CDC Advisory Committee to the Director (ACD)

Minutes from the November 2-3, 2022 Meeting

Contents

Advisory Committee to the Director: Record of the November 2-3, 2022 Meeting

The Centers for Disease Control and Prevention (CDC) convened a hybrid meeting of its Advisory Committee to the Director (ACD) on November 2-3, 2022 in-person, via Zoom for Government, and via teleconference. The agenda included an overview of recent developments from the CDC Director; updates from the Moving Forward Initiative; reports from the ACD Data and Surveillance Workgroup (DSW), Laboratory Workgroup (LW), and Health Equity Workgroups (HEW); a presentation on communication outreach; updates on COVID and monkeypox (MPOX); a presentation on the Social Determinants of Health (SDOH) Initiative; public comments; and a follow-up on issues raised during the meeting.

Welcome and Introductions

David Fleming, MD (ACD Chair) welcomed ACD members and CDC leadership. He called the roll each day, which established that a quorum of ACD members was present. Quorum was maintained throughout the meeting. The ACD Membership Roster is appended to this document as Attachment #1. The following potential conflicts of interest (COIs) were disclosed:

- Dr. Adimora: Receives consulting fees funds from Merck and Gilead and her institution receives funding from these companies for her research.
- Dr. Goldman: Her university receives funding from various companies that may be involved with some of the ACD efforts and has received funding from CDC.
- Dr. Taylor: Her association receives CDC funding.

Dr. Fleming reviewed the agenda for the day and introduced Dr. Walensky, who provided an overview of current issues and events at CDC.

Overview of Recent Developments

Rochelle P. Walensky, MD, MPH (Director, CDC) welcomed everyone and expressed her delight to join them for this 4th ACD meeting of the year and since ACD has been reinstated. She thanked the members for a year of hard work and productivity and emphasized that she was looking forward to their wise counsel through the reports from the ACD workgroups (WGs) and their proposals to CDC on key topics in which the agency is deeply engaged currently

As she thinks about what CDC is doing within the Moving Forward effort, it really is about turning science into immediate public health action. One of the goals in Moving Forward is to be action-oriented and to create a culture of action to share scientific findings and data faster and to translate science into practical, easy to understand, implementable policy. As part of the Moving Forward effort, the agency launched 10 Strike Teams in August with representation across the agency in each team.

In terms of the COVID and MPOX responses, MPOX cases have been trending downward since late August. As of October 26th, the 7-day moving average of daily cases was at 30 and over 1 million doses of JYNNEOS® vaccine have been administered. There has been substantial progress in reaching Black and Hispanic individuals, although more work is needed in that regard. CDC has continued to work with community health organizations, partners in the LGBTQ (lesbian, gay, bisexual, transgender, queer/questioning) community, health departments, and sexual health organizations to promote equity and access to vaccines, testing, and treatment. The agency recently published a *Morbidity and Mortality Weekly Report* (*MMWR*) highlighting severe cases based on CDC clinical consultation of about 50 cases, mostly among people with advanced human immunodeficiency virus (HIV) and heavily weighted toward people of color—specifically Black men. This underscores the critical importance of engaging all people with HIV in care and highlights the disparities in that care.

Dr. Walensky recently attended the World Health Summit 2022 in Berlin, which was an opportunity for her to provide the US pledge toward support for the Global Polio Eradication Initiative (GPEI). This was subsequent to her summer travel to Tanzania and Uganda, which was an inspiring visit in terms of seeing how CDC's work there is considered essential and truly is revered. She had the opportunity to meet with high-level dignitaries, including the President of Zanzibar, the Prime Minister of the United Republic of Tanzania, Tanzania's Minister of Health, Uganda's Director General for Health Services, Uganda's Director for Public Health, and US Ambassadors to Tanzania and Uganda. These are critically important partners who CDC works with to deliver services. It also was important for her to have been in Uganda over the summer to understand what was happening with CDC's teams on the ground there, because the Uganda Ministry of Health (MoH) confirmed an outbreak of Ebola virus disease (EVD) in the Mubende District in Western Uganda not too long afterward on September 20th. This is the 6th EVD outbreak in Uganda, 5 of which have been caused by the species of the Ebola-Sudan virus (EBOV-S).

The outbreak of Ebola in Uganda and the transmission of polio in the US are reminders of the importance of CDC's global efforts in disease prevention and outbreak response. The good news from a domestic preparedness standpoint is that CDC is just weeks away from announcing an unprecedented $3.9 billion in grants to State, Tribal, Local, and Territorial (STLT) health departments to support workforce and infrastructure.

Dr. Walensky emphasized that she has a passion for health equity, which was among the first efforts she made after becoming the CDC Director. Health equity is cross-cutting. It is not infectious or non-infectious diseases. Instead, this is where they meet and are intertwined at the nexus of whole health.

Discussion Summary

Dr. Goldman expressed concern about the elevated incidence of respiratory syncytial virus (RSV) concurrently with influenza and COVID across the country. It's striking that many people are asking her, as a pediatrician, if RSV is new, so she wanted to put this before CDC in terms of communications. What is new is that RSV is hitting at a time when there has never been such a challenge to staff Emergency Departments (EDs) and hospitals at a national level.

Dr. Walensky indicated that her team has been working on this and CDC just briefed the HHS Secretary on what is being called a "tridemic." The previous day, she provided remarks on this issue to the US Chamber of Commerce as well. Her understanding is that about 80% of every birth cohort almost every year gets RSV, except for the last 2 years. Now 3 years' worth of children are getting RSV. Even if it was not more severe this year, it certainly is earlier and there is now a bolus of children who are getting RSV. Layered on top of that is an indication of at least an early, if not a more severe, influenza season and COVID. While there are promising RSV vaccines for adults and monoclonal antibodies for children in the pipeline, these will not be available this year. Her mantra has been "Prevent what you can.".

Dr. Fleming noted that polio has been thought of as a disease that needs to be worried about in Pakistan and Afghanistan and in terms of the recent vaccine-associated paralytic cases in the US. He asked Dr. Walensky to speak to this and some of the steps that the US as a country will have to take to pay attention to vaccination in the US and other parts of the world.

Dr. Walensky indicated that she has been sitting on the Polio Oversight Board (POB) globally which has been focused on polio in Pakistan and Afghanistan and circulating vaccine-derived polio in other countries that are having challenges as well such as Nigeria and Yemen. CDC has a national surveillance system for acute flaccid paralysis (AFP), which is how the case in New York was flagged. An *MMWR* was recently published[1] on the outbreak situation in New York. There are now 1200 sites across the US that have the capacity for wastewater surveillance, which was leveraged in Rockland County to determine what is happening there and in surrounding counties. The *MMWR* offers a sense of what has been detected in the surrounding counties and how they have

[1] https://www.cdc.gov/mmwr/volumes/71/wr/mm7144e2.htm?s_cid=mm7144e2_w

been linked to the singular paralytic case in New York and how that case links back to cases in the United Kingdom (UK) and Israel.

Dr. Morita expressed her hope that Dr. Walensky would continue to "beat the drum" for health equity. She fears that as time goes on, people are forgetting the lessons learned through COVID and what has been revealed in terms of structural inequities that lead to disproportionate impact on certain communities.

Dr. Walensky emphasized that she came to her deep health equity passion historically, but what has been inspiring to her is that this has been an incredible morale booster for the agency. People want to do this, so it feeds forward.

Dr. Sharfstein stressed that in addition to the challenges with disease threats, there are misinformation challenges. Misinformation has become an issue with polio, RSV, COVID vaccination, CDC's role in childhood immunization, and so forth. This creates a different type of challenge in that CDC has typically focused on the pathogen, but this level of confusion being thrown at the public makes it difficult for the agency to do its job. He asked what Dr. Walensky sees as CDC's role in the bigger challenge of misinformation. It seems that traditional public health communication plans need a new section on miscommunication, misinterpretation, and how to respond quickly. Unfortunately, this is a new cost of doing business.

Dr. Walensky reflected back on the Advisory Committee on Immunization Practices (ACIP) meeting that put the COVID vaccine on the vaccine schedule for children, which was necessary so that it would be available in the Vaccines for Children Program (VFC). Everything on the vaccine schedule for children is not required. Certainly, CDC has no role in vaccine mandates or requirements. CDC puts vaccines on the schedule and then states make decisions about what they require for school admission. However, a vaccine cannot be leveraged through the VFC program if it is not on the schedule, which impacts access. Misinformation is among the challenges CDC needs to assess in Moving Forward.).

Moving Forward Initiative

Mary Wakefield, PhD, RN, FAAN (Senior Counselor to the CDC Director) provided a high-level overview of some of the work that is underway currently within the Moving Forward Initiative, first noting that there are pieces of this work that must move through specific processes before they are shared in a more public venue. The CDC Moving Forward Initiative is providing the agency with an opportunity to meet the high expectations of the agency staff, partners, and the American public. The expectations of all of the agency's internal and external stakeholders in terms of what CDC does and how they do it are very much in mind as CDC is executing on this agenda and the various components parts of CDC Moving Forward.

Communication within the agency, across HHS, with the American public, to public health systems from State Health Officers, et cetera are key communication pathways. There is a tremendous amount of work underway within the communications component of CDC, led by Kevin Griffis. The breadth and depth of this agency's work is incredibly complex, making it extremely important that its senior leaders have all of the tools (e.g., strengths, skills, content expertise) they need to lead this agency strongly. A particular initiative is underway, led by Dr. Houry, that has been operationalized over the last couple of months that will roll into the next year to strengthen and provide support for the agency's leaders as they lead this agency through this incredible time of change and given this agency's work on a daily basis. The core capabilities of the agency (e.g., data science, laboratory, equity, et cetera) are front and center as an area of focus and opportunities for improvement. CDC called upon Dr. Jim Pirkle, Associate Director for Laboratory Science and Safety (ADLSS) and Director of the Office of Laboratory Science and Safety (OLSS), to share a specific example to illustrate some of the work being done to close gaps.

Jim Pirkle MD, PhD (ADLSS, OLSS, CDC) reported that in the early part of COVID, there was a problem with a laboratory test that was developed at CDC. Before a test goes out from CDC, it undergoes a quality assurance

(QA) review. The review was not adequate. The result was that the test that was distributed was not as good as it should have been for its intended purpose. The solution was to establish the Infectious Disease Test Review Board (IDTRB). For practical purposes, that means that any test developed in the infectious disease laboratories at CDC undergoes a review by the IDTRB before it is shared outside of CDC. The review consists of 3 subject matter experts (SMEs) independently reviewing the method validation and QA around the method, and independently validating that the quality is suitable for the intended use. The IDTRB was put in place as of March 1, 2022. When the MPOX outbreak began, MPOX testing went through this process before it went outside of CDC. As they work with the laboratories, they want everything to be ready and in place before it goes to the IDRTB. This was very successful with the MPOX test, with the entire review process taking only 36 hours. Thus, this process would not cause a significant delay in terms of responding to a major emergency.

Mary Wakefield, PhD, RN, FAAN (Senior Counselor to the CDC Director) pointed out that there also is work underway to reorganize CDC to better align the assets of the agency to deliver on the agency's mission. There are Strike Teams across 10 functional areas, that focus on public health data; global health; external affairs; laboratory safety, science, and capacity; public health readiness and response; advancing equity; public health infrastructure, including the workforce capacity; science; policy; and communication. All of the information and recommendations from these Strike Teams is being reviewed by Dr. Walensky, with a plan to have those recommendations move through the formal required process that is anticipated to begin no later than the end of the calendar year.

Jim Macrae, MA, MPP (Senior Advisor, CDC) his focus was on how CDC could better translate its data into actionable policy and communications. In the course of his review, he found a number of strengths within the organization that could be built upon. The staff have done a remarkable job in responding to COVID, MPOX, and polio. There were some things the organization could do better, as well as things that were identified externally to the organization that could make it easier for CDC. His report focused on what could be done internally to help improve how CDC functions and operates. The report itself reflects the viewpoints and priorities provided by more than 120 internal CDC staff and external partners who provided feedback and ideas for improvements. The report to identifies the key priorities the agency needs to focus, with 5 main priorities.

The first priority is sharing scientific findings and data faster. The second priority is to translate science into easy to understand, practical policy and guidance. The third priority is to prioritize public health communications. The fourth priority is regarding developing a workforce that is prepared for future emergencies. The fifth priority is on promoting results-based partnerships.

The report is only about five pages long, with as many concrete examples The good news is that CDC is translating the report into action. The *CDC Moving Forward Summary Report*[2] identifies 5 operational focus areas, including recommendations with aligned priority actions. The actions were prioritized into a core set of about 21 actions. The 21 Priority Action Teams (PATs) have been stood up to create actionable implementation plans to address these recommendations. The goal is for each PAT to create sustainable solutions that drive results. The 21 PATs are led by individuals with critical knowledge, skills, and abilities related to their PAT recommendation. PATs will engage with external partners as appropriate. PATs are expected to have implementation plans for review by the beginning of December.

The following questions were posed to the ACD for consideration and discussion:

- What do you see as the most critical areas for improvement in CDC?
- What related solutions should be considered?
- What other key actions do you recommend that we pursue in CDC Moving Forward?

[2] https://www.cdc.gov/about/organization/cdc-moving-forward-summary-report.html

Discussion Summary

Dr. Wakefield emphasized that in terms of engaging external partners to inform the work of the Strike Teams, they are looking at where they can create more porousness in the boundaries between the agency and external partners in the processes and structures of the agency. They are working closely with CDC's Office of General Council (OGC) to determine in addition to the rules of Federal Advisory Committee Act (FACA) what other options that could be baked into processes of the agency.

