



CDC Advisory Committee to the Director (ACD)

Minutes from the June 6, 2024, Meeting

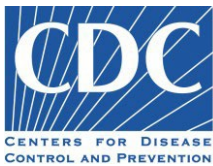


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Advisory Committee to the Director: Record of the June 6, 2024, Meeting

The Centers for Disease Control and Prevention (CDC) convened a meeting of its Advisory Committee to the Director (ACD) on June 6, 2024 via Zoom for Government and teleconference. The agenda included: 1) agency priorities and updates from CDC Director Mandy Cohen; 2) a presentation on heat and health; 3) Data and Surveillance Workgroup (DSW) update; 4) a presentation on laboratory readiness; 5) a presentation on social determinants of health (SDOH); 6) Communications and Public Engagement Workgroup (CPEW) update; and 7) a presentation on immunizations.

Welcome & Roll Call

Debra Houry, MD, MPH (ACD Designated Federal Official [DFO]) called the meeting to order and welcomed everyone. She noted that there are several vacancies on the ACD for which CDC is seeking new members. The deadline to submit nominations is July 8, 2024, and should include a cover letter, reference letters, and curricula vitae (CV)/resume. Application packages should be emailed to ACDDirector@cdc.gov mailbox. The subject line should read, "Nomination for CDC ACD." She invited members to encourage those interested to apply and to share the information with their networks. She then yielded the floor to the ACD Chair, Dr. David Fleming.

David Fleming, MD (ACD Chair) welcomed the ACD members, CDC leadership and staff, guests, and attendees. He then called the roll, which established that a quorum of ACD members was present. Quorum was maintained throughout the meeting. The roster of ACD members in attendance is appended to this document as Attachment #1. No conflicts of interest (COIs) were identified. Dr. Fleming then reviewed the meeting agenda.

Director's Update: Agency Priorities

Mandy K. Cohen, MD, MPH (Director, CDC) welcomed everyone and expressed gratitude to the ACD members for giving their time to this important advisory committee. Since the last ACD meeting, CDC has been focused on the 2024 priorities that she identified during the last meeting; its overall core mission of protecting health and improving lives; and the 3 externally-facing priorities and 1 internally-facing priority: 1) being ready for any health threat; 2) improving mental health, with a particular focus on reducing suicides and overdoses; 3) supporting young families; and 4) focusing internally at CDC to ensure that they are continuing from the chapter of Moving Forward into the One CDC effort.

Beginning with CDC's readiness work, the agency is focused with urgency on the avian influenza response. There has been considerable collaboration on this issue across the United States Department of Agriculture (USDA), Food and Drug Administration (FDA), CDC, and state and local public health and state and local agriculture partners. This highlights the importance of having the core infrastructure needed to respond to whatever health threats emerge. In the response efforts for avian influenza, CDC is in a very different place than at the beginning of the COVID-19 pandemic, through which many lessons have been learned. The agency has been investing in and doing work to be prepared for many years. CDC is able to use surveillance tools, such as emergency department (ED) data for 90% of the EDs throughout the country to assess what is occurring in real-time, and laboratory data can be utilized from large commercial laboratories to assess ordering patterns. CDC's National Wastewater Surveillance System (NWSS)¹ that has been used for COVID and Mpox is now being used in the avian influenza response. Similarly, there is a laboratory infrastructure with avian assays, and the agency is on a path to scale up to commercial availability for H5 assays. CDC is preparing even though no changes have been seen in the genetics of the virus. There have been 3 human cases, 2 of which had conjunctival and 1 that had respiratory symptoms. CDC is using all of the tools it has to build trust with the dairy industry to get and stay ahead of this virus. Early in the quarter, CDC released new respiratory guidance for COVID, influenza, and respiratory syncytial virus (RSV). There were numerous recommendations from the ACD regarding how to simplify the guidance and make it actionable. For instance, the updated school guidance discusses all the ways

¹ <https://www.cdc.gov/nwss/wastewater-surveillance.html>

schools can keep children in school, healthy, and learning. Also related to readiness, CDC released the *HeatRisk Tool*.² With 2023 being the hottest year on record, the *HeatRisk Tool* will help folks plan ahead, be prepared, and navigate through what will be another very hot summer. The *HeatRisk Tool* is linked to clinical guidance and patient toolkits.

