritization varies if the policy benefits the same group, but is framed as benefitting:
  - i) disadvantaged racial and ethnic groups,
  - ii) disadvantaged racial and ethnic groups affected by structural racism;
  - iii) disadvantaged groups defined in terms of place, i.e., their geographical locations, (inclusive of disadvantaged racial and ethnic groups);
2. Whether the provision of an anchor, (i.e. an expert recommendation for additional vaccine allocations for disadvantaged groups) affects respondents’ support.

## **METHODS**

The study was conducted with a representative sample of US adults participating in an omnibus survey fielded by Harris Insights & Analytics (see Appendix). It was fielded April 13-16, 2021, just



before eligibility for COVID-19 vaccines was extended to all US residents ages 16 and older (April 19).

### **Study Design**

In the first of two questions, participants were randomized to read one of three vaccine allocation plans, in which groups are offered larger shares of vaccines framed in ways that foreground the role of race, structural racism, or place-based disadvantage (as captured by disadvantage-indices such as SVI), and asked to indicate their approval (see Appendix, Table S1 for the full instrument). Approval was measured using a 5-point Likert-scale (Strongly Oppose-Strongly Support). Measures of overall support and opposition were created by collapsing “strongly support” with “support” and “strongly oppose” with “oppose”.

For the second question, participants were re-randomized to either the expert anchor (NASEM/state) or no anchor. The anchor included information about NASEM’s recommendations and current state practices for setting aside vaccines for disadvantaged groups. Respondents were then asked to indicate what percentage of additional vaccines should be set aside, placing an indicator or a scale ranging from 0 to 100% (0.1 increments; indicating 0% required dragging the slider to the scale’s zero point). Responses were categorized into zero or non-zero (i.e. amounts greater than 0%) allocations, and a total of five analytic bins in 20% increments was created.

### **Statistical Analysis**

Data were analyzed using ANOVA, linear or logistic regression, and Chi-squares tests to compare differences in the outcomes by randomized groups. Given the experimental design, we report all findings without adjusting for covariates.<sup>22</sup> All data were analyzed using SPSS v. 26 with weights provided by Harris Insights applied to retain nationally-representative estimates. Statistical significance was set at 0.05. The study was determined exempt by the University of Pennsylvania Institutional Review Board.

## RESULTS

A total of 2,003 individuals participated in the study. The AAPOR completion rate was 63%, see Appendix. Respondent demographics are shown in Table 1.

**Table 1. Overall Respondent Demographics (weighted and unweighted)**

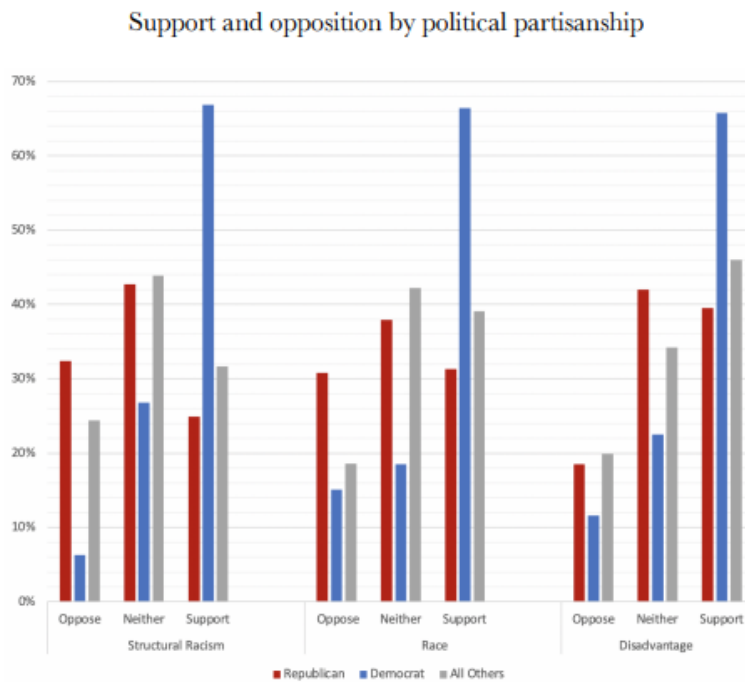
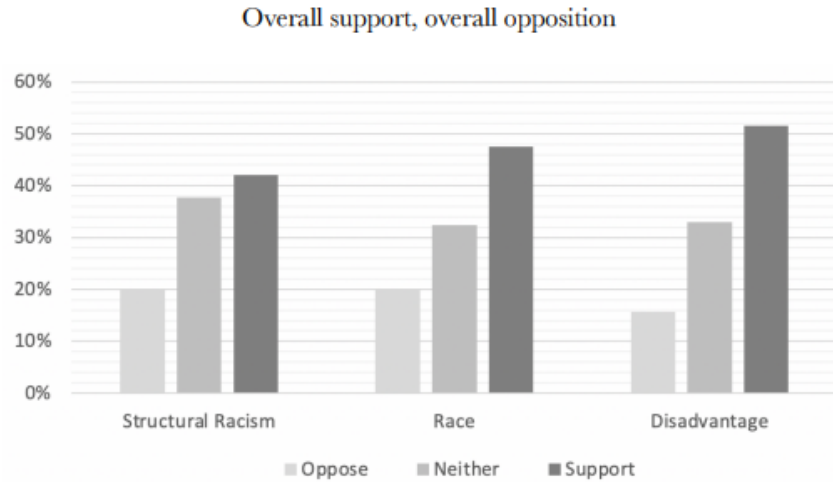
		Weighted		Unweighted	
		N	%	N	%
<b>Gender</b>	Male	979	47.5%	905	43.9%
	Female	1064	51.6%	1141	55.3%
	All Others	18	0.9%	17	0.8%
<b>Age</b>	18-44	942	45.6%	850	41.2%
	45-65	684	33.1%	673	32.6%
	65+	439	21.3%	540	26.2%
<b>Employment</b>	Employed (FT, PT or Self)	1157	56.1%	1034	50.1%
	All Other (Unemployed, Retired, Student, Homemaker, etc.)	906	43.0%	1029	49.9%
<b>Education</b>	Less than HS degree	193	9.4%	103	5.0%
	HS degree to < 4 year college degree	1130	54.7%	1069	51.8%
	4 year college degree or more	741	35.9%	891	43.2%
<b>Income</b>	< \$50k	599	29.1%	815	39.5%
	\$50k-\$74.9k	331	16.1%	422	20.5%
	\$75k-\$99.9k	270	13.1%	282	13.7%
	>\$100k	800	38.8%	484	23.5%
<b>Partisanship</b>	Republican	597	31.2%	617	32.2%
	Democrat	817	42.6%	791	41.3%
	All Others	502	26.2%	509	26.6%
<b>Race</b>	White (not Hispanic)	1310	63.5%	1544	74.8%
	Hispanic	309	15.0%	166	8.0%
	Black	249	12.1%	178	8.6%
	Asian	122	5.9%	83	4.0%
	All Others	72	3.5%	92	4.5%

Overall support for additional allocations was highest under the disadvantage frame at 51.5% followed by the race frame (47.5%) and structural racism (42.1%; see Fig 1, top panel). Overall opposition was lowest under the place-based frame (15.6%), while similar under the race (20.1%)

and structural racism frames (20.1%). Differences in support across frames were statistically significant ( $p=0.005$ ).

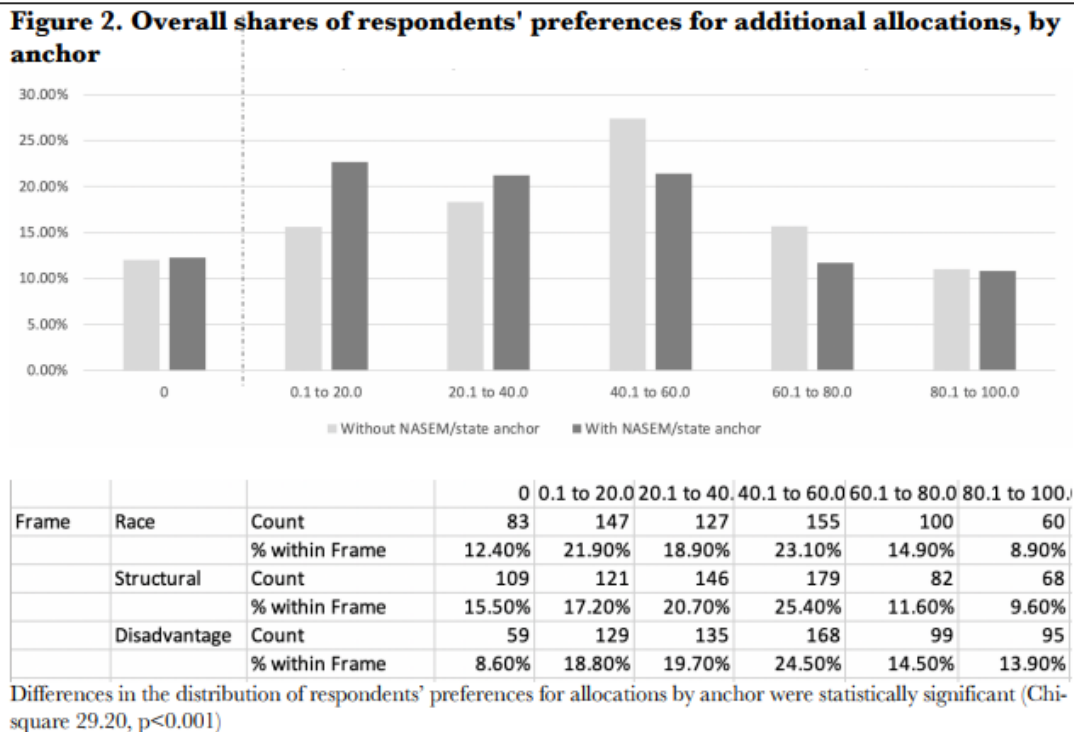
Support and opposition varied by partisanship. The majority of respondents identifying as Democrats supported additional allocations under all 3 frames almost equally (range 65.8-66.9%). Support was weaker among Republicans, and differed across frames: 39.5% approved of the place-based frame, 31.3% of the race frame, 24.9% of the structural racism frame (all differences by partisanship across frame were significant at 0.001, see Fig. 1, bottom panel, Appendix table S2). While partisanship demonstrated the strongest group differences in support by frame, Table S2 shows that respondents with higher educational attainment were more supportive under the structural racism and disadvantage frames, and that more Black, Hispanic and Asian respondents indicated support under the structural racism frame.