Dr. Taylor noted that the "porous walls" are important from two perspectives, one building partnerships and two reaching under-served populations. In terms of partnerships, the laboratory system realized quickly during the pandemic that one entity cannot do everything. Issues of the pandemic played into data transfer. Many commercial entities know much more about data transfer than government.

Dr. Wakefield noted that they have had conversations with Dr. Pirkle, to talk about strategies to leverage these even more.

Ms. Valdes Lupi expressed appreciation for the language used pertaining to performance improvement and quality improvement, which resonated for her having served in local and state health departments. These are the values and principles the CDC often has co-led with health departments surrounding public health accreditation, which she was glad to see the agency applying internally in this review. Given that many of the Strike Team functional areas are cross-cutting (e.g., equity, policy, and communication), she wondered what the throughline is and how the agency will approach the work with some of the cross-cutting functional areas.

Dr. Houry indicated that the Strike Teams focused on the structural changes related to reorganization and they have worked with Dr. Wakefield and Mr.

Mr. Bailey added that the idea is around having an opportunity to ensure that CDC priorities related to equity are seen throughout the entire enterprise. As each center presents its plan for the next fiscal year, that information is considered. There is expertise within each office to work with the Director's office to ensure that there is a clear equity strategy to also help inform efforts such as Notices of Funding Opportunity (NOFOs) such that the focus is where it needs to be relative to the priorities of CDC.

Based on Dr. Wakefield's experience in the Office of the Secretary (OS), she believes that CDC will be a showcase for HHS on this.

Dr. Goldman suggested standing up a workgroup to address the science and research issues. She suggested people with broader expertise must help CDC review designs, analyses, and products. Mr. Macrae emphasized that a lot of this pertains to asking CDC to look at itself differently in terms of how it engages. CDC is not alone in this and should be working in partnership with others. Dr. Wakefield added that this has been a major thrust of the PATs.

Dr. Houry highlighted that the Center for Forecasting and Outbreak Analytics (CFA) has been working on technical reports, including two for MPOX. That is one way CDC is getting the scientific data and findings out.

Dr. Sharfstein suggested CDC articulate 10 things that they will be able to do better that really matter to people in the country—not so much about the reorganization itself, but something that really matters to people such as whether their children will be able to get tested for lead poisoning or if water in their community will be safe.

Mr. Macrae explained that what they provided in this presentation were some of the concrete actions, but CDC wants to communicate clearly what the agency is trying to achieve with CDC Moving Forward.

Dr. Wakefield added that there have been conversations about packaging information in clear ways that resonate with various key partners. Pertaining to the work CDC is doing around response and the good news stories that connect to the American public.

Dr. Morita heard through the presentations that there is a clear acknowledgement about the speed at which information is shared now versus 5 to 10 years ago. The recommendations and plans acknowledge the need to get information to the public more quickly and differentiate the kind of information that needs to be provided to the public, healthcare providers, governmental public health, and researchers. Porous engagement with partners is critical and essential. While it has happened for years, it has been more informal, inconsistent, and not in a standardized way. Another issue is that it has not always happened at the right point in the process. As guidance is being developed, partners could be engaged at that point or prior to that. In addition to engaging with partners prior to a crisis to establish trusted relationships, it also is a matter of inserting them at the right point in the process. She noticed in the slides a reference to an Executive Board to which Dr. Walensky must relate back to and expressed her hope that this is not a bureaucratic process that slows down the work the agency is doing.

Dr. Wakefield clarified that the intent of the Executive Board is to garner some efficiencies and across-agency engagement to create some additional porous boundaries within the agency at a high level. Regarding ensuring porousness around engaging with outside audiences, so much can be learned from CDC's partners from other parts of HHS.

Mr. Macrae added the report initially focused on response. However, it quickly became apparent that there were things that could have been done before the response and things that need to be done after the response in terms of being able to move forward. One of those is building partnerships and trusting relationships *before* a crisis.

Dr. Adimora wondered what the strategies would be for resolving the tension between clarity, accuracy, and speed. CDC was not trying to be slow previously—they were trying to be accurate. They are dealing with a public that essentially has no tolerance for nuance or inaccuracy. One aspect of this involves ensuring that the communications people actually understand the science, given that some of these concepts are not simple and it can be disastrous to backtrack.

Mr. Macrae acknowledged that this is one of the tensions within the CDC itself, there has been a mantra to first, be right. They are trying have speed, clarity, and accuracy in ways that make sense. He is encouraged by one of the recommendations for the agency to develop expertise in the area of using human-centered design for developing communications. They would value ACD's insights in terms of how to get there.

Dr. Martinez commented that one issue involves organizational behavior and how to change the culture of organizations. This must be part of the DNA of an organization. Thought must be given to the human resource (HR) processes of CDC and how they need to be modified to align with the Moving Forward Initiative.

Mr. Bailey indicated that his team started a few months ago assessing how to transform CDC's HR processes. They recently had an all-employee webinar that spoke to the changes employees and managers will begin to see. A strategic plan has been identified to address diversity, equity, inclusion, and belonging (DEIB). Each Center, Institute, and Office (CIO) has written an action plan to support the strategic plan. Action plans were specifically co-authored with the employees of each CIO.

Mr. Dawes said he was delighted to hear about health equity being a cross-cutting issue with intentional thought. What drew his attention was the fifth priority, "Promoting results-based partnerships." This was an area the HEW fleshed out and discussed in terms of community-based organizations (CBOs), inclusive NOFOs, and creation of centers to help elevate the process.

Dr. Wakefield stressed that any and all suggestions about how to execute, bake in relationships, and provide examples will be appreciated. For example, they had a recent conversation with the CDC Tribal Advisory Committee (TAC) and the extent to which some of their work is inclusive of and focuses on the views of the National Indian Health Board (NIHB).

Mr. Macrae added that since many of the CDC grants go through states and localities, it is important to make sure these reach the populations that are most in need or are under-resourced and cannot even apply for the grants. Some ways to do this are through incentives, technical assistance (TA), and other such efforts.

Dr. Fleming suggested that some of the across-agency initiatives are probably the most important on which to focus. These are the most difficult to get done because the reality is that most people at CDC work in a Center, Division, or Program and spend most if not all of their time working with people in that same place. While people are well-intentioned, he wondered if thought has been given to the processes and structures that could be set up to create connections between the various parts of CDC in an ongoing way. That is the only way from a functional and cultural standpoint that the agency can be effective in achieving these across-agency changes.

Mr. Macrae acknowledged that it is not only about digging deep to make sure that there is expertise and knowledge, but also is about thinking across the agency. Both are valuable but will not be as effective if there is not cross-cutting work for which there are incentives across the organization and that is included in performance plans. Accountability and collaboration are two of Dr. Walensky's principles that are essential. Suggestions are welcomed about how to build that kind of cross-collaboration.

Health Equity Workgroup Report

Daniel Dawes, JD, and Monica Valdes Lupi, JD, MPH (HEW Co-Chairs) and David Fleming (ACD Chair) shared an update on the work done by the HEW members to consider actions steps in response to the HEW Terms of Reference (TOR), with a goal to seek agreement from the ACD on the approach in this report that would allow for questions and suggestions and enhancement that could be incorporated into a final report. The HEW was tasked to provide input to the ACD that relate to CORE implementation, with 7 questions asked of the HEW to organize and develop solutions and deliberate and report back to the ACD. The timeline is for the HEW to report back to the ACD by February 2023 for an ACD vote.

The HEW was tasked with four major focus areas: 1) national data systems that assess and monitor racism in health and other drivers of health, as well as healthcare disparities; 2) strategies that establish and sustain anti-racist systems of public health; 3) policy levers that advance health equity; and 4) multi-sector partnerships that accelerate the elimination of health inequities. The HEW tailored its focus to three priority issues. The three priority issues were formed into Task Areas. The table outlines the three Task Areas:

TASK AREA #1	TASK AREA #2	TASK AREA #3
Enable and assure the meaningful involvement of communities in agency decision-making, the development of health equity policies, program implementation, and evaluation	Align, and restructure as necessary, CDC policies, resource allocation, and program practices so as maximize the ability for staff and partners to address health inequities in their day-to-day work	Elevate and expand focused activities to measure and address the upstream factors and their consequences, including social and structural determinants of health that contribute to and drive health inequities
ACD Lead: Daniel Dawes	**ACD Lead**: Monica Valdes-Lupi	**ACD Lead:** David Fleming
CDC SME: Euna August and Leandris Liburd	**CDC SME**: Jennifer Meunier and John Auerbach (DFO)	**CDC SME:** Becky Bunnell and NaTasha Hollis
MEMBERS	**MEMBERS**	**MEMBERS**
Bonnie Swenor	Paula Tran	Philip Alberti
David Brown	Nafissa Cisse Egbuonye	Rachel Hardeman
Bobby Watts	Julie Morita	Cary Fremin
Maria Lemus	Octavio Martinez	Ada Adimora
Delmonte Jefferson	Rhonda Medows*	Michelle Albert*
	Mysheika Roberts*	

The HEW spent time reviewing the Moving Forward publicly available resources. There is alignment in terms of the conversations the HEW was having across its Task Areas.

There is alignment with Task Area #1 in terms of the creation of a one-stop shop for external partners to navigate the agency, recognizing that they were curious about how CDC might be defining what external partners would include beyond STLT health departments. Across all 3 Task Areas, the HEW recognized the need for CDC to make structural changes and ensuring that it did not become the work of one office or one program to carry the ball forward on the health equity activities, instead it has to be part of the fabric of everyone's work at the agency.

Given that the draft report is approximately 12 pages, the HEW decided to spend its time with ACD focusing on the last section of the report, Action Steps for ACD Consideration. The HEW is still in the process of streamlining and editing on the Background, Obstacles and Challenges to Progress in Health Equity, and Guiding Principles sections. The group decided the ACD will see the full report because there were many rich HEW discussions when they met. They used the Guiding Principles to help focus on the goals that they hope are reflected in the following Action Steps for ACD Consideration.

Action Steps for Consideration: Task Area 1

1. CDC should incentivize equity in its funding opportunities and prioritize funding to non-governmental organizations that include clear and sustainable approaches to embracing the health equity journey.
    - Incentivize funded organizations across several areas including supporting ecosystems that spur entities to begin and progress on their health equity journeys.
    - Make applications for NOFOs less challenging for organizations that service economically/socially marginalized communities to complete.
    - Create centers to support CBOs throughout the NOFO process.
    - Provide funding and resources through systematic and equitable processes.

2. CDC should build and strengthen relationships between CBOs and state public health agencies.
    - Promote meaningful engagement of community in the development of policies and programs designed to promote health equity.
    - Strengthen efforts to promote positive social connectedness and community resilience.

3. CDC should elevate the Congressionally authorized Office of Minority Health and Health Equity (OMHHE) to the Office of the Director (OD).
    - Adopt and implement theory of change for achieving health equity by impacting systems and structures long-term.
    - CDC's strategies to provide assistance to CBOs should be evidence-based or reflect emerging/promising practices.

Action Steps for Consideration: Task Area 2

4. CDC should develop a culture shift that is driven by including diverse groups in setting policies and science agendas in meaningful ways.

5. CDC should integrate an "equity in all policies" approach related to procurement, NOFO applications and reporting requirements.

6. CDC should strengthen project officer engagement by developing or redesigning training materials that elevates equitable grantmaking and emphasizes the important roles they play in providing support to grantee partners.

7. CDC should work across programmatic areas to develop communities of practice and action to support increased opportunities for peer-to-peer learning and sharing.

Action Steps for Consideration: Task Area 3

8. CDC should initiate a coordinated, agency-wide approach to identify and implement measures of underlying drivers of equity and health equity in ways that make them as accessible and useful as possible, including to localities and public health programs.
    - Lead assessing and synthesizing current state-of-the-art of measurement of upstream drivers of health equity.
    - Initiate process with key partners and stakeholders to assess feasibility of, and opportunities for, developing and using field-tested and consistent methods and measures.
    - Assure development of comprehensive set of indicators that include asset and solution-based measures of individual and community equity and health equity.
    - Focus special attention on identifying and developing measures that can be timely, locally available, and as granular as possible.
    - Promote, and enable through program funding, incorporation of measures of health equity into monitoring and evaluation.

9. CDC should initiate a coordinated, agency-wide approach to develop and integrate methods and strategies to influence the effects of drivers of health equity across the entire range of public health outcomes.
    - Align and integrate internal organization and leadership of Health Equity and Social Determinant of Health activities and approaches.
    - Promote and enable through program funding the routine assessment and mapping of the effects of the drivers of health equity.
    - Include a range of relevant structural power dynamics potentially affecting solutions in assessments.
    - Promote and enable through program funding identification and incorporation of strategies and tactics to improve project outcomes… take a leadership role in developing relevant needed partnerships with appropriate related federal agencies.
    - Routinely include asset-based approaches.
    - Ensure that measurement of these efforts and effects are routinely incorporated into project and program evaluation.

Discussion Summary

Dr. Goldman pointed out that there are intrinsic inequities in how data is collected because systems have not changed over the years in ways that allow for enough samples to represent certain populations.

Dr. Fleming added that public health has been slow in developing ways to efficiently and rapidly measure community indicators of health. A lot of emphasis is placed on measuring individual health, but since health is influenced by the places people live, work, and play, some additional attention to the community-level indicators of health and items that are potentially influenceable need to be added to the list.