On the global front, the US Government (USG) released *The United States Government Global Health Security Strategy (GHSS) 2024*³ that CDC was a part of and that aligns with CDC's *Global Health Strategy*.⁴ Dr. Cohen reported that she had the opportunity to participate in the launch of the GHSS and spent a couple of weeks in Africa visiting Kenya, Zambia, and Ethiopia seeing some of CDC's work. She was at the World Health Assembly (WHA) the previous week meeting with many of the agency's bilateral partners there. Some good news coming out of the WHA is that the International Health Regulations (IHR) amendments and consideration of lessons learned from the COVID pandemic continue to push forward. CDC's teams were in Kenya and the agency hosted Kenya's President Ruto at CDC in Atlanta. This was a special opportunity to show President Ruto first-hand how CDC does its work, which included a tour of the agency's Emergency Operation Center (EOC). In addition to good dialogue with President Ruto, new agreements were signed regarding how to continue to work together and sustain the work that CDC has invested in with Kenya.

With regard to mental health, Dr. Cohen spent most of May on the road for Mental Health Awareness Month. CDC released a new *2024 National Strategy for Suicide Prevention*.⁵ CDC Co-Chaired that effort with Substance Abuse and Mental Health Services Administration (SAMHSA). CDC's National Center for Injury Prevention and Control (NCIPC) has a new Director, Dr. Allison Arwady, who began immediately on the agency's suicide prevention work with respect to what CDC can offer in terms of data, expertise, and evaluation of best practices. Dr. Cohen emphasized that one of the things she loves about the *2024 National Strategy for Suicide Prevention* is the concrete commitments that folks made across the USG to this effort. The US is losing 50,000 people a year to suicide and needs to do better. The first of many strategies identified in this publication pertains to investing in community-based resources, for which she traveled to Nashville, Los Angeles, New York, and Birmingham to think through this issue. In terms of the overdose prevention space, the tide may have turned for the first time with a 3% decrease in overdoses. Even with this decrease, 100,000 people are still being lost to overdoses. The potency of street-grade products is incredibly high, and it is important to stay ahead of this. This is another area for which CDC's data and expertise come to bear, and for which the agency continues to allocate its Overdose Data to Action (OD2A) funding to support this effort.

With respect to young families, CDC is focused on ensuring that children get the best start of life and that parents are healthy. For this priority, there is a focus on childhood immunizations. CDC will be engaging in a back-to-school effort with a reminder about routine vaccinations, for which she would love to have the ACD's input. The good news is that the childhood vaccination rate is 93% nationally, but there are pockets in the country that dip into the 70% to 80% levels. Maintaining and increasing high levels requires a lot of hard work to build trust. CDC also is focused on investing resources in promoting positive childhood experiences (PCEs). The data on adverse childhood experiences (ACEs) are important in terms of how ACEs shape lifelong health patterns. CDC also is doing a lot of work around maternal mortality. In terms of African American maternal mortality, there is a large gap between Black mothers and White and Hispanic mothers. African American mothers are 2.5 times more likely to die during childbirth, which is unacceptable. There is a whole-of-government effort across HHS, and CDC is very much a part of that. CDC's data are driving the effort to address this, including prioritization and deployment of resources.

² <https://www.cdc.gov/heat-health/hcp/heat-forecasting-and-air-quality-tools.html>

³ <https://www.whitehouse.gov/wp-content/uploads/2024/04/Global-Health-Security-Strategy-2024-1.pdf>

⁴ <https://archive.cdc.gov/#/details?url=https://www.cdc.gov/globalhealth/strategy/default.htm>

⁵ <https://www.hhs.gov/programs/prevention-and-wellness/mental-health-substance-abuse/national-strategy-suicide-prevention/index.html>