**Figure 1. Percent support and opposition for prioritizing groups within 3 frames, overall and by partisanship\***

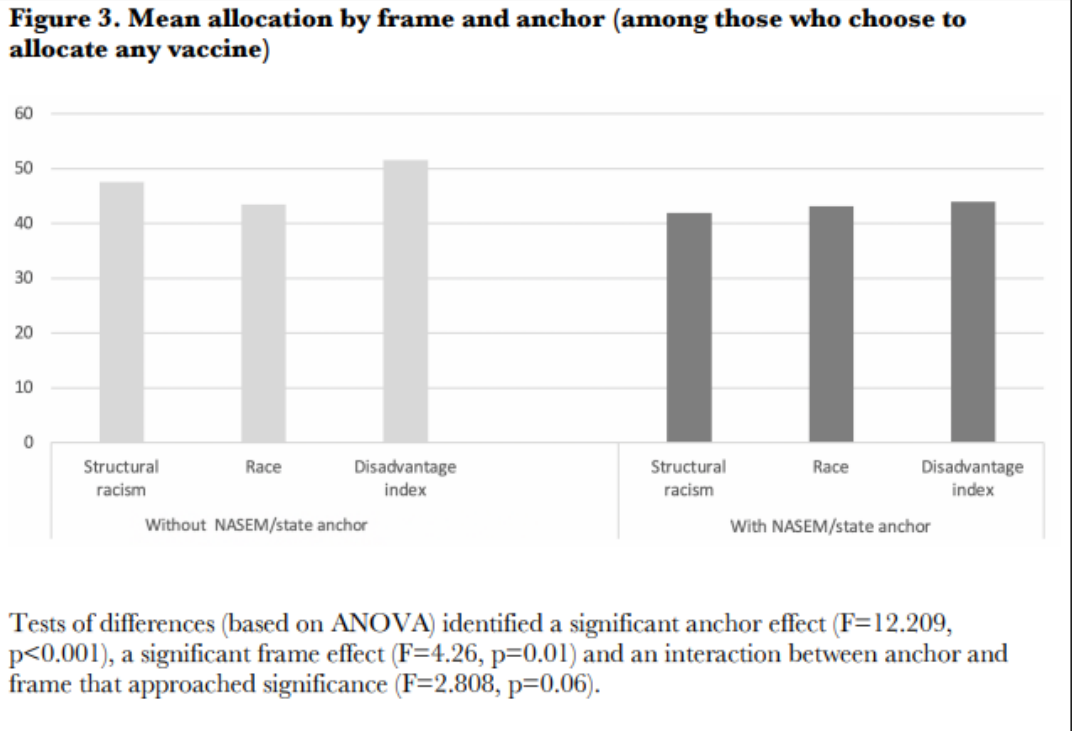


\*Percent respondents answering net oppose, neither or net support within each frame, i.e., collapsing strongly support+support and strongly oppose+oppose. For the top panel the differences in the distribution of support across frame are statistically significant. Pearson Chi-Square 14.96,  $p=0.005$ ) For the bottom panel, the differences in the distribution of support across partisanship within each frame are also statistically significant; Race: 67.668 ( $<0.001$ ); Structural Racism: 112.240 ( $<0.001$ ), Disadvantage: 37.678 ( $<0.001$ ).

Figure 2 depicts the second component of the experimental design, assessing whether respondents' preferences for allocating additional quantities of vaccines varied if they were informed about NASEM's proposal and states' practice. We found a statistically significant impact of this anchor ( $p < 0.001$ ): Respondents allocated more in the lower range of the distribution, and less in its upper range, compared to those not receiving the expert anchor.



Mean amounts of additional allocations differed, and there were statistically significant interactions between frame and the expert anchor (Fig. 3). Specifically, mean allocations were relatively flat across frames for those who did receive the anchor (41.9% (structural racism) to 43.2% (race) and 44% (disadvantage)). But differences across frames were greater when no anchor was provided (47.6% (structural racism), 43.5% (race), 51.6% (disadvantage)), and compared to the expert anchor, allocations were higher in the structural racism frame and disadvantage frame.



In additional analyses examining the interactions by partisanship, anchor, and frame for whether or not respondent selected a non-zero allocation, we found evidence of statistically significant interactions. Specifically, being a Democrat significantly increased the likelihood of making a non-zero additional vaccine allocation for those exposed to the structural racism frame ( $b = 1.48$ , Wald  $\chi^2= 9.32$ ,  $p = 0.002$ ).

**Discussion**

To our knowledge, this is the first examination of public response to widely adopted disadvantage indices to promote equitable allocation, and of alternative approaches that focus more narrowly on racial groups. Just one-fifth of respondents opposed any of the equity-promoting frames. Increasing allocations through the use of disadvantage indices met with most support and least opposition, the inverse was the case for referencing structural racism.

Informing respondents about NASEM's recommendation and states' practice in terms of additional allocations led to lower amounts under the structural racism and disadvantage index frames. However, the overall magnitude of the public's additional allocations aligns well with NASEM's recommendations and states' actual practice, and supports these.

While the effects of frames was fairly small, partisanship played an important role in driving differences, with least partisan friction associated with the use of disadvantage indices.

In terms of policy implications, our findings highlight an important omission in guidance issued by the CDC's Advisory Committee on Immunization Practices (ACIP).<sup>23,24</sup> The public, just as NASEM, recognizes that equity matters in allocating vaccines within the general population, and a majority supports special prioritization efforts. Yet, the element of within-population prioritization is absent from ACIP's guidance, which focused on promoting equity in the traditional sense (though the sequence of priority groups) and did not embrace NASEM's recommendation. While ACIP emphasizes equality of opportunity to receive vaccines across all allocation phases, the majority of the public feel more than that is owed.

### **Limitations**

Our study is cross-sectional in nature, demonstrates an immediate effect of framing on support for vaccine allocation plans, and thus may be evidence of a transient effect. Findings cannot be extrapolated to reach conclusions about broader public understanding, which happens over time and across multiple exposures to messaging. We asked about the public's willingness to increase allocations in April 2021 when scarcity persisted,<sup>25,26</sup> but some areas were beginning to face new challenges in not being able to distribute all available vaccines. Possibly, respondents were aware of this, and correspondingly more likely to disapprove of additional allocations. Still, we found substantial approval. We elicited views on prioritization among the general population: it is unclear what our findings mean for prioritizations within populations in earlier phases, which NASEM also recommended. However, related research suggests that support for additional allocations is not limited to the general population.<sup>21</sup>

**Conclusion**

Our study demonstrates that while there are differences depending on how policies are framed, there is substantial public support for prioritization by means of disadvantage indices.

Our findings are also important given that disparities in vaccination coverage remain, and that the gap between the most and least disadvantaged groups has increased since the entire US population has become eligible for vaccines, rather than decreased<sup>3,27</sup> (even if, plausibly, at magnitudes that are lower than had states not adopted disadvantage indices). Our study suggests that there could be significant public support for policies that continue to seek to reverse this trend, and likewise for efforts towards equitable allocation once vaccines are offered to children under 12, and if booster vaccines should become necessary. Longer-term, our findings matter for future pandemic planning, and can suggest that there could be broader support for using disadvantage indices outside of the vaccine allocation context for other resource allocation purposes in clinical and public health.

**Funding/Support:** This study was supported by a Policy Accelerator Program grant of the Leonard Davis Institute of Health Economics at the University of Pennsylvania. The funder had no role in study design, data collection and analysis, decision to publish, or preparation of the manuscript.



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## **Sappendix – Race-based and Place-based Prioritization in COVID-19 Vaccine Allocation Through the Use of Disadvantage Indices: Public Attitudes and Framing Effects**

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### **Methods, instrument and further statistical analyses**

Harris Insights & Analytics conducted an omnibus online poll (The Harris Poll) among US residents 18 years and older from April 13-16, 2021. Participants were recruited from online market research panels who opted into market research. Panelists are rewarded for taking part in surveys according to a structured incentive scheme, with the incentive amount offered for a survey determined by the length and content of the survey, the type of data being collected, the nature of the task, and the sample characteristics. The sample is a non-probability sample. To ensure representativeness of findings, two main processes are applied. First, purposive sampling and weights, to align the sample with the US General Population for ages 18+, based on the Current Population Survey from the Census (by education, age, gender, race/ethnicity, region, household income, household size, and marital status). Second, propensity scoring is applied to adjust for attitudinal and behavioral differences between respondents who are more likely to participate in online surveys (versus those who are less likely), those who are more likely to join online panels (versus those more reluctant), and those who responded to the survey that was fielded (versus those who did not). To minimizing non-response bias, survey invitations provide only basic links and information that is non-leading. Due to the way the sample is constructed and maintained, response rates that should be reported for probability samples cannot meaningfully be stated. The completion rate (completed surveys divided by number of respondents who entered the survey) was 63 % (see: American Association for Public Opinion Research. 2016. Standard definitions: Final dispositions of case codes and outcome rates for surveys. Available at: [https://www.aapor.org/AAPOR\\_Main/media/publications/Standard-Definitions20169theditionfinal.pdf](https://www.aapor.org/AAPOR_Main/media/publications/Standard-Definitions20169theditionfinal.pdf)).

**Supplemental Table S1: Experimental design for eliciting preferences towards race-based and place-based prioritization for Covid-19 vaccines within priority groups**

Currently, COVID-19 vaccines are generally only offered to priority populations, such as healthcare workers, essential workers, people with medical conditions, and older adults. From April 19, vaccines will be offered in all US states to the general population. At that point, everyone who is not in a priority group, along with everyone who has not yet been vaccinated, will be eligible to get a vaccine. While there will be more vaccines, and relatively fewer people, it will still be the case that not everyone who would like a vaccine will be able to get one right away. There remain questions about how to allocate vaccines among the general population.