Dr. Hardeman noted that there are a lot of health indicators that can help inform what is happening, but there are important opportunities that can capture what is happening in real-time. Thinking about how to do that in a way that is unbiased certainly will be important. There also are data that have not been thought of or used in this space to think about SDOH, structural racism, or other forms of inequity. Zillow data can be incredibly informative. Giving thought to ways to partner with the private sector in ways that have not been done before. There are also opportunities even within CDC. During the last ACD meeting, she learned about the Environmental Justice Index (EJI), which had such importance for her project on maternal mortality and measuring the impact of racism on maternal deaths. It would be beneficial to begin with a survey to determine what is already happening to help inform this.

Dr. Sharfstein pointed out that there are some challenges in direct funding of CBOs. State and local health departments receive funds, they take a cut. Ideally, a lot of this work is being led by a coalition at the local level. Therefore, there is some tension in saying that a CBO should have a relationship with the funder—CDC. If state health departments are seen just as entities that take a cut rather than a potentially convening group for CBOs and others to solve problems, it will undermine what state and local health departments can do. He likes the action steps that are proposed and the strong expectations for state and local public health departments to lead those kinds of engaged coalitions, sharing grants, and matching grants.

Dr. Adimora proposes for consideration to who/what exactly is meant by "community" (e.g., racial, and ethnic groups, people who define themselves in a certain way or by a certain behavior, et cetera). There is direct discussion about CBOs, but not everyone in the community is necessarily represented by CBOs. Therefore, how should work with the community be conducted when they are not in those CBOs or other specifically defined groups.

Dr. Hardeman pointed out that during the pandemic, Minnesota grassroots community organizations were more effective at deploying resources and supporting testing, et cetera than the department of health due to lack of connections and trust. At times, local or state public health need to lead the work but may not be the right agency to do the work. Another example in Minnesota has been the power of mutual aid in the aftermath of the uprising after George Floyd's murder and the way the community was able to come together with resources, a lot of which was not in a formal way. They are working on how to capture that from a measurement standpoint.

Dr. Morita agreed that it should not be about funding community organizations or to state and locals to get to communities—it should be complementary. Good examples are in COVID immunization work. Building expectations for community organizations and government agencies getting the funding to work together is important. If the funding is coming from CDC, the expectation can be built to do that. The conversation began with an intent to get conceptual agreement from ACD on the Action Steps. She is supportive of the action steps listed that are strong and conceptually supportive, with suggestive tweaks. Action Step 2 mentions CBOs and public health agencies, but STLTs also should be included. They all receive funding from CDC and there are opportunities for influence. Action Step 6 references project officer engagement and should include all CDC staff.

Dr. Gary found the recommendations to be thorough and responsive to the questions. Returning to the conversation around structural racism and data, she is concerned about how to identify issues that might not be readily seen in the data such as embedded racism in screening tests. FDA is looking at the findings that pulse oximeters are less accurate when used on dark skin, for example.

Dr. Goldman pointed out that there has been an assumption that some public health data originate in communities and flow upward and others originate in the federal government and flow downward. Under the Affordable Care Act (ACA), hospitals have to conduct community health needs assessments every two years. Perhaps there is a way for public health to standardize around that and harness it so that every hospital is collecting data that are useful for flowing upward about these disparities. The Behavioral Risk Factor Surveillance System (BRFSS) captures information about whether someone smokes, but poverty and other SDOH are also risk factors.

Dr. Martinez pointed out that the HEW attempted to capture exclusivity in the current way that health comes to states has excluded some key members of communities. Intersectionality also is being lost and would be wonderful for CDC to elevate.

Based on the discussion, Ms. Valdes Lupi observed that the ACD members flagged some important points The HEW was aware of this when drafting the report and everyone agrees that the intent is to support impacted communities. There is a role for local and state health departments. The spirit and intent of the language was to address what has been heard from communities in which state health departments are not delivering quality

public health services through grants they are receiving from CDC. The HEW will give some more thought to that. She appreciated the comment about giving more thought to who "community" is and how to work with communities that might not be engaged in or part of CBOs or non-profits. This also arose in HEW's conversations. Some of the communities that benefit from the CDC funding are the STLT public health departments. The HEW will revisit this to review the language carefully. In addition, the ACD members made a host of good observations and suggestions about data and the SDOH. She imagined that the presentations on SDOH would inform some of revisions. From her perspective, it felt that there was conceptual support at a high level for the direction the HEW has taken. Her impression was that it would be beneficial to go on the record for a vote to support the Action Steps presented, particularly given the sense of urgency the Moving Forward Team shared, and then to present again during the next ACD meeting once the language is tightened up.

Mr. Dawes agreed with Ms. Valdes Lupi's comments and thought the robust dialogue they just had was a testament to the great effort from the HEW members and CDC teams.

Vote

Mr. Dawes made a motion for the ACD to support the Action Steps as conceptual recommendations, which Ms. Valdes Lupi seconded. The ACD voted unanimously to support the Action Steps as conceptual recommendations, with no dissentions or abstentions.

Laboratory Workgroup Report

Joshua Sharfstein, MD and Jill Taylor, PhD (LW Co-Chairs) provided an update from the LW, which is currently focused on TOR #5. In the 2022 budget agreement, Congress requested that the Office of the Secretary, HHS establish a Task Force to evaluate factors contributing to the shortcomings of CDC's first COVID-19 test as well as policies, practices, and systems that should be established to mitigate future issues. HHS agreed that the LW will serve as the Task Force. The Congressional report language reads as follows:

- *The agreement includes direction in the Office of the Secretary to establish a Task Force, including participation from outside stakeholders and subject matter experts, to evaluate what contributed to the shortcomings of the first COVID-19 tests, including laboratory irregularities, and what policies, practices and systems should be established to address these issues in the future:*

  - *The Task Force shall also examine CDC's processes for the development and deployment of diagnostics and its ongoing operations, including communications and electronic lab reporting with clinical, commercial, and State and local public health laboratories.*
  - *Based on the conclusions of this effort, CDC shall develop an agency-wide coordination plan for developing and deploying assays during a public health emergency that engages a nationwide system, as appropriate, and leverages the expertise offered by the public and private sectors.*

The LW has divided these 3 items into Elements A, B/C, and D. Dr. Sharfstein has taken the lead on Element A, which is the first bullet. Dr. Taylor is leading Elements B/C (*The Task Force shall also examine CDC's processes for the development and deployment of diagnostics and its ongoing operations . . .)* and D (. . . *including communications and electronic lab reporting with clinical, commercial, and State and local public health laboratories).* The third bullet will be based on the WG's report back to CDC.

Element A addresses the factors that contribute to having a good test and where potentially things could have gone wrong, including the categories of: Governance, Regulatory Oversight, Quality Assurance, Resource for Laboratories, Planning, Responsibilities of Laboratories, Scientific Decision-Making, Decision to Manufacture, Internal Communication, and External Communication. The LW likely will condense these categories as they work through the topics. Element A activities to date have included development of specific questions for each topic, which included requests for document from CDC for LW review. The LW had a terrific meeting with a number of CDC officials who explained the documents and answered questions. The next steps are to synthesize

all of the information received to understand the key areas of failure that led to the test not working, frame the major issues identified, and then hand off to group B/C and D to delve further into what can be done to address the issues. Elements B/C and D will follow the same format.

The next steps for the LW are to meet in-person December 1-2, 2022 to review and discuss Element A material, hear Element B/C and D presentations from CDC SMEs, engage in LW discussions, and develop the major points for the first draft of the report. In early January 2023, multiple virtual meetings are planned to work on and review text. In late January, there will be a final content meeting to reach consensus. The LW hopes to present to ACD during the February meeting.

Discussion Summary

Dr. Fleming reminded everyone that this particular aspect of the LW's work is unusual for the ACD, given that it is being responsive to a specific request from Congress. The committee ultimately will vote on the findings of the report. Those findings then will be relayed directly to HHS and Congress.

Mr. Auerbach added that a copy the report also can go to CDC and HHS will have the opportunity review the report, ask clarifying questions, and then present it to members of Congress and their staffs.

Dr. Goldman asked whether the fact that this task is Congressionally mandated changes anything about the FACA rules regarding whether the presentation of the report to ACD and how ACD votes will be done in a public forum. It would be helpful to her to ensure that an attorney has looked at the Congressional language and the report to ensure that the ACD is fulfilling the request.

Mr. Auerbach indicated that throughout the process, there will be complete compliance with FACA rules, with the understanding and expectation that the report would go through a parallel process at HHS as well.
Dr. Sharfstein emphasized that the LW recognized from the beginning that this is a difficult issue. It was a painful episode for the CDC that caused an immense amount of frustration within the agency and far beyond, so they did not know the spirit with which this task would be received. It has been clear that everybody wants to figure out what can be done to fix the problem. The LW has been met with tremendously candid conversations from CDC staff, received the documents that are available, and have identified important issues.

Dr. Houry stressed that CDC is not only waiting for the report, but also looking forward to hearing what the agency can do better. There have been issues and looking at what can be done to improve laboratory quality, safety, and excellence and are engaging with the ACD LW. It will be helpful in February for the ACD to hear about what Dr. Pirkle has proposed around a robust quality plan, as well as what has been learned from the Laboratory Strike Team around some structural changes to determine whether these would have prevented some of these issues. CDC values this input not only related to COVID-19, but also with regard to some longstanding issues that the agency is diving into and on which they are taking a systematic approach.

Dr. Taylor pointed out that all of public health, certainly at the laboratory level, are at a critical point. Diagnostics are changing dramatically not only because of the pandemic, but also because of technology and people's expectations. People now expect to be able to do point-of-care tests. Consideration must be given to the role that has for public health reference laboratories and the CDC super reference laboratory. The hope is to talk in the report about not only CDC, but also about what is needed for the system.

Data & Surveillance Workgroup Report

Julie Morita and Nirav Shah (DSW Co-Chairs) presented an update on the activities of the DSW. Since convening earlier in the year, the DSW has focused its attention on identifying opportunities for CDC to strengthen its efforts to build a responsive public health data infrastructure, while advancing health equity. Since the August meeting, the DSW met 3 times and narrowed its focus on how the CDC can implement changes leading to improved data sharing and data exchange with and between STLT federal and heath care partners. The DSW

shared the following action steps with the ACD for discussion and to ask the ACD to consider endorsing them as recommendations for CDC:

1. ***Define the minimal data necessary from core data sources with an emphasis on data quality, harmonization, and standardization.***

   CDC, in consultation with STLT partners, and with input from healthcare and federal agency partners, should:
   - Develop, publish, and regularly update a list of data elements that constitute the minimal data necessary for disclosure to CDC for public health activities, including response activities.
   - Work with STLT partners to develop a list of data elements that constitute the range of data necessary for disclosure to STLTs for the same core data sources.

2. ***Establish a public health certification program to promote the automated exchange of standardized and high-quality data for public health.***

   CDC, in collaboration with STLT partners and the Office of the National Coordinator for Health Information Technology (ONC), should:
   - Develop and implement a coordinated phased approach to certification which should start with expanded guidance for public health criteria, move to requirements, and ultimately advances to certification.

3. ***Implement a strategic approach to Data Use Agreements (DUAs) and frameworks that provide patient protections while also supporting real-time decision-making and response.***

   CDC, in coordination with STLT partners, should:
   - Establish a proactive approach to DUAs and streamline the process, seeking to provide language on protecting individual privacy, and addressing other concerns like the use and re-release of data, consistent with laws applicable to each party, respectively.

The action steps are not exhaustive and do not intend to address all data sharing uses and needs across public health. They represent time-sensitive priority efforts that address data harmonization and system interoperability improvements, particularly focused on core data sources used for mission-critical public health activities.

Discussion Summary

Dr. Taylor highlighted potential challenges when working with the Council of State and Territorial Epidemiologists (CSTE). There is a minimum dataset for a laboratory requisition and another for a case report. Consensus will be difficult. At the beginning of the outbreak, clinicians were required to provide a great amount of data to get a test done at a public health laboratory. That went away when the 5 commercial laboratories came on board for MPOX testing. That shows that the need is there, and it can be done.

Dr. Morita noted that by the way the action steps are outlined that the DSW acknowledges the importance of CDC's critical partnership with STLTs. Regarding the minimum dataset, Ms. Valdes Lupi asked Dr. Morita to say more about the data elements they discussed and how those might be reflected in the first proposed action step.

Dr. Morita indicated that in these high-level action steps did not get into specific data elements. They felt like it would be up to CDC in partnership with other agencies to work out what those are. The memo itself is explicit about racial, ethnic, and other sociodemographic characteristics being considered core elements because as played out with the pandemic, it was clear that the data were limited in terms of race, ethnicity, disability, and gender.

Thinking about equity, especially in territories and Indian Country, Dr. Martinez asked whether any thought was given to how to ensure equitable, interoperable, infrastructural addresses that need to be made. This is more about budget and ensuring that funding is not all going to go just to public health departments in large cities, which usually get the attention.

Dr. Morita noted that this connects to the specific challenges Tribal areas encounter in terms of resources and funding. The memo itself acknowledges the need to get into the resources required to fully implement this. The DSW has another TOR that will delve further into the resources that are required.

Dr. Shah added that the DSW is recommending working closely with all partners. In learning from and speaking with ASTHO, CSTE, the American Public Health Association (APHA), and many others during the process of getting to these 3 initial action steps, that came up many times.

Dr. Sharfstein requested additional information about what the DSW envisioned for certification and whether it is singular or modular.