The fourth priority is the agency's internally facing One CDC work. This involves embedding lessons learned from the pandemic and meeting the new moment of public health of being different as one CDC team. Most visible of this effort is the new website. There was a year-long effort called "Clean Slate" for the agency to rethink its footprint on the internet, which is how most people access information from the CDC. CDC launched Clean Slate to overhaul the CDC.gov website and streamline its content, archiving over 60% based on user patterns. Now people will be better able to find the information they are seeking to protect their health. Clean Slate is a work in progress, with user feedback continuing to be obtained. Another element of the internally facing work involves making large investments in, and setting a course for, CDC's data work. To that end, CDC launched its updated Public Health Data Strategy (PHDS).⁶ Dr. Jennifer Layden and her team in CDC's Office of Public Health Data, Surveillance, and Technology (OPHDST) have done impressive work to align across the agency to help ensure that there is an enterprise way of thinking about data to be effective and efficient. It is important to ensure that CDC's data standards align with what hospitals and doctors are already doing in terms of interoperability. CDC continues to work on laboratory strengthening and is rolling out a quality program across all laboratories. This is an area that needs continuous resources, so Dr. Cohen has spoken to The Hill about core capacities. They are making an effort to look at resources in a disease-agnostic way to be more effective, efficient, and ready no matter the health threat. There also are efforts underway to ensure that CDC is viewed as the best place to work. One change is to make sure that more staff are working in-person in order to be one team, and there is ongoing work to ensure that CDC is recruiting and retaining the best possible talent available to carry out the agency's mission. CDC has an incredible mission and needs incredible talent in order to power that mission.

In closing, Dr. Cohen said she was looking forward to working with the ACD and the new CPEW and could foresee many opportunities going forward.

Discussion Summary

Dr. Morita expressed appreciation for the update on the priorities, progress, and what Dr. Cohen has brought to the agency. There was anticipation that Dr. Cohen could work across the federal government with other agencies and that she is lifting up, celebrating, and acknowledging the data and data expertise at CDC, which is core and fundamental to what CDC does, its strengths, and its added value in working in partnership with other federal agencies. Dr. Morita emphasized that the DSW has taken to heart the One CDC approach related to data and expressed appreciation for how Dr. Cohen has championed that, because the only way that is going to work is through Dr. Cohen's support and encouragement.

Dr. Cohen highlighted that there is a lot of "team sport" effort across government in terms of thinking about how public health and healthcare can align. More engagement is being done on the Centers for Medicare and Medicaid Services (CMS) side to ensure that payment levers reflect the data and evidence that are being generated by CDC, and she is excited about the progress there. There is still work to do in terms of the data enterprise. While she is certainly a champion for this, she recognizes that this will not happen overnight. Although some change management work is required internally, she feels good about the alignment they are getting externally from the CDC.

Dr. Fleming emphasized how great Dr. Layden has been in terms of the work she has been doing to provide additional input to the DSW.

Ms. Valdes Lupi requested further information about the large gap in infant mortality between Black mothers and White and Hispanic mothers, and what efforts are being made to raise awareness and provide education regarding H5N1 among those who are working on farms, who tend to be from diverse communities.

⁶ https://www.cdc.gov/ophdst/public-health-data-strategy/index.html?_cid=mda

Dr. Cohen indicated that in terms of the infant mortality gap, an Action Guide was published that focuses on ways to continue to make progress in closing this gap. Avian influenza is challenging. While the dairy industry has not experienced avian influenza, the agency has been applying lessons learned from its work with agriculture partners in poultry for many years. While the work with the dairy industry is not necessarily the same, it is similar. CDC has engaged in considerable outreach with farm worker advocacy organizations. Dr. Cohen expressed gratitude to United States Department of Health and Human Services (HHS) Secretary Becerra, who recorded a number of messages in Spanish for the dairy industry. CDC also is disseminating a considerable amount of information from its Health Resources and Services Administration (HRSA) partners, who run Farmworker Clinics. CDC also is using paid advertising through social media to raise awareness in targeted areas to encourage folks to protect themselves and use protective equipment around cows and raw milk. Information is being disseminated to the broader public about concerns regarding consumption of raw milk, and to convey that pasteurization works and pasteurized products should be consumed. More needs to be done with farms individually, and CDC wants to do more to partner with dairy farms. The agency has built trust with the poultry industry over many years. Dr. Cohen commended the USDA for putting in place a financial compensation program for farms to test their cows and recognized that more work is needed in terms of the linkage between human and public health.

Dr. Sharfstein asked what the CDC has learned in terms of the responses to COVID and avian influenza, and whether in terms of behavioral work the agency has been able to work with the SAMHSA 988 program to help analyze those data and assess how they link to the challenges. The 988 system is an interesting and important step forward for access to services.