[Race frame]	[Race&Racism frame- changes vs race-only frame in italics]	[Place frame]
Black, Indigenous, and Hispanic communities have been hit harder by COVID-19. They experienced at least twice as many deaths compared to the white population. Deaths were most frequent for people who were economically disadvantaged in these groups.	<i>Because of structural racism</i> , Black, Indigenous, and Hispanic communities have been hit harder by COVID-19. They experienced at least twice as many deaths compared to the white population. Deaths were most frequent for people who were economically disadvantaged in these groups.	People living in economically disadvantaged neighborhoods have been hit harder by COVID--19. They generally have less money, are more likely to live in crowded housing and are more frequently unemployed. While these people include all racial and ethnic groups, more Black, Indigenous, and Hispanic people live in disadvantaged neighborhoods. These groups experienced at least twice as many deaths compared to the white population.
Policy makers are considering a plan to address these issues. They suggest that once vaccines are offered to the general population, economically disadvantaged members of Black, Indigenous, and Hispanic communities should be offered a larger share of vaccines so that they are able to get a vaccine sooner.	Policy makers are considering a plan to address these issues. They suggest that once vaccines are offered to the general population, economically disadvantaged members of Black, Indigenous, and Hispanic communities, <i>who have been affected disproportionately by structural racism</i> , should be offered a larger share of vaccines so that they are able to get a vaccine sooner.	Policy makers are considering a plan to address these issues. They suggest that once vaccines are offered to the general population, people living in more economically disadvantaged areas should be offered a larger share of vaccines so that they are able to get a vaccine sooner.
Q1. How much do you support or oppose this plan? 1=Strongly oppose--5=Strongly support		
Q2. Under this plan, what percentage of the overall allotment of vaccines do you think should be set aside and added to the amounts that...		
[Race frame] ...economically disadvantaged members of Black, Indigenous, and Hispanic communities	Race&racism frame] ...economically disadvantaged members of Black, Indigenous, and Hispanic communities who have been affected disproportionately by structural racism...	[Place frame] ...people living in more economically disadvantaged areas...
...would otherwise be offered, based on their share of the population?		
<i>w/o Anchor Experimental Condition: The following text occurred in only three of the six experimental conditions: For your reference, a report by the National Academies of Science, Engineering and Medicine suggested that 10% should be set aside for related purposes, and currently 13 US states do so, by reserving between 5% and 40%</i>		
If you think no additional allocations should be made, click the slider at 0.		

**Supplemental Table S2. Support for prioritizing groups under the race, structural racism and disadvantage frames, by respondent characteristics**

	Randomly-Assigned Frame												Chi-square test of difference across characteristic by frame	
	Race		Structural Racism				Disadvantage							
	Overall support	Overall opposition	Overall support	Overall opposition	Overall support	Overall opposition	Overall support	Overall opposition						
<b>Partisanship</b>	N	%	N	%	N	%	N	%	N	%	N	%	$\chi^2$ (p)	
Republican	57	31.3%	56	30.8%	53	24.9%	69	32.4%	79	39.5%	37	18.5%	Race	67.668 (<0.001)
Democrat	176	66.4%	40	15.1%	180	66.9%	17	6.3%	187	65.8%	33	11.6%	Structural	112.240 (<0.001)
Other	63	39.1%	30	18.6%	57	31.7%	44	24.4%	74	46.0%	32	19.9%	Disadvantage	37.678 (<0.001)
<b>Education</b>	N	%	N	%	N	%	N	%	N	%	N	%	$\chi^2$ (p)	
< HS degree	30	49.2%	9	14.8%	27	37.0%	11	15.1%	20	35.1%	11	19.3%	Race	5.723 (0.221)
HS degree to <4-yr college	161	43.9%	78	21.3%	144	34.6%	88	21.2%	164	47.1%	45	12.9%	Structural	41.060 (<0.001)
4-yr college (or more)	128	52.5%	47	19.3%	126	58.3%	42	19.4%	168	60.0%	51	18.2%	Disadvantage	30.035 (<0.001)
<b>Race</b>	N	%	N	%	N	%	N	%	N	%	N	%	$\chi^2$ (p)	
White	215	47.1%	87	19.1%	151	35.3%	111	25.9%	210	49.2%	62	14.5%	Race	7.194 (0.516)
Hispanic	38	56.7%	10	14.9%	70	50.7%	12	8.7%	52	50.0%	17	16.3%	Structural	43.558 (<0.001)
Black	37	43.0%	24	27.9%	38	55.1%	7	10.1%	58	61.7%	18	19.1%	Disadvantage	11.692 (0.165)
Asian	21	47.7%	10	22.7%	28	66.7%	3	7.1%	18	47.4%	7	18.4%		
All others	8	38.1%	5	23.8%	10	35.7%	9	32.1%	15	60.0%	4	16.0%		
<b>Employment</b>	N	%	N	%	N	%	N	%	N	%	N	%	$\chi^2$ (p)	
Employed (FT, PT or Self)	189	50.4%	76	20.3%	187	47.0%	80	20.1%	201	52.1%	61	15.8%	Race	4.141 (0.126)
All Other (Unemployed, Retired, Student, Homemaker, etc.)	131	43.8%	59	19.7%	110	35.8%	61	19.9%	151	50.3%	46	15.3%	Structural	11.055 (0.004)
													Disadvantage	0.372 (0.830)
<b>Income</b>	N	%	N	%	N	%	N	%	N	%	N	%	$\chi^2$ (p)	
Less Than \$50k	67	37.0%	41	22.7%	78	37.3%	33	15.8%	94	45.0%	33	15.8%	Race	24.948 (0.002)
\$50k-\$74.9k	68	54.8%	21	16.9%	42	39.6%	20	18.9%	46	46.0%	14	14.0%	Structural	24.843 (0.002)
\$75k-\$99.9k	26	36.6%	11	15.5%	48	44.0%	22	20.2%	47	51.6%	9	9.9%	Disadvantage	20.092 (0.01)
\$100k+	144	52.9%	57	21.0%	121	46.7%	66	25.5%	158	58.3%	49	18.1%		

**Social vulnerability, disadvantage, and COVID-19 vaccine rationing: A review  
characterizing the construction of disadvantage indices deployed to promote equitable  
allocation of resources in the United States**

**Working Paper Date:** July 8, 2021

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**Funding Disclosures:** None.

**Abbreviations:**

<b>NASEM</b>	National Academies of Sciences, Engineering, and Medicine
<b>CDC</b>	Centers for Disease Control and Prevention
<b>ACIP</b>	Advisory Committee on Immunization Practices
<b>SVI</b>	Social Vulnerability Index
<b>ADI</b>	Area Deprivation Index
<b>CCVI</b>	COVID-19 Community Vulnerability Index
<b>HPI</b>	California Healthy Places Index
<b>PVI</b>	COVID-19 Pandemic Vulnerability Index

## Summary Points

- When planners began developing COVID-19 vaccine rationing frameworks in 2020, an additional major challenge arose, as the spread of the virus was exacerbated by major health disparities. In an unprecedented, novel turn, planners added statistical place-based measures of deprivation, known as disadvantage indices, to traditional sequential allocation frameworks. To better understand the construction of these indices and their role in equitable allocation, we reviewed the most commonly used indices with publicly available documentation.
- We characterized four indices: Area Deprivation Index (ADI), COVID-19 Community Vulnerability Index (CCVI), Healthy Places Index (HPI), and Social Vulnerability Index (SVI).
- Eighty total variables from the following nine domains were used to construct these indices: population demographics, poverty, education and employment, minority populations, housing, and transportation, high-risk transmission environments, health, healthcare system, and environmental and neighborhood.
- Geographic units that the indices were applied to range from the block group to census tract, zip code, and county level. U.S. Census Bureau's American Community Survey was the primary source of data, but indices varied greatly on variables and geography used, weighting schemes, and reporting units.
- While all indices have comparable goals, their designs differed considerably. Given the clear potential to promote equity in the pandemic setting and, plausibly, outside of it, further analyses should systematically elicit the tradeoffs associated with using different types of indices.

## Introduction

The COVID-19 pandemic has disproportionately affected disadvantaged populations, especially communities of color in the United States (U.S.), resulting in increased rates of unemployment, infections, hospitalizations, and deaths (1–9). To promote equitable allocation of COVID-19 vaccines, public health experts proposed to combine traditional sequential allocation frameworks that prioritized resource allocation *across* distinct groups with prioritizations *within* each group, using statistical measures of disadvantage (“disadvantage indices”) (10–12). Disadvantage indices are place-based measures that combine numerous relevant metrics such as income, housing quality, and education, enabling ranking at a particular geographic unit such as the census tract (1,200–8,000 people) or even smaller block group level (600–3,000 people) (13–15). These indices quantify the close link between health, location, and socioeconomic status and represent a data-driven approach to guide the planning of allocations *to* and *within* states and communities (10–12,16). Multiple indices exist and differ in design, which requires considering a range of tradeoffs. For example, prior work showed that a larger share of people of color would be prioritized under the Social Vulnerability Index (SVI) as compared to the Area Deprivation Index (ADI), while ADI targets a smaller geographic level and enables a more granular capture of disadvantage (17,18).

In the U.S., vaccine allocation guidance is traditionally provided by the Centers for Disease Control and Prevention (CDC) and its Advisory Committee on Immunization Practices (ACIP) (19). Guidance is non-binding, and allocations are ultimately individually determined by the CDC's 65 immunization grantees (comprising fifty states, the District of Columbia, five large cities, eight territories, and one commonwealth: referred to below collectively as "jurisdictions") (20). By the end of March 2021, during the period of most intense COVID-19 vaccine rationing, 37 of the CDC's jurisdictions used disadvantage indices for five main purposes: 1) to prioritize disadvantaged groups through increased shares of vaccines or vaccination appointments; 2) to define priority sites or areas; 3) to tailor outreach and communication; 4) to plan the location of dispensing sites; and 5) to monitor receipt of vaccination (12). The SVI became the dominant index utilized, used by 29 jurisdictions, but planners used an additional seven other indices (12).

This variation in indices used raises questions as to how and why these indices differ, and which index, if any, might be the most appropriate for COVID-19 vaccine allocation and future pandemics. Conceptually, politically, ethically, and legally, integrating different constituent elements also raises the question of which index most adequately captures overall or sub-domains of disadvantage. Our objective was to review the construction and initial purpose of indices deployed by vaccine allocation planners in the U.S. in the period December 2020 – March 2021, when COVID-19 vaccine rationing was most intense.

## Methods

All CDC jurisdiction health departments' websites were queried in a structured search from November 2020 – March 2021 to retrieve COVID-19 vaccine allocation plans. Detailed methods of the search are documented in a previously published review (12). Index design methodology and data were extracted from source websites or published methods papers by TS and ES. Indices without publicly available methodology and data were excluded from this study (12). Data extraction was reviewed by HS and MLK. For each index, the following information was extracted:

- *Name, Year, Purpose, Establishing group*
- *Data sources:* Sources of data that are used for each variable (ex. U.S. Census) and how frequently these are updated.
- *Variables:* Number and type of variables used
- *Domains:* Themes of the variables
- *Weighting:* Weights applied to variables if applicable
- *Geographic Unit:* Size of the geographic reference point (ex. block group, census tract)
- *Relative ranking:* data collected at the state, national level, or both

We summarized our findings for each index and characterized overlap in domains, variables, and data sources across indices.

## Results

We identified a total of eight disadvantage indices, of which four had publicly available methodology and data (Table 1). The four indices excluded from the study were the Pandemic Influenza Vulnerability Index and three separate indices all referenced as "COVID Vulnerability Index" (12). The following indices were included: Area Deprivation Index (21), COVID-19 Community Vulnerability Index (CCVI) (22), Healthy Places Index (HPI) (23), and Social Vulnerability Index (24).