Dr Morita indicated that the DSW did not get into specific recommendations but said that CDC should work with STLTs partners and the Office of the National Coordinator for Health Information Technology (ONC) to develop a phased approach through which these decisions can be determined.

Dr. Shah added that Micky Tripathi likes to say that "you have to certify the pitchers and the catchers." An example of a multi-state hospital system today has to report the same data elements 92 different ways across various jurisdictions, which may not be the most efficient use of their efforts, energy, and resources. The goal over time, with appropriate funding, is to have folks understand the minimal data and then from that use the template of what occurred with meaningful use on the healthcare data side and taking the elements that make sense to the public health side.

Dr. Adimora wondered whether the DSW gave any thought to making recommendations toward moving toward a system by which there could be much more comprehensive data on the nation as a whole.

Dr. Morita indicated that in some ways, that was baked into one of the TORs in terms of an overarching system that could house all of this information. Because of some of the time-sensitivity of the issues that emerged within the group, they did not get that deep into those conversations.

Dr. Shah added that the example from healthcare comes to mind with the United States Core Data for Interoperability (USCDI) now on its third revision. Over time on the healthcare side, additional elements are added over time with a lot of stakeholder input. To the extent that this also includes public health data that is useful and actionable, that process can be used and leveraged and also thought of as a parallel for public health needs.

Dr. Goldman commented that one of the things that was great about serving on the DSW, in addition to the leadership of the Co-Chairs and support from John Auerbach, was bringing together the perspectives of the data analytics industry, the healthcare industry that already has a massive EHR system in which there have been huge investments, and state and local health agencies. It is the beginning of a process of completely transforming the public health data system. A lot of people will save money immediately because their reporting will be simplified, but state and local agencies and CDC will need resources in order to implement this.

Dr. Taylor said she was thinking about the accreditation system through the Public Health Accreditation Board (PHAB) and that in the medium term, having a data system that is compliant with certain criteria would be a "gentle stick."

Dr. Morita added that if standards are established, other bodies can be the enforcers of compliance with the standards. The standards must be established.

Dr. Layden said it was a hard task to address issues that have been challenges across public health across all levels. These 3 action steps help make a start at working on critical issues that need to be addressed thoughtfully and in collaboration to look critically at the short-term and long-term sustainable path for this work.

Dr. Martinez commented that there is an argument to be made for public and policy stakeholders that when talking about equity and the infrastructure of the public health system, they want a first-class public health system for this nation. This is about the health of the citizens, health of the nation, and national defense. This should be important to everyone across the nation regardless of race, color, or creed because it also is about the quality care of every community member. Perhaps an opening statement can be made about this in terms of why these recommendations are being made and the importance of investing in public health.

Vote

Dr. Shah made a motion to adopt the DSW's proposed action steps, which Dr. Morita seconded. The ACD voted unanimously to approve the DSW's proposed action steps as official recommendations that the ACD would make to CDC, with no dissentions or abstentions.

Social Determinants of Health Initiative

Karen Hacker, MD, MPH (Director, NCCDPHP, CDC) provided an update on SDOH efforts across CDC, particularly within NCCDPHP, as well as the external factors that are influencing this and how that also might contribute to what STLT Health Officers might be involved in. As a reminder, SDOH are considered to be the conditions in which people live, work, play, worship, and everything else that contributes to their health outcomes. There are a lot of data to suggest that these various factors are contributing to more than 50% of health outcomes, particularly negative outcomes. When this work began, a lot of thought was given to how this fits into health equity and how addressing SDOH moves populations in the direction of health equity. SDOH fits under CDC's CORE objectives. There was a strong foundation for addressing SDOH across CDC based on previous efforts. Some examples include the agency's work around childhood lead, the REACH program, the Choose Safe Places Early Care and Education (CSPECE) program, injury work that has been done, homeless efforts, the Social Vulnerability Index (SVI), the Environmental Justice Index (EJI), Health in All Policies (HiAP), health impact assessments, and other work.

When Dr. Hacker arrived at CDC, she wanted to amplify this work within her own center. Therefore, NCCDPHP began an assessment of what they could achieve, were already working on, and moving forward from there. It has become clear that there is a difference between addressing or assessing social needs of an individual and talking about SDOH. This is important in terms of understanding public health's role in SDOH. CMS has recently released some new regulations that will require hospitals to conduct assessments for social needs as of 2024 in a number of areas that are of great interest to CDC (e.g., food security, housing instability, transportation, utilities, and interpersonal safety). T

There are 4 key roles that public health can play in SDOH: Convenor, Integrator, Influencer, and Change-Maker. Building off of Public Health 3.0[3], public health can act as a convener in terms of fostering sustainable multi-sectoral, multi-level partnerships.

The agency assembled a cross-agency Task Force with members from every center, which Drs. Hacker, and Houry lead. One of the first things the group did was develop a CDC SDOH Framework with 6 pillars: Policy & Law, Data & Surveillance, Evaluation & Evidence Building, Partnerships & Collaboration, Community Engagement, and Infrastructure & Capacity. Subcommittees are now working in each of these areas. The central

[3] https://www.cdc.gov/pcd/issues/2017/17_0017.htm

goal of the framework is SDOH, including social and structural conditions, and equity overall as the main focus of the work. The Task Force has been working on this at the agency level for about a year and feel that alignment across the agency is critical. The group has completed visual and narrative versions of the SDOH framework and has vetted that with many partners; summarized the current work at CDC to understand what was going on, including a gap analysis; created a logic model; developed a communication strategy; and published 2 articles. To share an example, The Community Engagement Subcommittee completed a chapter of the next version of "Principles of Community Engagement." They also have been involved in thinking about the strategies to incentivize, talking about community engagement in CDC NOFOs, whether templates are needed for language, et cetera. Typically, CDC is not the action arm of the agency—it is the community organizations and local and state health departments, so consideration is being given to how to encourage and incentivize that work. Many of the NOFOs being published by many CDC centers require coalitions, relationships with partners, and cross-sector types of strategies.

In terms of NCCDPHP'S targeted SDOH work, the center identified a group of social determinants they thought they could get their arms around since SDOH is big and there are many possibilities. They also wanted this to echo some of the work that already was underway and speak to the things they believed influence the outcomes in chronic disease. They identified food and nutrition security, tobacco-free policy, built environment, social connectedness, and community-clinical linkages. NCCDPHP received its first budget line item for SDOH that focused specifically on developing accelerator plans to fast-track improvements in health and social determinant outcomes among populations experiencing health disparities and inequities. Initially, 20 awards were allocated (1 Tribe, 7 States, 7 Counties, 2 Cities/Counties, and 3 Cities). The appropriations language limited funding only to STLTs and did not allow the funding to be opened up to larger groups. This was very frustrating for the center and communities, because a lot of the work underway around this planning process is not necessarily coming out of governmental public health. The awardee plans are being submitted now. To highlight an example, St. Louis County in Minnesota has established formal partnerships with Essentia Health and Lake Superior Community Health Center. Their work is focused on community clinical linkages, social connectedness, and food security. In the second round, 36 new grantees were recently funded.

Given that there was not enough practice-based evidence to show how coalitions can do their work within SDOH, NCCDPHP began an initiative with Association of State and Territorial Health Officials (ASTHO) and the National Association of County and City Health Officials (NACCHO) called "Getting Further Faster." In the first year, they were asked to identify coalitions that had been successful in addressing social determinants across the county. They identified 42 coalitions that they felt had been quite successful in the realm of the initial 5 SDOH mentioned earlier. There already is an evaluation report, about 5 papers are currently in production, and other products are being developed About half of the partnerships reported that they had positive health outcomes data to be able to demonstrate the outcomes of their SDOH initiative. About 90% of them contributed information about community changes that they are very proud of. They also heard from most of them that they still need help in sustainability and funding. During the second year of this project, more in-depth evaluations are currently being done with 14 of these communities that have been asked to pilot some of the measures NCCDPHP to ascertain whether they are feasible. In the third year, during which NCCDPHP will be working with CMS, they will be examining the relationship between the health system and public health to identify successful partnerships across the country.

Another project in which NCCDPHP has been involved, the Gravity Project, pertains to data issues. One question that has been raised regards whether the data the healthcare system is going to be collecting on social needs will be valuable to the public health community. The Gravity Project was a large project involving a wide-ranging coalition of folks from multiple sectors that identified that, indeed, the data could be extremely helpful. The challenge continues to be whether people can get access to these data. This project was launched in May 2019 by the Social Interventions Research and Evaluation Network (SIREN) to develop data and exchange standards to represent SDOH data documented in EHRs across 4 clinical activities: screening, diagnosis, goal setting, and interventions. NCCDPHP is working with the project to build a national public health use-case for SDOH. With

the help of the Robert Woods Johnson Foundation (RWJF), NCCDPHP was able to make the BRFSS data available at an incredibly granular level by state through Small Area Analysis (SAA).

CDC has been involved at multiple levels with HHS and the Whole-of-Government Approach (WGA), which greatly influences how CDC sees itself within all of the movement that is underway around social determinants. CDC is always seeking to expand those partnerships. The HHS Advisory Committee on SDOH created a SDOH Action Plan for which CDC was very much front and center. In addition, the White House is creating an SDOH Plan.

Additional resources were included in the House, Senate, and President's Budget last year and this year. CDC did not receive those resources last year, given that other priorities arose. This year, those additional resources are back and would allow CDC to engage in additional implementation and research and evaluation in the SDOH realm.

Discussion Summary

Dr. Fleming recognized that while the BRFSS is a great system, it essentially collects information about individuals in a community. He wondered whether any ideas have been generated around a core set of community-level measures in health equity and if there was any advice CDC could use from the ACD in moving that forward.

Dr. Hacker indicated that they are assessing how to incorporate the environmental justice work that has been done out of CDC's National Center for Environmental Health (NCEH) into the current Population Level Analysis and Community Estimates (PLACES) and BRFSS so that all of the data can be seen in the same place. They also are involved in another RWJF program through the CDC Foundation in which they are talking to local groups to determine what SDOH data they want to see. The hope is that this will influence what CDC potential could bring into PLACES. There are many challenges with the BRFSS. It is self-reported data, it is still random digit dialing (RDD), et cetera. However, it has at least been made accessible at this point. Basically, anybody can go to the website to look at their community.

Regarding the intersection between workforce and SDOH, Dr. Sharfstein reported that the Bloomberg American Health Initiative provides scholarships to people in other fields to give them public health tools to help address data needs, policy, community engagement, education, housing, policing, and so forth. He wondered whether CDC has thought about ways to train and educate people from other fields.

Dr. Hacker pointed out that with the new infrastructure workforce dollars states are receiving, they can choose to do something along these lines. CDC worked to create some job descriptions for people to engage in the types of activities Dr. Sharfstein described. It would be interesting to assess how much of the REACH resources are being directed to non-health-related groups in terms of working together.

Ms. Valdes Lupi noted that she was on a call the previous week with colleagues at Housing and Urban Development (HUD) related to the Kresge Foundation's Health Equity and Housing grant during which they began talking about other SDOH and work across government. They described some of the conversations and complexities around Data Use Agreements (DUAs), and she wondered whether Dr. Hacker could say more about other agencies and if she could share updates on the Youth Risk Behavior Survey (YRBS).

Dr. Hacker indicated that the YRBS is no longer in her center, though she has heard that there are some concerns about whether all states are going to continue to conduct the YRBS. In terms of other organizations, there have been activities with HUD, the Food and Drug Administration (FDA), and the Department of Transportation (DOT). HUD is very enthusiastic about how to weave health into the work that they are doing. They do have a history with smoke-free housing and environmental health work related to asthma. That is somewhat different than the homeless issue, which is more about homes and having housing for which there is a lot of potential. DOT received a fairly large amount of funding with the infrastructure grant. While they do

seem to be very interested in health, one of the challenges is that the coalitions around transportation are often their own group of people who may or may not include public health. With those new resources, public health is not always at the table. CDC is trying to encourage public health to be involved in the planning of those grants, since that is where the opportunities are going to be.

Mr. Auerbach added that there are subcommittees within the CDC SDOH Task Force, one of which is the Partnership Subcommittee that has decided in its preliminary work to pay special attention to housing. During the last Partnership Subcommittee meeting, senior leadership from HUD and senior leadership working on housing from a state discussed what partners they would need to work with in terms of the housing sector at the federal, state, and local levels. CDC approached the DOT with the knowledge that the infrastructure funding gave them half a trillion dollars' worth of new resources and that many of the projects that they would be supporting had a public health impact (e.g., highways, mass transportation, walkable communities, and so forth).

Ms. Valdes Lupi emphasized that with evictions on the uptick, there likely is a role for CDC in terms of elevating what happens as a result of some of the COVID-19 protections being lifted. She did hear from some local health partners that their schools had dropped funding and support of the YRBS, which is deeply disturbing given what they are all hearing about youth mental health. On the tobacco control front, there was heavy reliance on the YRBS to demonstrate the case of effectiveness of tobacco control and vape prevention.

Dr. Hacker noted that the good news is that CDC uses the National Youth Tobacco Survey (NYTS) rather than the YRBS to assess tobacco use in youth. The most recent data was published the previous week in the *MMWR*. There are challenges with almost all surveillance systems that have been using a different methodology pre-pandemic and had to transition to a different type of methodology, such as virtually. The National Health and Nutrition Examination Survey (NHANES) had challenges. There are concerns about whether the methodology used pre-pandemic can be compared to the methodology used post-pandemic in order to assess changes over time.