Dr. Cohen responded that while there is always work to do in terms of lessons learned, CDC's focus is on readiness and core capacity. The capacities built for COVID are being used in the avian influenza response, along with real-time ED syndromic data, the NWSS wastewater infrastructure data, laboratory data visibility, enhanced genomic capabilities, and extensive influenza infrastructure that CDC has invested in for decades. There is a lot of coordinated response within CDC and across HHS and the USG. Although there are various perspectives on how to do the work, there are daily calls across the USG to make sure there is coordination, including with states. Simple, actionable information is disseminated with an emphasis on that information being what is currently known, and that the virus could change. Investments that have been made in core resources helps to go further. It is difficult to scale up testing to commercial laboratories without resources. CDC was able to allocate approximately \$90 to \$100 million in order to handle the avian response because they were able to repurpose dollars post-COVID. That flexibility will go away in the next year to 18 months. Dr. Cohen has been talking about how to mobilize funds before there is an emergency. Avian influenza is not yet an emergency, but CDC does not have the ability to access the rapid response funds in order to respond. It would be beneficial for the ACD to help think through and articulate this. There are areas for which the authorities and the ability to mobilize resources has been challenging, and there are opportunities to keep issues from becoming an emergency if funds could be mobilized faster during an emerging threat as opposed to during an emergency.

Dr. Houry indicated that CDC has been fortunate to work with SAMHSA for almost a year to help with the continuity between CDC and SAMHSA around 988. CDC and SAMHSA are co-leading the *National Strategy for Suicide Prevention*. The 988 data are part of the robust evaluation plan for that. Internally, CDC is looking at its dashboards on mental health and is working to be able to better present information on fatalities, ED data, and other utilization.

Dr. Gayle commended Dr. Cohen on how much she has been able accomplish in a short period of time, recognizing that it is not easy and likely has been exhausting. She asked Dr. Cohen to speak more about the biggest obstacles and opportunities. When she heard Dr. Cohen speak to the Atlanta Chamber of Commerce, it was interesting to hear about CDC's partnerships with the private sector and some of the opportunities in this

area. She also observed that November is going to be monumental one way or the other, and that CDC used to be a lot more immune from the blowing of political winds. Given that this is no longer the case, she asked Dr. Cohen what she is thinking about preparing for whichever way the November election goes and, to the extent possible, of keeping CDC moving forward regardless of what path is taken.

Dr. Cohen replied that in terms of obstacles, there are a lot of small line items in the CDC budget. That makes it difficult to invest across the enterprise in terms of core pieces of infrastructure, such as data capacity, laboratory capacity, and workforce in alignment with prioritization. The global and response work fit into the response work as well. There are no line items for wastewater, which is an infrastructure spanning 2 CDC centers. It is run out of CDC's National Center for Emerging and Zoonotic Infectious Diseases (NCEZID), but it is being used for respiratory pathogens and Mpox. Looking at core infrastructures from the budget, flexibility, and authority perspectives, CDC is the response agency for health security for the nation. This means that issues are going to arise that require mobilization of dollars and people. CDC's budget, authorities, and structure must reflect that. While Dr. Cohen does not think the agency is quite fit-for-purpose yet, she thinks they can do everything possible within the guardrails of the constraints. There is more to do in the next number of years in terms of the authorities and budgets to ensure that CDC can respond to any health threat that occurs. Private sector partnerships are extremely important in terms of obstacles. There are always going to be limitations on what the CDC can and should do, but leveraging innovations and partnerships in the private sector and helping partners prioritize their work is crucial. CDC has to be clear in conveying information about the pathogens of top priority, the diagnostics they would like industry to consider, and what large and small employers should do to keep their workforces healthy. She spent time in Los Angeles kicking off the Milken Institute Global Conference with Michael Milken talking about this exact topic. Dr. Cohen welcomed thoughts from the ACD on how to leverage more partnerships. To touch on the question about November and transition, as the CDC Director, the law changed related to Senate confirmation. The FDA and the National Institutes of Health (NIH) are deep research and scientific institutions, which aligns CDC where those other parts of HHS already were. CDC is going to stay focused on its work and priorities that resonate on both sides of the aisle, which keeps things going. She has had no conversations on The Hill in which people did not understand why CDC is focused on readiness and response, improving health, and supporting young families. She feels good about those priorities meeting the moment of what the country needs and also meeting the moment of bipartisan support that will help the organization navigate, if there is a transition, because these are universal priorities that will allow the agency to continue forward into the future.

Dr. Fleming said he thought that the ACD could provide input and advice on ways to make the message clear across the political spectrum about CDC's critical role.

Dr. Martinez expressed concern about the Supreme Court of the United States (SCOTUS) anti-affirmative action decision last year and the anti-diversity, equity, and inclusion (DEI) laws and efforts that are occurring that make it even more challenging to ensure that the workforce is diversified. He asked Dr. Cohen's thoughts on navigating this new landscape to ensure that the workforce represents everyone.