The ADI and HPI were created as collaborations between governmental and academic entities, the SVI was created by the CDC/ASTDR, and the CCVI was created by a private organization in response to perceived shortcomings of the SVI (Table 2). Regarding the overall concept of disadvantage that indices highlight, the ADI endeavors to characterize “deprivation” and neighborhood “disadvantage”, while the CCVI and SVI aim to capture “vulnerability” and the HPI foregrounds the opposite, in emphasizing health. Each index defined a specific purpose related to communities: the ADI is characterized as a general planning and health policy tool; the CCVI and HPI focus specifically on COVID-19; with the SVI centering on natural disasters (Table 1).

Indices captured communities at the following geographic levels, with the SVI, ADI, and CCVI, each reporting or providing linkage for two geographies: block group, census tract, zip code, and county (Figs 1 and 2). The SVI, ADI, and CCVI all reported national and state level rankings, while the HPI reported rankings specific to California only (Table 1).

Eighty total variables were used that can be grouped under nine overarching domains: Population demographics, poverty, education and employment, minority populations, housing and transportation, high-risk transmission environments, health, healthcare system, and environmental and neighborhood (Table 3). The most common variables, which were used by three indices each, were single-parent households with children under 18 years of age (SVI, ADI, CCVI) and civilians (16+ years of age) unemployed (SVI, ADI, CCVI). Both variables were sourced from the American Community Survey (ACS). Eighteen other variables were used by two indices each and were also sourced from the ACS (Table 3). ADI and SVI exclusively used data from the ACS, while CCVI and HPI had fifteen and nine unique data sources, respectively, with data being updated at different frequencies (Tables 1 and 3). The CCVI used variables from the SVI and added relevant demographic, epidemiological, and healthcare-related factors specific to COVID-19 disease epidemiology.

Variables were weighted equally under the SVI and CCVI, with the overall score determined by the added scores of each variable divided by the number of variables that are integrated (SVI permits dropping variables). By contrast, specific weights calculated by regression and factor analysis determine the integration of scores for the ADI (based on factor score coefficients, a statistical methodology used to determine patterns and overlap between variables) and HPI (weighted based on domain regression scores) (Table 1).

## Discussion

Our analysis of the unprecedented, rapid, and wide adoption of disadvantage indices to promote equitable COVID-19 vaccine allocation identified considerable heterogeneities in indices’ construction, data sources, ranking methods, and reporting units.

The differences in geographic unit is particularly striking. Given the fact that high-income and low-income neighborhoods can often be within blocks of each other in many metropolitan areas, the population rankings calculated differ based on the corresponding geographic unit used. Out of the indices reporting multiple geographic units, ADI reports more granular geographies than SVI and CCVI by using block groups. A more granular view of communities can theoretically provide a more rigorous estimator of community health, especially in the context of COVID-19, as existing data shows that areas with higher poverty rates, population density, and proportion of minority populations have increased odds for infection (9,27–29). Yet, the SVI, the most widely



used index by policymakers is less granular than the ADI by using census tracts. While this may have a smaller overall impact in rural settings, in urban, population-dense areas, using a less granular unit may lead to underestimation of disadvantage. Outside of COVID-19, indices such as the Global Multidimensional Poverty Index (MPI) propose to focus on the most granular level of the household, which poses challenges in the U.S. since most census data is not available at this level (16). Therefore, future research questions include when, where, and to what extent lacking geographic resolution become problematic, as opposed to representing a pragmatic tradeoff where perfection can be sacrificed for the sake of operationalizability.

The overlap and variation between variables selected, data sources and weighting are also notable. Indices largely use the U.S. Census Bureau's American Community Survey data for social and economic variables, which are publicly available, and survey a broad swath of the U.S. population. Indices differentiated themselves based on their addition of variables to a relatively uniform set of base variables. One newly developed index, the CCVI, specifically supplemented the SVI with variables deemed relevant to COVID-19, including those measuring high risk transmission environments, chronic disease prevalence, and healthcare system resilience. CCVI drew from many governmental and national sources (ex. CMMS, BRFSS) for these additional variables. The HPI focuses heavily on variables related to the environment and the neighborhood-built environment. Additional variation is introduced to the indices through variable weighting, for which some indices rely on factor score coefficients (ADI) while other have a fixed (equal or otherwise) weights for each domain, resulting in difference even among indices with otherwise similar variables. For example, the CCVI considers the variable population density as its own domain, implicitly giving it much more weight compared to other indices that integrate population density as a variable within a domain and use the composite domain score for weighting.

A broader critique of using disadvantage indices is that 1) the effect of individual factors may not be directly proportional to changes in health outcomes, and 2) the data used are "static", and do not reflect rapid shifts in community demographics, development, and resources (18,30). For example, the SVI is updated every two years and ADI every five years, even though they both use U.S. ACS data which is collected on an ongoing yearly basis. ADI uses the ACS Five Year Estimates, an average of the previous five years of collected data (21). Nancy Krieger and colleague argued that the level of imprecision is such that, instead, "attention should turn to assessing the structural drivers of inequitable government and private sector policies." Just as the question of the appropriate geographic resolution, this charge can be viewed from a perfectionist or a pragmatist perspective. While further thought needs to be given to how to strike the right balance in trading off different advantages and disadvantages, an important perspective on considering indices' role is what would have happened absent their use. For example, where planners used indices to allocate larger shares of vaccines to more disadvantaged areas, and vaccines were used up by populations in these areas, more disadvantaged people who were more likely to get, spread, and die from COVID-19 received a vaccine before those for whom waiting longer was easier and safer. Without a question, structural determinants of health require urgent attention, but given current evidence it seems a complementary, rather than a competitive relationship should be the goal.

## **Conclusion**

Traditionally, disadvantage has not been integrated into vaccine allocation frameworks. For example, the CDC's 2018 pandemic flu vaccine allocation framework centered on establishing four broad population groups with 28 specific population subgroups within each category and then proposed different priority sequences depending on the intensity of the pandemic, without any

further consideration of the level of disadvantage of specific subpopulations (26). In a major shift, for COVID-19, the majority of planners felt that such an approach would exacerbate, rather than mitigate, the negative effects of existing health inequities, and directly integrated disadvantage indices in their allocation plans (10). Disadvantage mattered, and continues to matter, in COVID-19; furthermore, as vaccination gaps remain, prioritizing vaccine allocation could come up again before the next pandemic if booster shots are required. As a result of the unacceptable global disparities in vaccination access, the majority of countries have far lower overall vaccination rates than the U.S., and many have pronounced domestic disparities, too, where the use on a disadvantage index, while far from perfect, would likely still make meaningful differences to promote equitable allocation *within* countries (11,16). The U.S. experience offers major lessons to be learned for the use of indices within COVID-19, future pandemics and public health and clinical practice more broadly.

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**Table 1. Summary of characteristics of disadvantage indices.**

Name of Index	Year Developed / Current Data Year	Frequency of Update	Purpose Developed	Sources of Data	Geographic Unit Reported	Number of Variables	Construct Domains	Weighing of variables/ domains	Ranking Level	Index Construction
Area Deprivation Index (ADI)	2013 / 2019	Every five years based on American Community Survey Five Year Estimates	Share measures of neighborhood disadvantage with the public for use in research, program planning, and policy development.	American Community Survey, U.S. Census Bureau	Census block group/Neighborhood	17	1. Income 2. Education 3. Employment 4. Housing quality	Weighted based on factor score coefficients for individual variables (need to integrate all variables/domains)	National, State	ADIs are provided in national percentile rankings: ranks range from 1 to 100 at the block group level and in deciles from 1 to 10 for each state. A block group with a ranking of 1 indicates the lowest level of disadvantage within the nation and a ranking of 100 indicates the highest level of disadvantage.
COVID-19 Community Vulnerability Index (CCVI)	2020 / Multiple	Undetermined	Assess community resilience to impacts of COVID pandemic	Numerous (See Table 3)	Census tract County State	40	1. SES 2. Minority Status & Language 3. Housing type, Transportation, Household, Composition & Disability 4. Epidemiological Factors 5. Healthcare System Factors 6. High Risk Environments 7. Population Density	Variables weighted equally (need to integrate all variables/domains)	National, State	CCVI ranks each geography (state, county, or census tract) relative to one another on a 0 to 1 scale, with 0 being least vulnerable and 1 being the most vulnerable.
California Healthy Places Index (HPI)	2015 / 2018	Unclear	Assist Californians in exploring local factors that predict life expectancy and comparing community conditions across the state	Numerous (See Table 3)	Census Tract	24	1. Economy 2. Education 3. Healthcare access 4. Housing 5. Neighborhoods 6. Clean environment 7. Transportation 8. Social environment	Weighted sum of regression domain scores (need to integrate all domains)	State (California)	HPI scores are assigned a percentile rank: ranks range from 0 to 100 with those closer to 100 indicating healthier community conditions.
Social Vulnerability Index (SVI)	2011 / 2018	Every two years based on U.S. Census Bureau American Community Survey data releases	Identify communities that need support throughout natural disasters or human-made hazardous events	American Community Survey (ACS), U.S. Census Bureau	Census tract County	15	1. SES 2. Household composition & disability 3. Minority status & language 4. Housing type & transportation	Variables weighted equally (permissible to omit variables)	National, State	Tract rankings are based on percentiles: percentile ranking values range from 0 to 1 (state) and 0-100 (national), with higher values indicating greater vulnerability.