Dr. Morita expressed concern about the sustainability of Dr. Hacker's work with a limited budget and non-continuous stream of funding and wondered what thoughts she had about how to advocate for or leverage continuous funding to support these efforts. Because there is such a strong connection between structural barriers in the upstream systems, health inequities, and racial disparities, perhaps there would be value in Dr. Hacker working together with the OMHHE to get some dedicated resources moving forward.

Dr. Hacker indicated that they work with OMHHE substantially and as the new Health Equity Office emerges, they need to be doing more than that—particularly in terms of where some of these efforts end up living. Like any other coalition, they probably cannot stay together forever.

Communication Outreach

Kevin Griffis (Associate Director for Communications, CDC) presented on the reorganization of the CDC Office of the Associate Director for Communication (OADC). This process was built upon a foundation that began a few years ago and was completed in August 2022. The reorganization is responsive to many of the priorities that were outlined in Mr. Macrae's report and anticipates some of the challenges that he identified and potential solutions. While the OADC reorganization started well before Moving Forward began, it reflects a lot of the concern that Dr. Walensky has about communication writ large within CDC. In 2020, OADC embarked on a feedback and strategic planning process. In 2021, an assessment was conducted by an independent contractor that involved individual interviews with people across the organization and involved a thorough review of the state and functions of OADC. In September 2021, OADC announced a reorganization. In November 2021, the OADC reorganization package was submitted. In April 2022, OADC began operating in the new structure. OADC's reorganization priorities: 1) streamline and prioritize functions and services; 2) build or retool systems and

structures to be nimbler; 3) cultivate a more collaborative, cross-functional culture; and 4) align teams based on function.

Two of the primary problems the team was trying to solve for, reflect some of the consensus for change that Mr. Macrae uncovered in his process of the review of the functions of CDC during the COVID-19 response. OADC's prior structure suggested that its work with the media and communications with the public through digital platforms were not of paramount importance. The new structure addresses that by elevating digital media and media relations to their own divisions, which has important implications because OADC is able to have direct conversations on a daily basis and talk about the work that is happening. A recent example is that OADC has been speaking with HHS and the White House about CDC's overall Ebola response and the need to help the public better understand what the agency is doing in Uganda and in the US to better prepare in the event that there is a case in the US. I

The reimagined OADC elevates media and digital communication; better aligns teams based on function; streamlines and prioritizes functions and services; cultivate a more collaborative, cross-functioning culture; and puts emphasis on internal/enterprise communication and DEIA efforts.

Upskilling work in progress includes required annual training for all health communicators across CDC; required basic web strategy training for health communicators; and required training for leaders (Branch Chiefs, Division Directors, et cetera) on basic communication functions so that they understand what communication expertise exists among their communication lead/staff. Emergency response work in progress has included assembling a cross-agency workgroup to develop response-specific training for communications staff to allow smoother hand-offs between staff during emergency response; developing mission brief(s) to onboard communication staff quickly and ensure smooth hand-offs; and developing a system for regularly incorporating feedback from evaluations and After-Action Reports (AARs) that could improve communication.

Discussion Summary

Dr. Taylor pointed out that scientists want granularity in data and non-scientists want understandability and asked how this reorganization would lead to that result, and whether CDC messages are tested on scientists and the public to ensure that they are achieving the right level.
Mr. Griffis responded that this pertains to elevating the Division of Communication Science and Services, which is working on a number of strategies to help infuse plain language across the organization. Part of what the Moving Forward process and PATs are working on regards how to give all of the CIOs across CDC the tools necessary to explain complicated, nuanced science in a way that everyone can understand. There are existing tools to help with this. T

Dr. Sharfstein said he did not really hear how the totally different information environment is being considered, such that a message is just the beginning of communication. Misinformation is a major issue in today's environment. In a recent class he taught, the students were asked to look at the issue of myocarditis and messenger ribonucleic acid (mRNA) vaccines. They were asked to find responsible and irresponsible TikTok videos. As soon as people started talking about data, numbers, and papers in the responsible TikTok's, the students were looking at the email and did not even watch to the end of the TikTok's. When the irresponsible TikTok videos started with nurses saying there is a cover-up about patients and they are crying, his own students in a public health class are riveted. There is no question that the content is much more appealing. The current world is 1000:1 misinformation to information. He did not see "misinformation" on the OADC organizational chart and wondered how it affects Mr. Griffis' job and how he envisions CDC engaging with that. He suggested that: 1) every communication plan that goes out of CDC should have a misinformation component; 2) CDC should establish an advisory committee on misinformation, given that this is a multidisciplinary problem; and 3) CDC should engage with social media companies.

Mr. Griffis indicated that "misinformation" is addressed within the Division of Communication Science and Services. However, CDC and government agencies alone are not going to be able to solve this problem. CDC will

have to continue to use every channel they have available to get the information out and not rely solely on government channels. During the course of the MPOX response, the agency did a lot of work with trusted messengers in the LGBTQ community to get the information out about how people could protect themselves. Interestingly, TikTok has one of the stricter content moderation policies of all of the social media platforms.

Dr. Martinez noted that having been on the Presidential COVID-19 Health Equity Task Force, one thing they heard about from across the entire country was how youth and teenagers felt completely forgotten and outside of the realm of anyone providing information to them. Within that context, he asked whether CDC has been thinking about how to communicate with youth and teenagers. For example, many middle schools and high schools across the nation have their own newspapers and radio stations. It is important to discuss misinformation and enhance public health concepts and knowledge as early as possible among these populations as young as possible. The caveat about trusted sources is that those who are listening to misinformation may see the people sharing it as their trusted voice.

Mr. Griffis pointed out that foundational to every communication plan is determining the audience. If part of the audience is younger populations, thought must be given to the avenues through which to reach them. Social media, those who are influential among younger populations, and message testing to ensure age diversity are important. For example, they worked with some of the dating apps to get MPOX messaging out to male populations specific to protecting themselves.

Ms. Valdes Lupi added that micro influencers can be important as trusted messengers. In the absence of information during the pandemic, different groups were stood up. For example, the Public Health Communications Collaborative (PHCC) has crafted just-in-time, very easy to understand, unpacked communications tidbits for practitioners. Some of the things the PHCC is hearing about in terms of the challenges ahead, beyond crisis and risk communications, is about the issue of trust.

Mr. Griffis noted that one of the keys to rebuilding trust is to make sure that CDC does not have errors. A lot of work being done around communications involves determining ways to mitigate errors. No organization is going to be error-free. The agency will do everything possible to ensure that they eliminate mistakes. A number of issues have been discussed in terms of Moving Forward, all of which are in the service of improving how CDC functions, which will feed into improving trust in the organization.

Dr. Goldman does not think the public is convinced that CDC is effectively doing its job even when it is. MPOX is a very good story in terms of the response, how quickly the rates declined, and how effective the strategy has been. CDC must restore the confidence of the public that the agency is looking out for it and that the advice CDC is providing is sound. The agency did a great job of reaching out to the men who have sex with men (MSM) community and others. Based on the presentation, she was confused about what the communication enterprise is within the agency.

Mr. Griffis clarified that the best way to think about the overall structure is that the OADC is the communication function in the OD. The CIOs also have communication functions, so CDC's communications apparatus is decentralized overall. However, the OADC is trying to improve visibility across the organization and provide additional leadership to the centers and divisions. MPOX is an ongoing conversation that CDC is having. Shots did not get into arms by magic. That was the result of a lot of the work that was done by CDC.

Dr. Morita observed that now there is a desire for the pendulum to swing more for CDC to strengthen the communication it does to the public. She is concerned about over-correcting and losing sight of the other audiences the agency has. Academic institutions, scientists, and state and local public health are dependent upon CDC guidance and communication.

Mr. Griffis observed that this related to the issue raised about the critical importance of everyone being on the same page about what the facts are and providing the same messages at the federal, state, and local levels.

Public Comments

The floor was opened for public comment on November 2, 2022 4:15 PM ET. Public engagement and input are vital to ACD's work. Prior to each meeting, members of the public are invited through a notice in the *Federal Register* to submit written and/or oral comments. Members of the public also were invited to submit written public comments to the ACD through the Federal eRulemaking Portal at http://www.regulations.gov.

Chrissie Juliano, MPP (Executive Director, Big Cities Health Coalition)

We have 35 members from the nation's largest metropolitan health departments who together serve more than 61 million people. We are so pleased that the committee has been reconstituted and also look forward to having current practitioners added to the mix as has been the case in the past. Over the last few years, as you all know, we've had multiple public health crises from opioids to gun violence, COVID to monkeypox, and it has really illustrated just how emergent challenges almost always hit cities first and often hit them hardest. Many of the things that make cities great also make them uniquely vulnerable. Our member jurisdictions have more people living in close proximity and they have more people who lack access to healthy environments—all structural problems that exploit the health of communities. But cities also offer opportunities to take on these challenges. Again, we appreciate the 2 working groups on equity and data modernization, which are 2 of our priorities. For example, we are exploring with the BCHC members how best to move from declaring racism as a public health crisis to actually rebuilding systems, policies, and practices so that they mitigate rather than exacerbate racism. Data modernization is also critical. We can't move the field forward if we don't address data gaps at all levels of government. Federal data modernization dollars must get local, with really important guidance from the CDC around data systems and data collection. We cannot have a fully integrated health data system without building capacity at every level of government. Finally, neither our members nor the CDC can do their work without effective partnerships. I would really be remiss not to recognize the role that CSTLTS (Center for State, Tribal, Local, and Territorial Support) has played for health departments across the country, particularly during the COVID pandemic. CSTLTS has been a source of support for practitioners. As new partnerships mechanisms are considered as part of CDC Moving Forward, we must make sure to preserve that important function.

COVID-19 Update

Brendan Jackson, MD, MPH (Incident Manager, CDC COVID-19 Response) provided an update on CDC's COVID-19 response. For CDC staff, it has been tough to see the failures, both real and accused, day after day. Most staff joined the agency because they believe in the importance of public health, its mission, and its potential impacts. The loss of morale that has occurred cannot be underestimated. A lot of the challenges have been products of the decentralized and federal system, red tape, partisan politics, et cetera.

The US is close to an all-time low for cases, hospitalizations, and deaths. There has been an uptick in cases, hospitalizations, and test positivity over the last week. The major question regards how much of the rise in infections is going to translate to the outcomes that matter (e.g., severe disease, death, long COVID, et cetera). CDC's Nowcast estimates variant proportions based on a huge amount of weekly genomic sequencing, which shows that BA.4 and BA.5 are fading into the background, even though they still comprise a majority of the sequences. BQ.1.1, BQ.1, and BF.7 seem to be growing faster and seem to be more transmissible. CDC is watching XBB, which has been prominent in Southeast Asia. It is a recombinant of BA.2 and there has been a lot of discussion in many circles about what will happen with this variant.

The challenge with all three of these is that they have some resistance implications. Evusheld, the prophylactic antibody cocktail that is pretty good at preventing serious consequences of COVID for up to 6 months, and bebtelovimab, the last remaining monoclonal, are under threat from some of these variants. Antivirals, Paxlovid (nirmatrelvir and ritonavir), Veklury (remdesivir), and Lagevrio (molnupiravir), seem to be unaffected. What this means in terms of vaccines and pre-existing immunity from infections is still an open question. The data so far are relatively promising, but there probably is an incremental escape from immunity as with every one of these.

However, there does not seem to be a massive shift. These variants are all the "great grandchildren" of BA.5 and BA.2.

CDC is still producing weekly COVID-19 Community Levels (CCLs). This is a metric that is based on 2 measures of hospitalization, hospital strain and cases. While cases are not what they once were and there are home antigen test reporting issues, CDC still thinks CCLs are a good proxy for what is occurring in terms of transmission. At this time, less than 3% of counties were at high CCLs where people are recommended to step up precautions such as masking. People are welcome to mask at all levels, but it is hard to shift the factor of people's level of comfort with masking. These numbers could easily rise in the next few months. COVID is not the only respiratory illness circulating. Now RSV and influenza also are circulating, so consideration must be given to having a coordinated and coherent respiratory disease communication on this. CDC has been criticized in some circles for focusing more on preventing the health consequences of infection rather than prevention of infections themselves. Nobody likes infections, but the challenge with Omicron is that infections are very difficult to prevent. Even China has challenges controlling COVID and continued COVID infections with its Zero COVID policy and draconian measures. This country is not going to come close to such measures, so what is realistic in the US versus what actually can be done must be balanced.

CDC received some criticism for moving away from the 6 feet social distancing metric. The criticism on the other side is that 6 feet is not some magical binary. This is a complex stew of factors depending upon whether one is inside or outside, how good the ventilation is, whether people are wearing masks, whether people are singing or talking loudly/too fast, et cetera. CDC has been trying to convey those nuances better. Another factor was removal of quarantine, which already had not been recommended for months for vaccinated people. It is known from Omicron that vaccination is not a great barrier to infection, though it is still very good at preventing severe disease and CDC was just trying to adapt things to the most recent science. There is a lot more discussion to be had as to what society can do to protect the most vulnerable. There are no easy answers despite what some people say on Twitter.