Dr. Cohen said CDC very much believes that a diverse workforce makes the nation stronger. She is very proud that CDC is one of the most diverse workplaces not only just within HHS, but also within the government overall. Of course, there is always more work to do. The Public Health Associate Program (PHAP), Epidemic Intelligence Service (EIS), and fellows training programs allow CDC to attract a very diverse talent group. CDC's job is to retain them. These programs are comprised of diverse individuals coming out of college who may not have a background in public health, but CDC can get on that trajectory. The agency started a Public Health AmeriCorps again, bringing in a very diverse workforce. There have been some small wins in terms of authority to convert those folks to fulltime, which helps from a pipeline perspective. CDC invests a lot in training and Dr. Cohen has been spending a lot of time internally focusing on the young professionals at CDC. They have meet-and-greets

and conversations about how to build skills and building a career. There is always more to do and there are challenges. For instance, it is known that more Hispanic and Latino persons need to join the CDC team, which is an area focus for the agency this year. CDC has longstanding connections with Historically Black Colleges and Universities (HBCUs), and Dr. Cohen believes they need to have more connections to Latino and Hispanic academic institutions. The ACD can provide thoughts and suggestions on how CDC can continue to do better in this respect.

Dr. Taylor reminded everyone that one of the recommendations the Laboratory Workgroup (LW) made to the ACD regarded the administrative processes for personnel, which they observed were not particularly supportive of recruitment or retention. The LW suggested having a career path within CDC for laboratory personnel so that they do not have to move to another area in order to be promoted. Given that a workforce with a variety of experiences is essential to what CDC does, she asked Dr. Cohen to talk about the administrative challenges. While these were put in place for the right reason, they have side-effects that are not good.

Dr. Cohen said she thinks that streamlining CDC's laboratory workforce is very important, particularly given that they are the backbone of generating the data and the expertise that drive the agency's ability to respond. In some ways, being pathogen-focused has kept CDC siloed and made it harder for folks to find career paths forward. The agency is looking at ways to think about enterprise solutions for its laboratories that also allow folks to get experience in various pathogens, high throughput platforms, and running large laboratories in a way that is more similar to state public health laboratories. CDC attracts folks who want to work on unusual pathogens and conduct research and surveillance. CDC also is a diagnostic entity, so they are trying to balance that. In terms of career pathways, there is a lot of work underway within the agency focused on improving quality and effectiveness and better aligning across CDC which informs how folks think of career paths and trajectories.

Dr. Medows commended Dr. Cohen and emphasized the ACD's unanimous support for all of the work she and the agency are doing.

Dr. Fleming observed that there is still confusion among the public about COVID vaccination, for which the new Community and Public Engagement Workgroup may be able to provide input. It is unknown when the virus will settle down and a routine immunization schedule might be established. He asked Dr. Cohen to speak more about what CDC and other federal agencies are doing to express more clearly to the public the reality of that uncertainty and provide an explanation for the continued confusion. In particular, new vaccines become available but new viruses and strains circulating are not responsive to the new vaccines, which creates a lot of confusion and distrust in the system.

Dr. Cohen responded that COVID is changing faster than influenza virus. The Vaccines and Related Biological Products Advisory Committee (VRBPAC), which is run by the FDA and in which CDC participates, had a robust conversation regarding new emerging strains and the need to pick the most ideal strain. But thought also must be given to the practicality of manufacturing, communicating, and getting folks vaccinated. There was an effort in the COVID guidance to simplify and streamline the guidance to the things they believe save the most lives, chief among them being vaccination. It is important to make clear that COVID, influenza, and RSV vaccines save lives. CDC signaled in March that there would be updated COVID vaccines in the Fall and that people should prepare to get their updated COVID vaccines. It is true that COVID has not settled into a clear seasonal pattern the way influenza has. There is likely to be a summer increase as in every summer previously. Because the virus changes so fast, it adds to the inability to make seasonal predictions. CDC is trying to signal as early as possible in the year what is anticipated to occur. In terms of private-public partnerships, a message Dr. Cohen would love the ACD to carry to the private sector is that influenza and COVID vaccines should be offered together and should get into behavior patterns. There will be a communications campaign from HHS around vaccination for

this Fall season, but communication is more complicated because of the need to talk about both influenza and COVID. These are tough messages to transmit in 10-second sound bites. CDC is working hard to test messages and creative ideas. This is one reason the new CPEW is so critical, and Dr. Cohen looks forward to working with them.