**Table 2. Organizations involved in developing disadvantage indices.**

Name of Index	Who Developed
Area Deprivation Index (ADI)	Health Resources & Services Administration (HRSA) University of Wisconsin School of Medicine and Public Health
COVID-19 Community Vulnerability Index (CCVI)	Surgo Ventures
California Healthy Places Index (HPI)	Public Health Alliance of Southern California Virginia Commonwealth University
Social Vulnerability Index (SVI)	CDC/HHS Agency for Toxic Substances and Disease Registry's (ATSDR) Geospatial Research, Analysis & Services Program (GRASP)

Table 3. Variables used to construct disadvantage indices.						
Items			Disadvantage Index			
Domain	Variable	Source <sup>1</sup>	ADI	CCVI	HPI	SVI
Population Demographics	Population Estimate	ACS				✓
	Estimated total number of people per unit area (sq. miles)	SVI		✓		
	Estimate of Daytime Population	ACS				*
	Persons Aged 65 +	ACS		✓		✓
	Persons Aged < 18	ACS		✓		✓
	Single-Parent Households with Children Under 18	ACS	✓	✓		✓
	Percentage of family households with children under 18 with two parents	ACS			✓	
	Percentage of registered voters voting in the 2012 general election	ACS			✓	
Poverty	Persons Below Poverty	ACS		✓		✓
	Percent of families below the poverty level	ACS	✓			
	Percent of population living below 150% of the poverty threshold	ACS	✓			
	Percent of the population with an income exceeding 200% of federal poverty level	ACS			✓	
Education and Employment	Civilian (age 16+) Unemployed	ACS	✓	✓		✓
	Percent of population aged 25-64 who are employed	ACS			✓	
	Percent of employed persons ≥ 16 years of age in white-collar occupations	ACS	✓			
	Median Family Income	ACS	✓		✓	
	Per Capita Income	ACS		✓		✓
	Income Disparity	ACS	✓			
	Percent of 3-4 year olds enrolled in pre-school	ACS			✓	
	Percent of 15-17 year olds enrolled in school	ACS			✓	
	Persons (age 25+) with No High School Diploma	ACS		✓		✓
	Percent of population aged ≥ 25 years with < 9 years of education	ACS	✓			
	Percent of population aged ≥ 25 years with greater than or equal to a high school diploma	ACS	✓			
Percent of population over age 25 with a bachelor's education or higher	ACS			✓		

	Percentage of adults aged 18 to 64 years currently insured	ACS		✓	
	Persons without Health Insurance	ACS			*
	Percent of population uninsured	ACS		✓	
	Civilian Non-Institutionalized Population with a Disability	ACS		✓	✓
Minority Populations	Minority (all persons except white, non-Hispanic)	ACS		✓	✓
	Index of dissimilarity	Decennial Census 2010			✓
	Persons (age 5+) Who Speak English "Less than Well"	ACS		✓	✓
Housing and Transportation	Median Home Value	ACS	✓		
	Median gross rent	ACS	✓		
	Median monthly mortgage	ACS	✓		
	Percent of low income homeowners paying more than 50% of income on housing costs	Comprehensive Housing Assessment System			✓
	Percent of low income renter households paying more than 50% of income on housing costs	Comprehensive Housing Assessment System			✓
	Percent owner-occupied housing units (home ownership rate)	ACS	✓		✓
	Multi-Unit Structures (Housing in structures with 10+ units)	ACS		✓	✓
	Mobile Homes	ACS		✓	✓
	Crowding (At household level (occupied housing units), more people than rooms)	ACS		✓	✓
	Percent of occupied housing units with more people than rooms estimate	ACS	✓		✓
	Percent of households with less or equal to 1 occupant per room	ACS			✓
	Persons in Group Quarters	ACS		✓	✓
	Households with No Vehicle	ACS		✓	✓
	Percent of households with no vehicle available	ACS	✓		✓
	Percentage of households with access to an automobile	ACS			✓
	Percentage of workers (16 years and older) commuting by walking, cycling, or transit (excluding working from home)	ACS			✓
	Percent of occupied housing units without a telephone	ACS	✓		



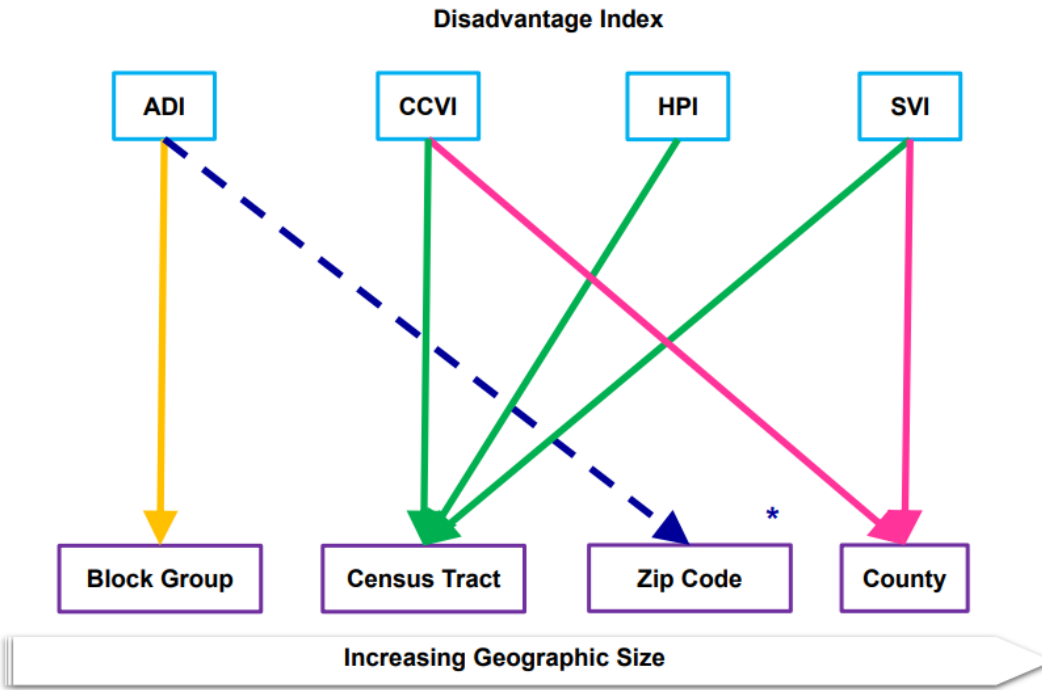
	Percent of occupied housing units without complete plumbing	ACS	✓	✓		
High Risk Transmission Environments	Long-term care (nursing homes, assisted living, and care homes) residents per 100,000	ArcGIS/DHS		✓		
	Prisons population per 100,000	Vera Institute of Justice		✓		
	Percentage of population employed in high-risk industry	BLS Quarterly Census of Employment and Wages		✓		
	Estimated percent of adults diagnosed with high cholesterol	BRFSS		✓		
Health	Estimated percent of adults diagnosed with a stroke	BRFSS		✓		
	Estimated percent of adults ever diagnosed with heart disease	BRFSS		✓		
	Estimated percent of adults diagnosed with chronic obstructive pulmonary disease, emphysema, or chronic bronchitis	BRFSS		✓		
	Estimated percent of adults reporting to smoke cigarettes	BRFSS		✓		
	Annual cancer incidence per 100,000 persons	National Cancer Institute		✓		
	Rate of persons living with a HIV diagnosis per 100,000 people	National Center for HIV, STD and TB Prevention		✓		
	Estimated percent of adults reporting to be obese (a body mass index of 30 or greater)	BRFSS		✓		
	Estimated percent of adults ever diagnosed with diabetes	BRFSS		✓		
	Healthcare System	Intensive Care Unit (ICU) Beds per 100,000	CMMS		✓	
Hospital Beds per 100,000		Definitive Healthcare		✓		
Epidemiologists per 100,000		BLS		✓		
Agency for Healthcare Research and Quality – Prevention Quality Indicator Overall Composite (PQI): admission rates for preventable conditions (via good outpatient care) adjusted per population		CMMS, Mapping Medicare Disparities (MMD) Tool		✓		
Health Spending per Capita		CMMS		✓		

	<b>Aggregate cost of medical care</b>	PolicyMap & Quantitative Innovations		✓		
	<b>Percent of population with a Primary Care Physician</b>	PolicyMap BRFSS		✓		
	<b>Total Public Health Emergency Preparedness (PHEP) Funding Per Capita</b>	CDC Center for Preparedness and Response		✓		
	<b>Health Labs per 100,000</b>	Association of Public Health Laboratories		✓		
	<b>Emergency Services per 100,000</b>	Census Economic Annual Surveys		✓		
<b>Environmental and Neighborhood</b>	<b>Percent of the population living within ½ mile of a park, beach, or open space greater than 1 acre</b>	GreenInfo Network			✓	
	<b>Population-weighted percentage of the census tract area with tree canopy</b>	National Land Cover Database			✓	
	<b>Spatial distribution of gridded diesel PM emissions from on-road and non-road sources for a 2012 summer day in July (kg/day)</b>	California EPA			✓	
	<b>Cal EnviroScreen 3.0 drinking water contaminant index for selected contaminants</b>	California EPA			✓	
	<b>Mean of summer months (May-October) of the daily maximum 8-hour ozone concentration (ppm), averaged over three years (2012 to 2014)</b>	California EPA			✓	
	<b>Annual mean concentration of PM2.5 (average of quarterly means, µg/m3), over three years (2012 to 2014)</b>	California EPA			✓	
	<b>Percentage of the urban and small town population residing less than ½ mile from a supermarket/large grocery store, and the percent of the rural population living less than 1 miles from a supermarket/large grocery store</b>	USDA Food Access Research Atlas			✓	
	<b>Percentage of the population residing within ¼ mile of an off-site sales alcohol outlet</b>	Alcoholic Beverage Commission			✓	
	<b>Combined employment density for retail, entertainment, and educational uses (jobs/acre)</b>	U.S. EPA			✓	

\*Adjunct variables in SVI 2018, excluded from SVI rankings

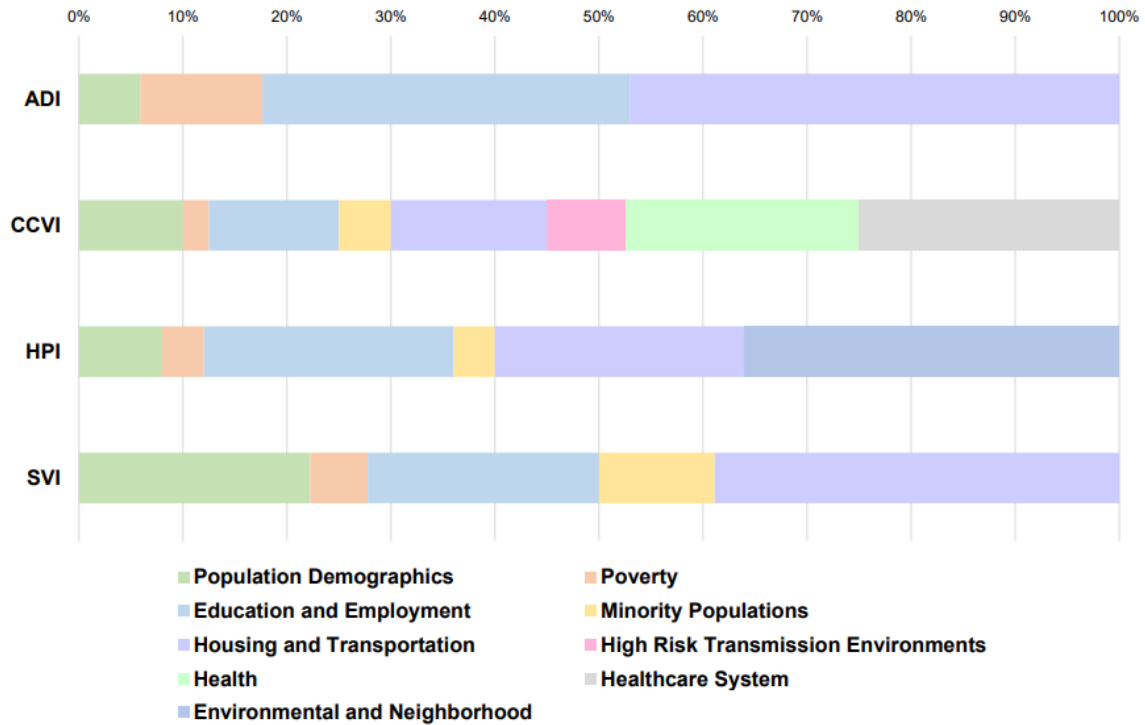
<sup>1</sup>Source abbreviations: ACS = American Community Survey; SVI = Social Vulnerability Index; DHS= Department of Homeland Security; BLS = U.S Bureau of Labor Statistics; BRFSS = Behavioral Risk; Factor Surveillance System; USDA = U.S. Department of Agriculture; CMMS = Centers for Medicare and Medicaid Services; EPA = Environmental Protection Agency

Figure 1. Reported geographic units of disadvantage indices.