CDC's current response priorities are optimistic. The first 2 are about increasing uptake of some key tools that are available, boosters and therapeutics. The problem is that too many people still are not getting them—especially in socially disadvantaged groups. The intent is to reach people where they are and partner to increase access and communicate in a way that people can relate to.
Drilling down on vaccines, only about 20% of people over 65 years of age have gotten updated bivalent boosters. These are people who are at greatest risk of dying, even more than they were in the past. It is beneficial for people of all ages to get boosters, so CDC wants to do what it can to increase uptake. Similar disparities are seen in the uptake of Paxlovid, which is the most effective and most widely used antiviral at this point. Based on a large claims database, a recent *MMWR* article[4] shows that non-Hispanic Whites have substantially higher usage rates, even controlling for age. This is another major disparity issue that needs to be addressed. A lot of myths are still circulating about Paxlovid and rebound but rebound can happen with or without Paxlovid. Rebound is almost always mild, and it is more important to have prevented severe disease in the first place.

Ventilation has become abundantly clear that good indoor ventilation is a way to reduce the spread of COVID. The benefit is that it is an engineering control that does not require consistent individual actions to have effects and it has benefits beyond COVID. CDC is working on stepping up its game in this area. There already are websites and work is being done to update, streamline, and make the websites as clear as possible. CDC is working with the White House Office of Science and Technology Policy (OSTP) on some cross-governmental targets. Schools can help reduce spread by replacing or upgrading their HVAC systems and using HEP filtration systems. The majority of schools have not been able to do that yet. In terms of preparing for a potential winter surge and new variants, there are 8 million potential viral hosts. While one question regards whether this virus is running to the end of its evolutionary road for humans. While this has been thought multiple times before, Delta

[4] https://www.cdc.gov/mmwr/volumes/71/wr/mm7143a2.htm

and Omicron have been surprises, so it is important to be prepared for whatever variant that comes next. The final priority is long COVID or post-COVID conditions. There is still a lot that is not understood but urgently needs to be understood, given that there is a lot of suffering occurring. NIH is the lead agency in terms of understanding causes, therapeutics, interventions, et cetera. CDC is responsible for understanding the burden and risk factors and advancing clinical education in this area.
CDC still regards COVID as an important public health priority and the agency is doing the best it can based on the resources allotted.
Dr. Jackson posted the following questions for the ACD's consideration and discussion:

- How can CDC best position itself to address COVID-19 for the long-term?
- What suggestions do you have for improving public communications around COVID-19, especially with underserved communities?

Discussion Summary

Mr. Dawes observed that the *MMWR* report on racial and ethnic disparities in outpatient treatment talked about disparities for Black, White, Multiple or Other, and Hispanic patients were present across all age strata. The 65-79 group had the most striking disparities and a death rate of about 44%, and he wondered what CDC thinks is driving this and what the agency thinks can be done to address it. He also noticed in this report that obesity is the number one underlying health condition and wondered what CDC is doing to try to address that.

Dr. Jackson acknowledged that the most concerning feature is that disparities are the highest in some of the older age groups. The Agency for Strategic Preparedness and Response (ASPR) is the lead on therapeutics, distribution, and communications. CDC is supporting that and has a number of communications products in development. CDC's health equity experts are engaged in outreach on local platforms, focusing on certain markets to try to increase uptake. There is still much more the agency could be doing to help support these efforts but has stayed out of the therapeutic space because they have been focused on other areas while other agencies take the lead there.

Dr. Taylor mentioned it seems logical that COVID is at the stage that it should start being treated as another one of the respiratory diseases, though the seasonality is not yet known. It seems that the same messages that would apply to RSV and influenza should be applied to COVID. She wondered if theoretically, they are seeing long COVID because of the huge population base and that long disease probably happens in many other diseases for which there is not the same population base such as Lyme disease or chronic fatigue syndrome (CFS).

Dr. Jackson agreed that it is time to start moving away from COVID exceptionalism and integrating it more, which is part of the rationale behind the move to programs within CDC and to integrate it more within the National Center for Immunization and Respiratory Diseases (NCIRD) with the other respiratory diseases.

Dr. Goldman thinks stronger efforts need to be made toward prevention of community transmission.

Dr. Sharfstein offered 3 suggestions: 1) The Forecasting Center has long had the idea that people could appreciate the risk of respiratory disease along with the risk of the weather. Perhaps CDC could consider working with weather reporters, creating a respiratory disease index like a heat alert, and putting it on weather reports. This would be a way for people to think about masking in the same way as carrying an umbrella; 2) Perhaps having a Misinformation Team as part of the ICS could help to address equity gaps; and 3) Pharmacies are a very important access point for people. The Paxlovid EUA does not appear to require having access to creatine testing. It seems like there is room for CDC to engage with the FDA to provide some guidance like Safe Harbor for pharmacists.

Dr. Jackson liked the idea of the respiratory disease index, which has been discussed in the past. He also liked the idea of a Misinformation Team. A lot of communication comes from the agency level, so they need to make sure that they are as integrated as possible with the COVID response. He would like CDC to be more forward

leaning in this space. In terms of the pharmacy issue, he has talked to a number of pharmacy groups and chains, and thinks they are well aware of the rules and what they feel like they can do.

Building on the question about long COVID, Dr. Gary pointed out that millions of people are now impacted by long COVID and there is a lot of confusion, frustration, and lack of information about it. Perhaps this could be revisited in the next ACD meeting. While long COVID is more likely after severe illness, it can occur after any level of severity. She thinks many people are not aware of the risk for long COVID and are not taking that into account when making decisions about getting boosted or taking other preventive measures.

Dr. Jackson clarified that it was not his intent to slight long COVID in his presentation. It was just that even as fast as he speaks, he could not include everything. He is happy to address this in more detail in a future ACD meeting. CDC was the first group to provide clinical guidance on post-COVID and long COVID conditions.

Regarding Paxlovid and equity, Dr. Adimora pointed out that Paxlovid is currently free under the EUA I that there is no charge to the patient. Her assumption is that in the near future, FDA will approve Paxlovid and there will be a charge for the drug. People without insurance will have a problem. While this is not specifically in CDC's domain, when talking about equity and CDC working with other agencies, she wondered if there is a plan for working with other agencies to deal with this issue so that the existing equities do not increase further once there is a charge for this drug.

Dr. Jackson indicated that ASPR is the lead agency in terms of distributions and this type of planning and are giving a lot of thought to this and CDC talks with them frequently. The biggest problem is the lack of ongoing funding for COVID and the reality that at a certain point, the money is going to run out and they are going to have to make sure these drugs are available in some form.

Regarding the communication challenges presented and the likelihood that this winter there will be increasing numbers of cases and potential emergence of new variants, Dr. Fleming pointed out that a major question from a communications standpoint regards what can be said about the efficacy of vaccines. In the past, the data CDC relied on for vaccine efficacy (VE) tended to be from cohort studies that took a while to generate information. The questions the media and public were asking could not be answered scientifically and devolved into misinformation and disinformation about VE. He asked if CDC has thought about ways to confront this challenge, which is likely to be seen with more real-time data collection relative to VE, systematic analysis of cases that are being reported, and/or real-time case-control studies that would allow CDC to be first in talking about what is known about VE rather than in a more responsive mode.

Dr. Jackson noted that CDC is being asked this all of the time by reporters. There are VE data in the published studies, but the questions will regard the new variants. The agency has a timeline for getting information out in the next several weeks. An inherent challenge is that the US is not Israel and does not have a national healthcare system with everything integrated. CDC is relying on some of the large cohort studies and trying to enhance those. The agency has a vaccine infection breakthrough surveillance platform that is tracking cases. One challenge is that the uptick in cases and hospitalizations have not been high yet, so it is difficult to accrue those data.

Monkeypox Update

Jonathan Mermin, MD (Incident Manager, CDC Multi-National Monkeypox Response 2022) provided an update on the state of MPOX. He explained that the reason MPOX initially derived a lot of attention is because it is the main orthopoxvirus that causes smallpox. There are some data from previous outbreaks and cases of MPOX that indicated that it could cause severe disease. It is named "monkeypox" because it was first discovered in 1958 following 2 outbreaks of a pox-like disease in research monkeys in laboratories. There is an ongoing effort to change or allow for different terminology because of potential stigma from the name itself. Over the past few decades, the proportion of populations that have been immunized against smallpox has decreased. In

addition, increasing numbers of cases and outbreaks have been attributed to the changing geographic distribution of human and animal populations.

This is not a benign infection in that severe disease does occur. Severe disease occurs in less than 2% of cases, when it does occur there can be persistent or recurring rash; coalescing or necrotic lesions (>100) despite treatment with tecovirimat and other antivirals; multiple organ system involvement; lesions leading to obstruction, stricture and scar formation, urethral and bowel strictures, phimosis, and facial scarring; and sometimes secondary bacterial or fungal infections, sepsis, and hemodynamic compromise. The majority of cases have occurred among immunocompromised persons, the majority of whom have been people with HIV with CD4 counts below 200—but not all. Severe disease and deaths have occurred in people with non-HIV immunocompromise.

In terms of who has gotten MPOX in the US, the average age is about 34 years (range <1-89). Among the cases, 96% have been among cisgender men and 3% have been among cisgender women. Of the cases, 1.6% have occurred among transgender men, women, or other gender. The majority of cases for which information was reported were in gay, bisexual, and other MSM. About 32% of cases have occurred among Black/African American persons, about 31% in Hispanic/Latino persons, about 30% in White persons, and 3% in Asian persons. Approximately 40% of cases have had HIV and about 40% of people with MPOX have had a sexually transmitted infection (STI) diagnosed in the past year. About one-third had ≥5 sexual partners in past 3 weeks, the incubation period for MPOX. Well-documented cases also have been associated with either caregiving or nosocomial events in the hospital with fingerstick.

Regarding the epidemiology and response, when MPOX first started in Europe and then came to the US, it was noted to be occurring primarily among gay and bisexual men and other MSM. This resulted in people changing their sexual behavior. There is a well-documented reduction of about 50% in the number of sexual partners and other risk activities that can put people at a higher likelihood of getting MPOX.[5] JYNNEOS vaccine became available in July from the Strategic National Stockpile (SNS), with a peak of vaccination reached between July to mid-August. This is a 2-dose vaccine series, with well over a million doses administered. However, the trend over time has been a reduced number of first doses and the consequent reduced number of second doses as well. CDC is conducting some formal VE studies but performed an early analysis to get a sense of what was happening with the performance of this vaccine. Based on the time period of the analysis, the predominance of people assessed had received just the first dose of vaccine. During this time period, there was a 14 times higher incidence of MPOX among persons who had not been vaccinated compared with those who had been vaccinated.

From the beginning of this outbreak, CDC was very concerned about equity issues. Community engagement and equity were incorporated into the CDC IMS structure with the establishment of an Office of Health Equity that recognized the issues related to the fact that the majority of cases were among gay, bisexual, and other MSM and to try to reduce some of the racial and ethnic disparities that naturally occur in an unequal society unless there is work against them. By reflecting on what has happened in other outbreaks, including some of the ones Dr. Mermin is involved in within his center on a routine basis (e.g., HIV and STIs), it was possible to have special vaccine programs and to bring up these important issues in the communications and when working with health departments. Looking at the epidemiological curve by race and ethnicity, there has been a dramatic reduction in the incidence of MPOX. However, even as incidence decreased, it has decreased at a faster rate in certain populations. For instance, the proportion of infections in African Americans has increased dramatically from about 15% in the beginning of the epidemic to close to 50% currently.

Even before these changes were observed, CDC had incorporated the community engagement and equity focus. Fact-based messaging was used to reduce stigma. Focused digital media and other channels were used to reach

[5] American Men's Interview Survey, 2022 Monkeypox Supplement

MSM, including MSM of color who might be at risk for MPOX. There has been a lot of continued engagement with communities, leaders, influencers, and organizations that are either focused on health or not focused on health but work within the communities most affected. CDC guidance has integrated equity issues and special vaccine equity programs. When there was a very constrained supply of vaccine, CDC encouraged health departments to develop vaccine equity programs that could bring the vaccination to communities of color who were potentially benefitting from vaccination. There has been considerable success at some of these events and venues.

Regarding communication challenges, vaccination uptake is decreasing. Understanding the current situation with the epidemic, it is estimated that about 2 million people in the US would benefit from vaccination. While this number has not been achieved, the absolute number of people getting vaccinated every week is decreasing. There is some concern because the LGBTQ community is often reminded of the HIV epidemic and being blamed for disease outbreaks, so there is a stigma associated with MPOX. Intersectionality increases obstacles for African American and Hispanic/Latino MSM. CDC has been criticized for both increasing stigma by providing focused messaging for gay and bisexual communities, as well as for not highlighting the disproportionate burden experienced by MSM and persons with HIV. This balance is a constant tension for the agency in terms of getting information out effectively to the people who need to receive it without increasing stigma and discrimination.

Every year for the past 7 years, more STIs have been reported in America than the prior year. At this point, other than COVID-19, STIs comprise 80% of reportable cases in surveillance systems in the US. In terms of syndemics, MPOX arrived in the setting of an inadequate STI infrastructure. Systemic homophobia, racism, and economic policies are associated with increasing STIs and major racial and ethnic disparities. MSM and transgender persons bear the largest burden of HIV, syphilis, and gonorrhea.

Key issues for public health response regard how to ensconce routine MPOX vaccination in clinics that provide HIV, STI, pre-exposure prophylaxis (PrEP) services, and link those activities with CBOs that are ensconced in the community and can bring people to services or services to people. Thought also must be given to how to continue venue and event-based vaccine equity initiatives and how to nurture engagement with community organizations and leaders. Efforts also must be made to expand collaborations between communicable disease and STI/HIV components within health departments and CDC and ensure that CDC has public health authorities to enable this to happen. With respect to lessons and obligations, it is important to anticipate the future and act fast; focus on equity and work with communities; bring services to people and make prevention easy; gain trust with proof of action and sharing information in an effective way; and as societal concern decreases, public health needs often increase.