\*Note: ADI provides linkages between block group and zip codes but does not calculate rank based on zip codes.

Figure 2. Percent composition of each disadvantage index by domain.



Note: Since SVI and CCVI equally weight all variables, these percentages are representative of true domain share in index construction for those indices.



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August 4, 2021

COVID-19 Health Equity Task Force  
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US Department of Health and Human Services  
Tower Oaks Building 1101  
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**Re: Improving Health Equity During and Beyond the COVID-19 Pandemic**

Dear Dr. Nunez-Smith and Task Force Members:

Anthem, Inc. (Anthem) commends the COVID-19 Health Equity Task Force (Task Force) for their leadership in addressing health inequities that have been highlighted and exacerbated by the COVID-19 pandemic. Anthem supports the objectives of the Task Force to develop recommendations to improve health equity during and beyond the COVID-19 pandemic, and we are committed to addressing disparities and improving health and well-being within the communities we serve. We appreciate this opportunity to offer our perspective on the issues that the Task Force has focused on throughout its proceedings.

Anthem is a leading health benefits company dedicated to improving lives and communities, and making healthcare simpler. Through its affiliated companies, Anthem serves more than 117 million people, including more than 44 million within its family of health plans. We aim to be the most innovative, valuable and inclusive partner.

Anthem continues its efforts as a trusted health partner to support individuals, families, caregivers, and communities as they navigate significant barriers to receiving care and community resources during the pandemic. From the time the pandemic began, we have consistently reached out to community leaders, providers, and caregivers to ensure a coordinated response to the barriers our members, and the communities we serve, are experiencing.

Recognizing the increased Health-Related Social Needs (HRSN) (also referred to as social drivers of health) of Anthem members and communities due to the pandemic, we executed multiple initiatives to maintain and improve access to care, services, and supports. We enhanced our focus on community health, adapted and accelerated our digital innovations, transformed many of our products and care solutions, and simplified our processes for enrollees and providers in the context of COVID-19. We are continuing to perform comprehensive community needs assessments and screenings to create localized

[antheminc.com](http://antheminc.com)

solutions in collaboration with community partners to decrease member barriers to housing, increasing access to nutritious food through food delivery, pop up food tents, and accessible pick up locations, and we are supporting internet access and providing laptops within our Medicaid states to support students' educational needs. We are also providing our Medicare members with access to social workers and case managers that help to coordinate local resources related to food insecurity, transportation, and additional social needs.

Anthem is also actively working to improve access to, and uptake of, the COVID-19 vaccine among underserved communities by engaging in direct member outreach and transportation to vaccination sites. Anthem joined the White House's Vaccine Community Connectors (VCC) program to encourage the vaccination of two million Americans living in the nation's most underserved communities. We are using data analytics to identify members with the highest Social Vulnerability Index (SVI) and provide proactive outreach, member education, scheduling support, and transportation, and facilitate collaboration with the outlets delivering the vaccine. We also undertook a comprehensive approach to tracking vaccine uptake, assessing adherence to completing multi-dose vaccine regimens, and identifying disparities in both uptake and adherence to vaccines in real-time, although we do not yet have resulting comprehensive data. Additionally, we partnered with Lyft to provide members with transportation to vaccine administration locations. We also worked with community leaders to develop a vaccine resource to assist vaccination sites in creating an accessible vaccine experience for people with disabilities and older adults.

Anthem looks forward to working with and assisting the Task Force and the Office of Minority Health (OMH) as you proceed with finalizing recommendations on health equity. Below, we offer Anthem's experience and perspective on topics that the Task Force has covered in recent meetings.

### **Specific Comments and Discussion**

#### **I. Data Collection, Standardization, and Integrity**

Anthem appreciates the Task Force's strong focus on the need for improved demographic data across all areas of healthcare to better identify and support strategies to reach underserved and historically marginalized people and communities. Anthem supports the Task Force's focus on enhancing data interoperability and integrity. As the Task Force has identified, there is a need for improving the collection, exchange, and use of demographic data to support improvements in health equity. Anthem offers the following recommendations.

- **Support sociodemographic data standardization and interoperability.** High-quality, accurate sociodemographic data is key to improving health equity in all communities. However, no national standards are implemented across healthcare stakeholders to facilitate consistent sociodemographic data collection and appropriate use. We urge Congress to support industry-led efforts, such as the HHS Office of the National Coordinator for Health Information Technology (ONC) and stakeholders' United States Core Data for Interoperability (USCDI) standardized set of health data classes and elements, to accelerate the development, adoption, and updating of national, interoperable sociodemographic data standards while maintaining appropriate safeguards and privacy protections. We also ask legislators and regulators to

remove state and federal legal barriers to appropriate and secure collection, use, and sharing of sociodemographic data for the purposes of supporting health equity efforts.

- **Support digital-first platforms for health.** All too often, healthcare services are fragmented in ways that create inefficiency while reducing access and affordability. As a digital-first company, Anthem is improving access to technology that helps members better manage their own health, recognizing that we still have a ways to go as a country towards addressing the digital divide. Our efforts to increase access and build trust in health IT will ultimately keep members healthy longer. Below are a few examples of our efforts in this area:
  - **Sydney Health App:** Our data-driven member tool keeps members engaged in their health and well-being. They can chat with a doctor, check for COVID-19 symptoms, manage their prescription, and find ways to save costs.
  - **C19 Explorer for COVID-19:** Our COVID-19 tool shows real-time virus information specific for each community. It helps doctors, public health officials, and employers track infection rates, community risk scores, hospital utilization, trending hotspots, and local economic conditions in order to stay informed on pandemic trends.
- **Support Immunization Information Systems (IIS) and Prescription Drug Monitoring Programs (PDMP) data-sharing.** Anthem supports greater sharing of certain health information between state and federal data collections and health plans. For example, health plans' efforts to improve vaccinations rates among underserved members would benefit from access to the information available in IISs (see also discussion below). In addition, we have supported efforts to expand the use of PDMPs, including allowing health plans to have access to PDMP data to allow for a more complete picture of the use of controlled substances in the community. If allowed access, health plans could identify individuals at risk of overdose or complications even earlier to prevent and identify substance use disorders.

## II. Vaccine Access and Acceptance

We appreciate the Task Force's emphasis on improving vaccine use and uptake among underserved and historically marginalized communities. Anthem is working to facilitate vaccinations through national partnerships and measures that address communities' unique needs - for example, through a collaboration between Anthem, Gee's Clippers ( a barbershop in Milwaukee), and providers and community-based organizations. Additionally, Anthem is promoting and sharing information, in partnership with a diversity of community and faith leaders, about the safety and efficacy of COVID-19 vaccines with members and, more broadly, in the communities we serve.

As previously mentioned, Anthem is part of the White House's VCC program to improve vaccination rates of Americans - as determined by the SVI, a measure incorporating income, ethnicity, and other characteristics related to social risk. As a trusted partner in this effort, we focus on proactively identifying and reaching out to community members who experience barriers to accessing a vaccine. We also provide education on the benefit of vaccines and offer services to receive a vaccine. To this end, in early 2021, we began outreach to members in communities with the highest SVI and initiated a

comprehensive approach to tracking vaccine uptake and adherence in real-time. With this experience, Anthem offers the following recommendation.

- **Support payer access to state IISs.** One of the challenges we have encountered is identifying our vaccinated members, which can hinder outreach efforts. Accessing vaccination information included in state IISs would improve our data analytics capabilities to facilitate and effectively focus outreach and follow-up efforts. Claims data is often delayed and can be incomplete if vaccine claims are not submitted, but payer access to state IISs would fill the data gaps and equip health plans with the tools to effectively coordinate care and connect members to needed services. Additionally, we support creating a universal Data-Use Agreement (DUA) to enable data sharing between IISs and payers to facilitate establishing data-sharing with states.

### III. Mental Health (MH) and Substance Use Disorder (SUD)

We strongly support the Task Force and this Administration’s focus on addressing health equity issues for MH/SUD-related treatment. We are deeply concerned about the pandemic’s impact on MH/SUD and how it has widened disparities in receiving care and treatment for these services. Anthem is committed to addressing these disparities and focusing on addressing varying needs across the life span. Throughout the pandemic, Anthem and our subsidiary Beacon Health Options have provided care for the new and existing needs of customers – providing educational resources, supporting the transition to virtual care, and responding quickly with new approaches. During the pandemic, Anthem saw telehealth usage increase by 80 times the levels seen in 2019; and 29% were new users of MH/SUD treatment. To address the increased demand, we helped train approximately 7,000 providers in virtual care delivery. We also conducted monthly webinars to help providers address MH/SUD needs related to COVID-19. This ranged from suicide prevention in underserved populations to integrating primary care and mental health, and what mental health conditions to expect in the current environment.

The social isolation brought on by COVID-19 has also exacerbated America’s opioid addiction problem, a “silent pandemic” for millions. We have been working to reduce and prevent opioid use disorder before, during, and after the pandemic. While treatment protocols often involve either drug therapy or behavioral counseling, Anthem believes that individuals do better with a whole-person care approach. Approved by the Food and Drug Administration (FDA), Medication-Assisted Treatment (MAT) uses medications in combination with counseling and behavioral therapies. We are proud to have reached our goal of doubling the number of members receiving MAT whole-person care from 18% to 36%. This work is part of a broader commitment to making changes that help reduce, prevent, and deter opioid use disorder and advance recovery. Regarding MH/SUD, Anthem offers the following recommendations.