In closing, Dr. Mermin posed the following questions for ACD's consideration and discussion:

- What has CDC done well with MPOX and what should we stop doing?
- When is the MPOX outbreak over for the US and for the world?
- What policies, systems, infrastructure, and resources need to be in place?

Discussion Summary

Dr. Goldman noted that the information from CDC came forth quickly, the numbers have shared more or less in real-time, and she has nothing but praise for the agency regarding this response. She would like to see rates instead of numbers as it better highlights the extent of the disparities.

Dr. Morita inquired as to whether there is information about vaccine doses administered by race and ethnicity. She wondered whether there were challenges in leveraging the HIV infrastructure.

Dr. Mermin indicated that they would be posting more easily available data on vaccine doses administered by race and ethnicity. The information they have indicates that there is disparity in vaccine use of vaccine by race and ethnicity, which is part of the reason the agency is putting so much effort in getting vaccine to the people

who need it. They did encounter some challenges in leveraging the HIV infrastructure. The communicable disease infrastructure in health departments reacted first and in many cases were able to link into the STI/HIV departments, but sometimes were not. CDC was able to address the difficulties in getting resources, human and financial, was to put out communications from CDC, the Substance Abuse and Mental Health Services Administration (SAMHSA), and Health Resources and Services Administration (HRSA) that allowed the ability to do MPOX work as long as it was done in conjunction with the work for which resources had been provided for by Congress. That allowed for the mobilization of disease investigation specialists, contact tracers, vaccinators, and others to be able to do multi-disease work—good public health work that sought more of a holistic approach to the health of individuals and communities than what is typically possible with silos and funding that is tied to specific diseases.

Dr. Taylor pointed out that the LRN system worked in this situation. While CDC had a test that had been distributed to state laboratories, there were some issues. The test was very manual, was not adapted to high throughput, was not using the platforms that many laboratories had. There also was a great deal of concern from healthcare providers regarding the amount of data required to access a test. The LRN needs to be modernized, more "grey swans" need to be anticipated, more tests need to be ready and validated to be accurate, a system of laboratories needs to be developing those tests, tests need to be adapted to multiple platforms that laboratories are known to use (including commercial laboratories), and there must be a minimum dataset at the beginning. While it is known that a lot of data need to be collected for positives, there can be plans for a minimum dataset to get the tests in quickly to all laboratories. There also needs to be work with manufacturers to have a platform that is rapidly adaptable.

Dr. Mermin said he would not find a single person at CDC who did not agree with this. In addition to the preparatory activities Dr. Taylor mentioned, there is a cusp of a revolution in diagnostics. Before this meeting, he performed a SARS-CoV-2 test in his house so he would be comfortable attending this session and taking off his mask. In terms of nucleic acid testing, there are implications with regard to the ultimate situation for point of care and home testing in terms of different aspects that can be added quickly. For MPOX, there are no point of care or multiplex tests. Based on the LRN data, about a third of people who have samples taken to be tested for MPOX have a positive MPOX test. It is complicated for clinicians and patients to rapidly address some diseases without knowing what it is. The future likely will be multiplex testing in major laboratories and potentially that same testing at home. Drs. Jernigan and Layden are very interested in minimum datasets and the concept of what it would mean to have de-identified data come to CDC in the speed and completeness required.

Ms. Valdez Lupi noted that she now works at The Kresge Foundation and New Orleans is one of their priority cities that they partner with closely. She appreciated the accessibility that they often had to their CDC colleagues and seeing the *MMWR* that was included in the ACD's read ahead materials about Southern Decadence and the work CDC did with the Louisiana Department of Health (LDH) and New Orleans Health Department (NOHD). To see that example and all of the learnings from the Southern Decadence Health Hub and the community vaccine clinics that were held leading up to Southern Decadence were gratifying to see.

Dr. Shah pointed out that there has been a reasonable debate between being fast, being credible, and being correct. In the past, a longer review process by CDC has been revered that ensured CDC was correct. With MPOX, the agency found a really good balance with the technical reports and forecasting appearing in a timely fashion during the actual outbreak and releasing the data publicly very quickly after the White House was briefed. This is a really nice example. With MPOX, there also were several shifts in the data systems to support the response. He asked what has been learned and how CDC interacts with states to make this process faster and better.

Dr. Mermin stressed that there always would be tension between speed and accuracy, between taking too long and not taking long enough, and recognizing that. When something needs to be done quickly, all of the people necessary must be pulled in as fast as possible. There are some logistical and policy challenges to being able to reach out and get all partners involved in what needs to be done to move guidance and recommendations

forward. CDC is working on that, but ultimately, they tried to take that balance in stride and move forward. There are still some very fundamental scientific questions that matter for public health with regard to MPOX that they are trying to answer with the data they have or other that other countries have in order to continue to be prepared to provide accurate information about what does and does not put someone at significant risk. That is a complex environment with this infection, but they know that people are expecting this from the CDC.

Ebola Update

Joel Montgomery, PhD (Incident Manager, CDC Uganda Sudan Virus Response 2022) provided an update on the state of the CDC's Uganda *Sudan ebolavirus* (SUDV) response to an outbreak that has implications not only for Uganda, but also for the rest of the world. Since 2018, there have been 6 Ebola outbreaks in the Democratic Republic of the Congo (DRC) and 1 in Guinea. There also have been 2 Marburg outbreaks in Guinea and Ghana. The SUDV outbreak in Uganda is ongoing. The Uganda Ministry of Health declared an outbreak of SUDV on September 20, 2022. This is a slightly different species than what has been seen in the DRC in the past. The first confirmed case was reported to CDC on September 19, 2022. This was through a program CDC has had in place with the Uganda Viral Research Institute (UVRI) for a number of years. This individual had symptom onset on September 11, 2022 and died on September 19, 2022. The case occurred in Madudu Sub-County in the Mubende District in Central Uganda, which is about 107 miles from the Capital of Kampala. The concern is that it is fairly easy to get from the Mubende District to Kampala. As mentioned, this outbreak is caused by SUDV as opposed to some of the other recent outbreaks of EVD that have been caused by *Zaire ebolavirus*—the same species that caused the large outbreak in West Africa in 2014 and 2016. The important point about this is that there are currently no FDA-approved treatments, vaccines, or rapid diagnostics tests for SUDV. A few vaccines and monoclonal antibodies are being explored currently, with plans to put clinical trials in place in Uganda. This is the fifth outbreak of EVD caused by SUDV in Uganda since 2000, with the most recent being in 2012 during which there upwards of 400 cases and around 300 fatalities.

There are 6 species of Ebola virus, of which 4 are known to cause human illness. Since the 1976 discovery of Ebola virus, there have been countless numbers of Ebola outbreaks across the region, the largest of which was in West Africa with upwards of 30,000 cases. As of November 3, 2022, there were 152 cases of SUDV. Of those, 131 are confirmed and 21 are probable. The 7 districts affected include Bunyangabu, Kagadi, Kassanda, Kyegegwa, Mubende, Kampala, and Wakiso. A new district has been affected, Masaka. Among the 151 cases, there have been approximately 55 deaths for an approximate case-fatality proportion of about 37%. That is about standard for SUDV, which typically has a case-fatality rate of about 40% to 45%. There have been variations in the case-fatality rate in this outbreak. For instance, Entebbe has one of the Ebola Treatment Units (ETUs) with a fairly good clinical management team that has been able to reduce the case-fatality rate to about 20%. It is somewhat higher in Mubende, which is currently where the epicenter is, with a case-fatality rate of about 45% there. Unfortunately, there have been 15 healthcare worker (HCW) infections with 6 deaths as well. Approximately 1800 contacts are being followed actively, with about 88% follow-up. One of the challenges is community engagement, which is not uncommon for Ebola outbreaks. That has hampered contact tracing and getting suspect cases into ETUs. Approximately 4 ETUs are currently functioning, with another 42-bed unit being constructed in Mubende that will expand some of the care and treatment.

Regarding the Uganda coordination and response efforts to date, Ugandan health authorities are leading the current response in coordination with the district-level health authorities and support from numerous partners. This is a large partner engagement effort, including the World Health Organization (WHO); CDC; Médecins Sans Frontières/Doctors Without Borders (MSF); a lot of the USG, including the US Agency for International Development (USAID), the Department of Defense (DoD), and the State Department. District and National RRTs have deployed to support outbreak response activities, including contact tracing. CDC's national EOC was activated on September 20, 2022. Regarding CDC support to date, as of 31 October, 17 HQ CDC Responders are in Uganda supporting response activities in the following roles: Epidemiology (6), Laboratory Logistics (1), Ecological Investigation Team (1), Infection Prevention and Control (IPC) (4), M&O (1), Safety/Security (1), Border Health (1), and Communications (1). There are 17 CDC Uganda Country Office staff supporting the response in-country. CDC Staff are assisting with border activities, IPC activities, identifying, and advocating for

logistical needs, assisting in data analysis, contact tracing, and establishing surveillance sites. CDC is currently activated at the center level through the National Center for Emerging and Zoonotic Infectious Diseases (NCEZID) and Center for Global Health (CGH).

Discussion Summary

Dr. Goldman noted that in its previous iteration, the ACD had a Global Work Group (GWG). It seems that global health has been overwhelmed by COVID, with so much attention paid to COVID and so much attention moving away from other issues such as chronic disease and infectious agents such as Ebola. She asked Dr. Montgomery to provide a sense of the current resource situation for CDC in this space.

Dr. Montgomery indicated that he probably was not the best person to respond to the resource issue. Perhaps CDC's Chief of Staff (OCoS)., Sherri Berger, would be the best contact for that information. This SUDV outbreak started in the in Mubende Regional Referral Hospital (RRH) where a number of HCW were infected, which they think was due to COVID fatigue that resulted in a lapse in protocol and use of personal protective equipment (PPE). COVID has impacted CDC's response and the Ugandan response. There has been a lot of turnovers in staff. COVID has had a serious negative impact on the capabilities in Uganda and likely elsewhere, particularly with regard to COVID fatigue and staff turnover. It is amazing that Uganda has been dealing with Ebola outbreaks since the late 1990s and early 2000s and always have managed to keep these outbreaks small and within their borders. In terms of resources, CDC has been fairly well-positioned to respond to the current outbreak with the resources the agency does have. That does not mean that they do not need more resources. They have been using the Infectious Diseases Rapid Response Reserve Funds (Reserve Fund).

Dr. Fleming observed that the West Africa outbreak cross border spread into East Africa clearly was different and asked Dr. Montgomery to comment, in light of COVID fatigue, on the ability of the countries adjacent to Uganda or experiencing travel from Uganda to detect the arrival of this disease.

Dr. Montgomery indicated that they have limited capabilities, though CDC and colleagues in USAID have been building up Uganda's RRT structure and laboratory capacity. Again, this is a different species. Tools such as GeneXpert® that were developed out of the 2014-2016 West Africa Outbreak were great for Zaire but does not pick up SUDV. A lot of the surrounding countries have GeneXpert® and the ability to pick up Zaire, but not Sudan. CDC has worked closely with Africa CDC to enhance laboratory capacity to detect cases. The DRC has the capability through some assays that CDC has developed that they are using at CDC in-house and at UVRI, so they have that capability. Some of the other surrounding countries are using assays from the German government. Cross border screening, traveler's health, RRTs, and surveillance are all being scaled up and CDC is trying to provide support. However, other countries are also suffering from COVID fatigue and a lot of staff turnover. Since this outbreak started, there have been about 15 to 20 alerts in the surrounding countries. Fortunately, they all have been ruled out either directly or through samples.

Dr. Morita noted that this presentation reminded her of 2014-2015 in Chicago, which was identified as one of the 5 places for entry from West Africa. She asked whether there have been efforts to use that type of approach to prevent introduction of disease into the US.

Dr. Montgomery responded that CDC has an entire domestic preparedness component and already is funneling passengers into 1 of 5 airports. There has been significant scale-up of diagnostic capacity as well through the LRN. There are 11 RESPTCs, all of which are anticipated to be online for diagnostic capacity for SUDV as well. CDC has a high throughput in-house assay that they are scaling up and for which they will seek FDA EUA approval, which will allow for nationwide diagnostic capability through the LRN. This is somewhat different from COVID and MPOX due to the gravity and nature of Ebola, which is a high-consequence viral pathogen. For biosafety/biosecurity measures that are similar to those employed in 2014-2016, the approach is more focused. There already is good regional coverage for diagnostics and the agency has been actively engaged with various partners from the LRN, the Association of Public Health Laboratories (APHL), emergency medicine and physician

groups, CSTE, and other partners. While he focused on Uganda, there has been a big effort and scale up domestically as well.

Dr. Martinez inquired as to whether the public understands the difference between the SUDV and *Zaire Ebola*, particularly in terms of vaccine availability for *Zaire Ebola* that is not effective for SUDV, and in terms of lessons learned that could be taken to scale for public health messaging in the US.

Dr. Montgomery emphasized that this is a very important point. When this all began, most people likely assumed that there are therapeutics and a vaccine. This has been a major communications challenge domestically and internationally. CDC has focused heavily on making sure that there is an understanding that the current therapeutics and vaccines for Zaire do not apply to SUDV. He suggested to the IC for the Uganda Ministry of Health to focus on the basics (e.g., contact tracing, isolation, ample ETUs, diagnostics, et cetera).

Dr. Goldman observed that the deaths of HCWs highlights the communications challenge, especially in places that have such shortages of HCW.

Follow-up on Issues Raised During the Meeting

David Fleming, MD (ACD Chair) led the ACD members in an open discussion regarding their thoughts about this meeting in terms of what went right, what went wrong, what could be done differently, and how they should be thinking about the next meeting.

Discussion Summary

ACD members made the following observations during this session:

- The additional discussion time allowed members to provide more advice and feedback.
- Establishing an ACD Science Workgroup (SWG), a broad look at science and goes beyond Congressional language. A model is the National Research Council (NRC), which identified new and innovative ways to work.
- The DSW, HEW, and LW would like input in terms of the ongoing feedback with CDC and next steps and processes for workgroups.
- Establishing a Communication Workgroup (CWG). Communication is underpinning the work ahead of the three ACD workgroups, but some of the ACD members have experience in public health communications beyond risk and crisis communications. Addressing miscommunication is of particular importance. Rebuilding trust in CDC and public health is essential for the field and the work with which the STLT agencies across the system.
- Focus on long COVID, because people may not even understand the symptoms, they have are related to COVID. A more in-depth presentation to ACD on long COVID.
- The ACD extended an offer to weigh in on anything that may be helpful with CDC Moving Forward
- Hear an update on CDC integrating mental health and mental health inequities within its communicable and non-communicable disease work.

Closing Remarks / Adjourn

David Fleming, MD (ACD Chair) pointed out that his experience has been that advisory committees are most productive when they are giving advice to CDC on topics for which the agency wants advice. While some of it is about telling the agency some things they do not want to hear, it also is about asking how CDC thinks the ACD could be most useful to the agency. It would be important for the ACD to continue to be a part of the discussions around Moving Forward and the transformation CDC is undergoing. Early on, the ACD heard from Patti Simone about the workforce. This is critical and underpins much of the work that the ACD is doing. Dr. Walensky talked about the $3.9 billion that are about to be allocated to CDC. At a minimum, it would be prudent to hear an update on that and determine whether there is a role for the ACD to provide advice on effectively implementing that massive investment that will receive a huge amount of scrutiny.

The ACD needs to be consciously thinking in its agenda not only about what issues are new that they want to take on, but also how they can continue to provide input on recommendations they already have made to CDC. Therefore, include in the agenda follow-up reports from CDC on WG suggestions and ACD recommendations.

John Auerbach, MBA (ACD DFO) Given the proposals to consider establishing additional WGs, it will be necessary to determine the capacity to maintain the 3 existing WGs that have additional work to complete. It is important to ensure that the existing WGs not suffer from pulling resources to create additional WGs. Consideration also must be given to the bandwidth of the ACD members in terms of the creation of additional WGs. The 3 things that were done differently for this meeting came directly from ACD suggestions. The first change was that time periods were lengthened for the discussions to ensure that the members had time to express their opinions and ask questions. The second was for the speakers always to state the key questions for which they need immediate feedback from the ACD. The third area was to allow time for informal discussions among ACD members with CDC staff, not about policy issues but in order to get to know one another. All of this work is helping CDC at this particular juncture with the reorganization, cultural examination, and thinking about how CDC can be better. In addition to the regular ACD meetings and WGs, CDC will consider other vehicles through which input may be provided in a timely manner and that are consistent with the FACA rules.

With no further business posed or questions/comments raised, the meeting was officially adjourned at 12:00 PM ET.

Certification

I hereby certify that, to the best of my knowledge and ability, the foregoing minutes of the November 2-3, 2022 meeting of the Advisory Committee to the Director, CDC are accurate and complete.

1/19/2023
_____
Date

David Fleming
_____
David Fleming, MD
Chair, Advisory Committee to the Director
Centers for Disease Control and Prevention

Attachment #1: ACD Membership

CHAIR
David W. Fleming, MD
Clinical Associate Professor
University of Washington School of Public Health
Seattle, Washington
Term: 10-01-2021 – 06-30-2023

DESIGNATED FEDERAL OFFICER
Debra Houry, MD. MPH
Acting Principal Deputy Director
Centers for Disease Control and Prevention

MEMBERS
Adaora Alise Adimora, MD, MPH
Professor of Medicine and Epidemiology
Division of Infectious Diseases
University of North Carolina School of Medicine
Chapel Hill, North Carolina
Term: 09-27-2021 – 06-30-2025

Michelle A. Albert, MD, MPH, FACC, FAHA
Walter A. Haas-Lucie Stern Endowed Chair in Cardiology Professor of Medicine
Director, CeNter for the StUdy of AdveRsiTy and CardiovascUlaR DiseasE (NURTURE Center)
Associate Dean of Admissions
Division of Cardiology, Department of Medicine
University of California, San Francisco School of Medicine
San Francisco, California
Term: 09-27-2021 – 06-30-2024

Daniel E. Dawes, JD
Executive Director
Satcher Health Leadership Institute
Morehouse School of Medicine
Atlanta, Georgia
Term: 09-28-2021 – 06-30-2024

Cristal A. Gary, MPH
Chief Advocacy Officer
Ascension
Chicago, Illinois
Term: 09-30-2021 – 06-30-2023

Lynn R. Goldman, MD, MS, MPH
Dean and Professor of Environmental and Occupational Health
Milken Institute School of Public Health
George Washington University
Washington, District of Columbia
Term: 09-28-2021 – 06-30-2023

Rachel R. Hardeman, PhD, MPH
Blue Cross Endowed Professor of Health and Racial Equity
Founding Director
Center for Antiracism Research for Health Equity
Division of Health Policy and Management
University of Minnesota School of Public Health
Minneapolis, Minnesota
Term: 09-28-2021 – 06-30-2025

Octavio N. Martinez, Jr., MD, MPH, MBA, FAPA
Executive Director
Hogg Foundation for Mental Health
Senior Associate Vice President, Division of Diversity and Community Engagement
Clinical Professor, Steve Hicks School of Social Work
Professor of Psychiatry, Dell Medical School
The University of Texas at Austin
Austin, Texas
Term: 09-28-2021 – 06-30-2025

Rhonda M. Medows, MD
President
Providence Population Health
Renton, Washington
Term: 09-27-2021 – 06-30-2024

Julie Morita, MD
Executive Vice President
Robert Wood Johnson Foundation (RWJF)
Princeton, New Jersey
Term: 09-29-2021 – 06-30-2024

Nirav R. Shah, MD, MPH
Chief Medical Officer
Olea.Health
Palo Alto, California
Term: 09-27-2021 – 06-30-2025

Joshua M. Sharfstein, MD
Vice Dean for Public Health Practice and Community Engagement
Johns Hopkins Bloomberg School of Public Health
Baltimore, Maryland
Term: March 30, 2022 – June 30, 2023.

Jill Taylor, PhD
Senior Advisor for Scientific Affairs
Association of Public Health Laboratories (APHL)
Silver Spring, Maryland
Term: 09-28-2021 – 06-30-2023

Monica Valdes Lupi, JD, MPH
Managing Director for the Health Program
The Kresge Foundation
Troy, Michigan
Term: 09-27-2021 – 06-30-2024

Attachment #2: Acronyms Used in this Document

Acronym	Expansion
AAPM&R	American Academy of Physical Medicine and Rehabilitation Society
AARs	After Action Reports
ACA	Affordable Care Act
ACD	Advisory Committee to the Director
ACIP	Advisory Committee on Immunization Practices
ACL	Administration for Community Living
ADLSS	Associate Director for Laboratory Science and Safety
AFP	Acute Flaccid Paralysis
APHA	American Public Health Association
APHL	Association of Public Health Laboratories
ASPR	Agency for Strategic Preparedness and Response
ASPR	Assistant Secretary for Preparedness and Response
BCHC	Big Cities Health Coalition
BRFSS	Behavioral Risk Factor Surveillance System
CBO	Community-Based Organization
CCLs	COVID-19 Community Levels
CDC	Centers for Disease Control and Prevention
CFA	Center for Forecasting and Outbreak Analytics
CGH	Center for Global Health
CIOs	Centers, Institutes, and Offices
CMS	Centers for Medicare and Medicaid Services
COI	Conflict of Interest
COO	Chief Operating Officer
CFS	Chronic Fatigue Syndrome
CSPECE	Choose Safe Places Early Care and Education
CSTE	Council of State and Territorial Epidemiologists
CSTLTS	Center for State, Tribal, Local, and Territorial Support
CTG	Community Transformation Grant
DDNID	Deputy Director for Non-Infectious Diseases
DEI	Diversity, Equity, and Inclusion
DEIB	Diversity, Equity, Inclusion, and Belonging
DFO	Designated Federal Officer
DMI	Data Modernization Initiative
DoD	Department of Defense
DOT	Department of Transportation
DRC	Democratic Republic of the Congo
DSW	Data & Surveillance Workgroup
DUA	Data Use Agreements
EBOV-S	Ebola-Sudan Virus
EBOV-Z	Ebola-Zaire
ED	Emergency Department
EHR	Electronic Health Record
EJI	Environmental Justice Index
EOC	Emergency Operations Center
EPA	Environmental Protection Agency
ET	Eastern Time
EVD	Ebola Virus Disease

FACA	Federal Advisory Committee Act
FDA	Food and Drug Administration
GPEI	Global Polio Eradication Initiative
HCW	Healthcare Worker
HDS	Health Disparities Subcommittee
HEW	Health Equity Workgroup
HHS	(United States Department of) Health and Human Services
HiAP	Health in All Policies
HIV	Human Immunodeficiency Virus
HR	Human Resources
HRSA	Health Resources and Services Administration
HUD	US Department of Housing and Urban Development
ICU	Intensive Care Unit
IM	Incident Management
IMS	Incident Management Structure
IT	Information Technology
LRN	Laboratory Response Network
LW	Laboratory Workgroup
MMWR	*Morbidity and Mortality Weekly Report*
MoH	Ministry of Health
MPOX	Monkeypox
mRNA	Messenger Ribonucleic Acid
MSM	Men Who Have Sex with Men
NACCHO	National Association of County and City Health Officials
NCCDPHP	National Center for Chronic Disease Prevention and Health Promotion
NCEZID	National Center for Emerging and Zoonotic Infectious Diseases
NCHHSTP	National Center for HIV, Viral Hepatitis, STD, and TB Prevention
NCIRD	National Center for Immunization and Respiratory Diseases
NIH	National Institutes of Health
NHANES	National Health and Nutrition Examination Survey
NIHB	National Indian Health Board
NIOSH	National Institute for Occupational Safety and Health
NOFO	Notice of Funding Opportunity
NRC	National Research Council
NYTS	National Youth Tobacco Survey
OADC	Office of the Associate Director for Communication
OGC	Office of General Council
OLSS	Office of Laboratory Science and Safety
OEJ	Office of Environment Justice
OMHHE	Office of Minority Health and Health Equity
ONC	Office of the National Coordinator for Health Information Technology
OS	Office of the Secretary
OSTP	White House Office of Science and Technology Policy
PHAB	Public Health Accreditation Board
PHCC	Public Health Communications Collaborative
PHE	Public Health Emergency
PLACES	Population Level Analysis and Community Estimates
POB	Polio Oversight Board
PPE	Personal Protective Equipment
PrEP	Pre-Exposure Prophylaxis

PRA	Paperwork Reduction Act
REACH	The Racial and Ethnic Approaches to Community Health
RESPTC	Regional Ebola and Other Special Pathogen Treatment Center
RRH	Mubende Regional Referral Hospital
RRT	Rapid Response Teams
RSV	Respiratory Syncytial Virus
SAMHSA	Substance Abuse and Mental Health Services Administration
SDHE	Social Determinants & Health Equity
SDOH	Social Determinants of Health
SIREN	Social Interventions Research and Evaluation Network
SME	Subject Matter Expert
SNS	Strategic National Stockpile
SPH	School of Public Health
STI	Sexually Transmitted Infection
STLT	State, Tribal, Local, and Territorial
SVI	Social Vulnerability Index
TA	Technical Assistance
TAC	Tribal Advisory Committee
TOR	Terms of Reference
UK	United Kingdom
US	United States
USAID	US Agency for International Development
USCDI	United States Core Data for Interoperability
USG	United States Government
UVRI	Uganda Viral Research Institute
VE	Vaccine Efficacy
VFC	Vaccines for Children Program
WGA	Whole-of-Government Approach
WG	Workgroup
YRBS	Youth Risk Behavior Survey

Attachment #3: ACD Workgroup Meeting Minutes

Workgroup	Meeting Date	Minutes
Health Equity	September 12, 2022	https://www.cdc.gov/about/advisory-committee-director/pdf/September_12_2022_HEW_Minutes_FINAL_signed.pdf
	October 19, 2022	https://www.cdc.gov/about/advisory-committee-director/pdf/October_19_2022_HEW_Minutes_Final_Signed.pdf
Data and Surveillance	August 29, 2022	https://www.cdc.gov/about/advisory-committee-director/pdf/August_29_2022_DSW_Minutes_Final_Signed.pdf
	September 19, 2022	https://www.cdc.gov/about/advisory-committee-director/pdf/September_19_2022_DSW_Minutes_Final_Signed.pdf
	October 17, 2022	https://www.cdc.gov/about/advisory-committee-director/pdf/October_17_2022_DSW_Minutes_Final_Signed.pdf
Lab Workgroup	August 24, 2022	https://www.cdc.gov/about/advisory-committee-director/pdf/August_24_2022_LW_Minutes_Final_Signed.pdf
	October 18, 2022	https://www.cdc.gov/about/advisory-committee-director/pdf/October_18_2022_LW_Minutes_Final_Signed.pdf