- **Address HRSN impeding access to MH/SUD treatment.** MH/SUD can often be exacerbated by HRSNs, so by addressing HRSNs, we can help people prevent, manage, and recover from MH/SUD. The current Medical Loss Ratio (MLR) requirements were implemented before the impact that HRSN have on health outcomes was fully recognized. Spending for benefits related to health-related social needs should be included in the numerator of the MLR formula for all healthcare programs. Rep. John Curtis (R-UT) recently introduced H.R. 3969, which would amend title XXVII of the Public Health Service Act to include activities to address HRSN in the calculation of the MLR for group and individual health insurance issuers. Anthem recommends that Congress pass

legislation that would appropriately encourage health plans to invest in innovative ways to remove barriers to care and improve consumers' health outcomes by addressing HRSN for all healthcare programs, including Medicaid.

- **Expand the MH/SUD workforce.** The Administration should support efforts to increase the MH/SUD workforce including:
  - Expand eligible Medicare providers by recognizing licensed Mental Health Counselors (MHCs), licensed Marriage and Family Therapists (MFTs), and certified peer support specialists as covered Medicare providers to address the gaps in care for Medicare beneficiaries;
  - Address limitations caused by scope of practice requirements. Physician oversight and supervision rules should be examined to increase access to a broad array of providers and services and to support opportunities for providers to practice at the top of their level of licensure;
  - Increase funding for graduate medical education programs that are earmarked explicitly for MH/SUD providers;
  - Encourage states, foundations, and others to establish a tuition reimbursement program for psychiatrists that will help improve mental health care access in the areas and states that need it most;
  - Increase diversity in the clinical workforce; and,
  - Encourage equitable reimbursement to broaden the utilization of peer supports.

#### **IV. Testing/Treatment Access**

COVID-19 testing and treatment access will remain important both in helping to control the spread of COVID-19 in underserved communities and supporting communities that may be disproportionately impacted by the virus. In 2020, Anthem removed barriers to accessing care by waiving cost-sharing for COVID-19 testing, treatment, and inpatient hospital stays as well as prior authorizations for supplies and durable medical equipment necessary to treat COVID-19. We believe equitable access to testing and treatment services is critical.

Anthem also supports efforts to drive lower-cost, high-quality tests and improve access. As an example of our initiatives to increase fast, effective, affordable, and easy-to-use testing innovations, the Anthem Foundation and Anthem served as founding anchor partners of the XPRIZE Rapid COVID testing competition. This competition awarded six million dollars to five teams to encourage the adoption of testing solutions. During the remainder of 2021, teams will accelerate the adoption of solutions on a massive scale, including inviting communities like schools, offices, factories, nursing homes, homeless shelters, and other communities to apply to be part of the roll-out. With this experience, we offer the following recommendation.

- **Increase federal funding to maximize testing for public or occupational health.** We support efforts to target funding for testing in underserved communities.



- **Eliminate any potential for COVID-19 price gouging by certain providers** to ensure testing continues to be widespread and affordable for Americans including underserved communities and communities that may be disproportionately impacted by the virus. As stated above, in the Spring of 2020, health insurers proactively eliminated cost-sharing for COVID-19 diagnostic testing and treatment. Subsequently, the Coronavirus Aid, Relief, and Economic Security (CARES) Act required health insurance providers to provide access to diagnostic COVID-19 testing without cost-sharing. The CARES Act also requires health insurance providers to pay the listed cash price for COVID-19 tests in the absence of a contract, thus eliminating their ability to negotiate more affordable test prices. On average, a COVID-19 test in the commercial market costs \$130. In contrast, out-of-network test providers charged significantly higher (more than \$185) prices for more than half (54%) of COVID-19 tests in March 2021—a 12% increase since the beginning of the pandemic.<sup>1</sup> Price gouging in COVID-19 testing continues to be a significant problem. To stop price gouging:
  - Throughout the PHE, Congress should eliminate the ability for price gouging to occur by setting a reasonable market-based pricing benchmark for tests delivered out of network.
  - Policymakers should accelerate the availability of consumer-friendly, rapid, and accurate tests that lower costs and mitigate the capacity and supply constraints of providers and labs.
  - The Administration should ensure that all available COVID-19 tests, both manufacturer-developed and laboratory-developed, meet appropriate standards for accuracy.

#### V. Telehealth and Broadband

The COVID-19 pandemic both highlighted and heightened the essential role of equitable access to broadband and telehealth, with appropriate guardrails, for all Americans. Given our role and experience in ensuring access to care for millions of members, we offer the following recommendations.

- **Support coverage for evidence-based telehealth services in Medicare.** A bipartisan group of members of Congress, in both the House and Senate, have come together to introduce H.R. 2166 and S. 150, the Ensuring Parity in MA for Audio-Only Telehealth Act, which would allow for Medicare coverage of diagnoses collected through audio-only telehealth during the COVID-19 Public Health Emergency (PHE) for plan years 2020 and 2021. The bills would require CMS to allow diagnoses from audio-only telehealth visits to be eligible for MA risk adjustment with safeguards to improve beneficiaries' access to care by ensuring payment accuracy for beneficiaries' health status and incentivizing value-based care. It's critical to support telehealth and remote patient monitoring that has been shown to increase patient engagement and improve access to care. This change is necessary to meet beneficiaries where they are. In particular, studies have shown that Black and Hispanic/Latino beneficiaries, as well as dually eligible beneficiaries with multiple chronic conditions, are less likely to have access to video and audio technologies than other groups of MA beneficiaries, potentially compounding disparities

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<sup>1</sup> AHIP, "COVID-19 Test Prices," July 20, 2021. Available at: <https://www.ahip.org/covid-19-test-prices/>

in COVID-19 outcomes.<sup>2 3</sup> As diagnoses were less likely to be captured in 2020 and 2021 due to the pandemic, we recommend CMS use two years of MA diagnosis data for non-curable conditions to calculate risk scores during the pandemic to improve payment accuracy for MA beneficiaries.

- **Support improved access to and affordability of broadband to eliminate the digital divide.** Many digital health products offered today work most effectively with a broadband connection. Important steps have been taken to support access to broadband. However, there are areas that continue to not have reliable access to affordable and quality broadband. We encourage the Administration to seek opportunities to continue to expand access to and financial support of programs that facilitate access to video and audio care for un- and underserved populations. We offer the following recommendations:
  - Support Congress and federal agencies in delivering access to broadband services by supporting efforts to fund and install broadband infrastructure in underserved communities;
  - Encourage existing efforts to map current broadband capabilities so that targeted investments can be made to maximize the benefit of broadband investment;
  - Identify existing federal programs that have had success in providing financial assistance for individuals to purchase broadband services (i.e. Federal Communications Commission Emergency Broadband Benefit and Lifeline Program);
  - Work with stakeholders on how to best educate individuals who have access to broadband services or programs that subsidize the cost of broadband to take advantage of these programs;
  - Connect the need for improved broadband access as a key part of expanded home-based care delivery (telehealth services, Hospital at Home, etc.); and,
  - Encourage coordination among federal agencies on broadband policies so investments can be most effectively used.
  
- **Remove Geographic Limitations and Restrictions.** The COVID-19 PHE has demonstrated the value of telehealth in providing access to care. Current Medicare laws and regulations unnecessarily limit coverage of telehealth to rural areas and require individuals to be present at certain approved originating sites such as hospitals and physician offices to receive telehealth services. These outdated restrictions hinder millions from utilizing available technology in the privacy of their home or safe space. Recognizing that these requirements were barriers to care, Congress and the Administration moved quickly to waive these restrictions during the PHE. We recommend that the outdated restrictions regarding geographic location and originating site be permanently removed to support improved access to care for all individuals who would like to utilize telehealth, even after the PHE concludes.

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<sup>2</sup> JAMA. "Patient Characteristics Associated With Telemedicine Access for Primary and Specialty Ambulatory Care During the COVID-19 Pandemic." December 2020. <https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2774488>.

<sup>3</sup> AJMC. "Differences in the Use of Telephone and Video Telemedicine Visits During the COVID-19 Pandemic." January 14, 2021. [tinyurl.com/2or2482g](https://www.ajmc.com/2or2482g).

## **VI. Pandemic Preparedness**

Anthem believes that making investments now is critical in improving health equity beyond the pandemic. Anthem supports building on the lessons learned from the COVID-19 pandemic response in improving outreach and access for underserved and historically marginalized communities. We support efforts to identify and strengthen the healthcare system for all to prepare for any future pandemics and public health emergencies. When conducting emergency and disaster preparedness discussions, it is critical to include people with disabilities in the planning process. It is also imperative to have a workforce that is prepared for future pandemics and other public health emergencies – with a key component being defining in-home workers as essential, allowing these workers increased protection and benefits, such as greater access to personal protective equipment.

## **VII. Reducing Barriers to Care**

Anthem recognizes that COVID-19 exposed and exacerbated health disparities, and continues to be committed to making sustainable advances to improve health and well-being across racial, economic, and cultural lines. Some of our initiatives include increasing access to high-quality maternal healthcare, particularly for people of color and people living in rural communities; connecting people with community resources to assist with critical needs; targeting interventions to improve care and outcomes; conducting data-driven, proactive outreach using tailored messaging; and, establishing a physical presence in communities of color and rural communities. Anthem offers the following recommendations.

- **Eliminate disparities in maternal healthcare.** The U.S. continues to have the highest maternal death rate of any developed nation, and women of color – Black women in particular – are disproportionately affected. We urge Congress to ensure that any final health package extends the 12-month postpartum coverage included in the American Rescue Plan from a five-year option to a permanent option for states to use in combating maternal mortality, and provide coverage and reimbursement of evidence-based certified doula services for pregnant beneficiaries.
- **Reduce barriers to care for those with chronic health conditions.** The Chronic Disease Management Act (S. 1424/H.R. 3563) allows Health Savings Account-eligible High Deductible Health Plans (HDHPs) to reduce consumer costs while enhancing care for enrollees' chronic health conditions by providing access to healthcare services and medications that manage chronic conditions on a pre-deductible basis. Alternatively, the U.S. Department of the Treasury and the Internal Revenue Service can expand existing guidance to permit greater flexibility in HDHPs and reduce barriers to items and services shown to prevent the exacerbation of chronic health conditions.
- **Promote stability and adequate funding for Medicare Advantage (MA).** MA health plans deliver Medicare Parts A and B benefits at lower costs than Fee-for-Service Medicare (FFS) and use those savings to provide higher-value care to our beneficiaries – by reducing or eliminating cost sharing that is required in FFS, enhancing Part D drug coverage, and offering supplemental benefits, such as dental, non-emergency transportation, and healthy food delivery. MA covers a more diverse, and lower socioeconomic status, population than FFS, making these additional

offerings even more significant. MA serves a larger proportion of racially diverse beneficiaries (32%) compared to FFS (21%) and more beneficiaries that are low-income, with 40% of MA enrollees having incomes below \$25,000 per year.<sup>4</sup> To ensure continued stability of the MA program, and access to the comprehensive and quality healthcare, services, supports, and innovative programs upon which beneficiaries rely, adequate and stable funding for MA is paramount.

- **Resourcing Home- and Community-Based Services.** Through legislation such as the Better Care Better Jobs Act, Congress should continue to resource and build community capacity, services and supports, and support for caregivers, solidifying infrastructure so that people with disabilities and older adults have access to the needed services and supports to live in their communities and sustain their health and independence.

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We applaud the work and leadership that the Task Force has undertaken. We welcome the opportunity to discuss our recommendations in more detail and look forward to partnering with the HETF and OMH/HHS on this important work. Should you have any questions or wish to discuss our comments, please contact Lisa Watkins, Health Policy Director, at (202) 450-8132 or [lisa.watkins2@anthem.com](mailto:lisa.watkins2@anthem.com).

Sincerely,



Elizabeth P. Hall  
Vice President

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<sup>4</sup> AHIP analysis of 2018 Medicare Current Beneficiary Survey Public Use File

## **COVID-19 Health Equity Task Force Comments for the July 30, 2021 Meeting Fresenius Medical Care North America**

**Background:** Dialysis patients are particularly vulnerable to COVID-19, facing a mortality rate of 20%+—which far exceeds the average for the general population. Communities of color are disproportionately impacted by kidney disease and also experience higher rates of COVID-19 infection, hospitalization, and death. The majority of dialysis patients represent minority populations—with Blacks accounting for 35 percent of Americans with kidney failure and Hispanics 18 percent. CMS data demonstrates that ESRD patients with COVID-19 have a rate of hospitalization six times higher than the general Medicare population. Mortality rates from COVID-19 are 1.9 times higher for Blacks and 2.3 times higher for Hispanics. In addition, many individuals diagnosed with COVID-19 suffer from acute kidney injury (AKI) and require dialysis for at least a period of time. U.S. studies showed that up to 46% of patients hospitalized with COVID-19 developed acute kidney injury, which strained the entire healthcare system.<sup>1</sup>

These statistics underscore the importance of ensuring vaccination for patients with ESRD. Fresenius Medical Care North America (FMCNA) entered into a provider agreement with the Centers for Disease Control and Prevention to administer COVID-19 vaccines to our patients and frontline workers in January 2021. In addition, we have served as a network administrator distributing vaccines to smaller dialysis providers throughout the country. As of June 8, 2021, within FMCNA clinics, we have vaccinated:

- 81 percent of patients who identify as Asian
- 70 percent of patients who identify as Black
- 79 percent of patients who identify as Hispanic or Latino
- 72 percent of patients who identify as Native American, and
- 70 percent of patients who identify as Hawaiian/Pacific Islander.

These numbers far outweigh the national averages for these minority populations.

We also believe it is important for the COVID-19 Health Equity Task Force to consider how the federal government can be better prepared to treat patients requiring dialysis during an emergency, such as the COVID-19 pandemic. Given the link between COVID-19 diagnosis and AKI, there has been an increased need for dialysis machines to treat this acute condition throughout the pandemic.

We recommend that the COVID-19 Health Equity Task Force consider a vendor managed inventory program for dialysis. Below we highlight the advantages to this type of program as well as a case study on FMCNA's response during the COVID-19 pandemic.

### **VENDOR MANAGED INVENTORY PROGRAM FOR DIALYSIS**

**Problem:** The United States Government (USG) does not have an adequate stockpile or distribution strategy for surging portable dialysis machines and supporting supplies to supplement state and local disaster response. The Strategic National Stockpile (SNS) approach to acquisition, storage, and distribution is less efficient than a Vendor

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<sup>1</sup> Hirsch JS, Ng JH, Ross DW, Sharma P, Shah HH, Barnett RL, Hazzan AD, Fishbane S, Jhaveri KD; Northwell COVID-19 Research Consortium; Northwell Nephrology COVID-19 Research Consortium: Acute kidney injury in patients hospitalized with COVID-19. *Kidney Int* 98: 209–218, 2020

Managed Inventory Program for stockpiling and distribution of some types of SNS assets. Vendor Managed Inventories are an appropriate solution in situations where vendors are best equipped to manage perishable products, such as dialysis disposables, and rapidly evolving technology platforms, such as dialysis machines. This will avoid expiration and obsolescence challenges.

- **The USG/SNS does not have a fully developed stockpile of portable dialysis machines and supplies.** Disaster response requires rapid deployment of dialysis machines and supporting supplies to serve chronic and acute renal patients. Recent experience with COVID-19 and other disasters has shown that the USG lacks a dedicated program to distribute dialysis assets in a coordinated way across disaster settings.<sup>2</sup> Access to dialysis treatments for both chronic and acute patients should be a requirement in situations where loss of power, water, or an inoperable clinic location is likely.
- **Deficiencies in current SNS stockpile and distribution strategy for medical equipment.** The current approach to stockpiling pharmaceuticals and medical supplies relies on government owned and maintained warehouses of prepackaged supplies that can be distributed from multiple points throughout the country. The government is responsible for acquisition, replenishment, and transportation of materials in the stockpile. For some products, specifically some durable medical equipment like portable dialysis machines and supplies, this method may be less efficient than contracting in advance with vendors that can utilize established warehousing and distribution networks to fill orders from hospital systems and state and local governments as disasters unfold.

**Impact:** If access to dialysis is interrupted, patients are at risk for a range of medical problems, including cardiac arrest, arrhythmia and death due to high potassium levels, strokes, and fluid overload leading to trouble breathing. Even relatively minor events can have a significant impact: when Florence struck the Carolinas as a Category 1 hurricane, over 4,000 dialysis patients were displaced.

**Solution:** The USG should direct the SNS to pre-purchase dialysis inventory through a Vendor Managed Inventory Program that is networked nationwide. The program would identify a defined quantity of Portable Dialysis machines, cartridges, and bagged dialysate solution for patients requiring renal replacement therapy during a pandemic or any type of disaster.

- **Vendor Managed Inventory Program Components for Dialysis:**
  - **Vendors contracted to maintain machines and supplies.** Selected vendors manage inventory and make it available to the USG on an ongoing basis. This inventory should be in-excess of normal stocking policies for commercial use.
  - **Vendors manage expiring stock to ensure up-to-date supply.** Vendors should maintain and rotate stock using the First-In-First-Out method of inventory management to guarantee up-to-date stock for deployment.
  - **Government utilizes vendor distribution and support capabilities.** Vendors should be able to use their scale – distribution locations, dialysis centers, and other assets - to manage the distribution, placement, maintenance and resupply of portable dialysis machines and supplies throughout the U.S. on an ongoing basis as directed by the SNS. Vendors should be able to deliver orders that originate from communities or the SNS within 48 hours.<sup>3</sup>
- **Requirements for Dialysis Machines and Supplies in Disaster Settings:**

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<sup>2</sup> The Assistant Secretary for Preparedness and Response (ASPR) executed a small-scale program to develop portable dialysis machines.

<sup>3</sup> Requirements for distribution based on patient requirements to prevent kidney injury and death.

- **Portable dialysis equipment and supplies are required in disaster settings.** Disasters require the ability to move equipment quickly. Machines should be light weight, mobile and easy to move with personal or commercial transportation. This feature enables a range of users— individual patients, hospitals, clinics or mobile field hospitals to perform dialysis.
- **Water source flexibility for dialysate is essential in disaster settings.** Access to potable water is problematic in disaster settings. Dialysis machines should not require water to operate. Instead, machines should be capable of using bags of dialysate fluid, as well as tap water to generate dialysate.
- **Dialysis machines must be easy to operate for a variety of users in disaster settings.** Medical professionals and patients may need to operate dialysis machines in disaster settings. Machines should be simple enough for different users to operate with limited chance for touch contamination, and readily available technical support.
- **Dialysis machines must operate regardless of power outages.** Disaster settings often have limited access to power. Machines should be able to run on generator power as well as standard power sources.
- **Dialysis machines and supplies need to be surged into disaster settings and supported after arrival.** Commercial supply chains and stand-alone dialysis centers currently support surge orders of dialysis machines into disaster areas. These private capabilities should be utilized by the government to meet surge requirements across disaster settings.

**COVID-19 Case Study and Response to Other Disasters:** Large and small-scale emergencies impact dialysis patients and can lead to acute kidney damage and death. In 2020, twenty-two weather related disasters occurred causing \$95 billion in damage.<sup>4</sup> These include hurricanes, tornados, wildfires, and algae blooms. Weather events like the 2021 deep freeze in Texas illustrate the impact of weather-related disasters for both chronic and acute dialysis patients. Disasters lead to disruptions in water and power availability, often require patient evacuations to field hospitals, and increased demand for portable dialysis machines and supplies.

During the early part of the COVID-19 pandemic, hospitals and other providers were left to manage their surge requirements without coordination from the Federal government. A federal program would be a resource for local and state governments to meet the needs of evolving disasters in real-time.

- **New York Presbyterian Hospital Case Study, April 2020.** On Saturday, April 4, the hospital made an urgent request for dialysis machines, supplies, and experienced dialysis nurses to assist with treating the quickly rising number of ICU patients needing renal therapy due to the spiking COVID-19 numbers in and around the city. Fresenius-NxStage was able to expedite delivery of 35 machines, 2,352 cartridges, and 5,000 bags of dialysate by Monday, April 6. This order is close to the typical NxStage monthly sales volume for the entire U.S. market, and was done in the absence of a Federal, SNS managed stockpile program for portable dialysis machines. An additional 108 dialysis machines were delivered to this hospital during the pandemic, and a team of dialysis nurses was deployed to support renal therapy in and out of the ICUs.

**Conclusion:** The USG does not have a program to stockpile and distribute portable dialysis machines and supplies that can address disasters of different scales simultaneously – especially, as the COVID-19 case shows, across the country all at once. A Vendor Managed Inventory program can utilize existing technology capability, supply chains, and distribution centers in the private sector to maintain excess inventories of equipment and supplies and deliver

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<sup>4</sup>National Centers for Environmental Information. Billion-Dollar Wather and Climate Disasters: Overview. Accessed from: <https://www.ncdo.noaa.gov/billions/overview>.

them quickly in an emergency. The SNS would contract with vendors to stock and maintain needed supplies. Coordination between the SNS and contracted vendors can help eliminate supply bottlenecks and flexibly meet demand as it fluctuates in different parts of the country. This model is better able to meet fluctuations in demand over time in multiple locations and is less likely to lead to shortages of portable machines and supplies.