As the session came to a close, Dr. Fleming thanked Dr. Cohen for the update and expressed appreciation for the great and hard work she and the agency are doing.

Dr. Cohen thanked the ACD and noted that they would hear from CDC leaders throughout the day about the hard work that is underway at CDC to improve health and protect lives.

Heat and Health

Aaron (Ari) Bernstein, MD, MPH (Director, Director for the National Center for Environmental Health and the Agency for Toxic Substances and Disease Registry [NCEH/ATSDR]) provided a presentation on heat and health in terms of what CDC is doing to enhance its preparedness with regard to heat. What is interesting about heat is that while the focus tends to be on mortality and heat-related illness (e.g., stroke and heat exhaustion), people who work at the health department level will say it is people with substance use disorders (SUDs), people without housing, and people who lose power whose lives depend on electricity. There are spikes in suicide, violence, and cardiovascular issues with heat events. There also is emerging evidence that many of the most common anti-hypertensive medications prescribed for blood pressure and medications prescribed for mental health disorders can increase the risk of harm with the combination of heat exposure. In terms of child learning, there are good studies regarding national and international testing showing that if one takes a test on a hot day, they will perform less well. There is a huge equity gradient there because people who have access to air conditioning are not equally distributed across the population. It also is quite clear that heat is potentially a risk for worse pregnancy outcomes. CDC takes heat seriously. The evidence suggests that it is going to get hotter in years to come, so CDC wants to make sure the agency is meeting that challenge the best it can.

There are good weather forecasts, but the challenge with these is that it is not entirely clear how hot is too hot for health. Heat alerts that have been historically given and are given for many parts of the country now by the National Weather Service (NWS) are not health-based. They are based on percentiles of temperature, meaning that an arbitrary cutoff is made at the 85th percentile for the distribution of temperature for the entire year. There certainly is customization to that, but it is not based on health outcomes. The issue of how hot is too hot for health is critical, and Dr. Bernstein said he was happy to report that progress has been made on this.

Typically, when there is a heat alert issued by the NWS, it is picked up by broadcast media and is posted on social media. However, it is not at all clear whether those communication channels actually reach those who are actually dying in heat waves. Last summer in Maricopa County where Phoenix is, about 700 people died. These were overwhelmingly people who were unhoused and/or had SUDs. It is not clear that these communication pathways are reaching these people. Cooling centers have been well-shown not to be located in environmental justice communities. It is known that in many places, people have not been to the cooling center that is nearest to where they live and may not be the most likely place they would go. There also is substantial evidence that in heat waves, even when buses become free, people stand out in the heat waiting for the bus. CDC is working to address some of these issues in its work, including launching a suite of heat activities beginning on Earth Day, which Dr. Bernstein described briefly.

The things that matter most are within the individual in terms of age, medications they are taking, whether they have chronic medical conditions, whether they have or can afford air conditioning, if they are able to get to safety, and if they have people to check on them to make sure they are safe. These are noble but are hard to know from a public health leader's perspective. It turns out that clinics around the country, through social

determinants screening, are asking about utility security. They certainly know individuals' ages, medications, and medical conditions. CDC designed a suite of resources that are based upon the Asthma Action Plan,⁷ which is an incremental step-by-step guide for what one should do if their asthma symptoms act up. CDC created Patient Tip Sheets and Action Plans for a starter set of conditions that are known to increase risks from heat, including heart disease, asthma, asthma for teens, caregivers, and pregnant women.

The foundation of these documents is to create a tailored path to safety that will work for the individual, meaning that if one needs to stay cool, it might be a cooling center, a neighbor's place, church, or shady area near a fountain in a park. If none of those are available, there are specific call-outs about who could check on someone in a heatwave and then that can be documented in the medical record so that there are at least a couple of places where people can find a way to contact and check up on that person. They also have built upon the foundation of a mantra of actions: Stay Cool, Stay Hydrated, and Know the Symptoms of what heat can do to an individual. When medical providers are asked what the symptoms are of being overheated, the standard overheated answers are provided (e.g., headache, nausea, heavy sweating). For people with chronic conditions, the first symptoms are likely not those but are symptoms of their disease. One of the first symptoms of someone with diabetes getting overheated is blood sugar control will worsen. Someone with asthma might have more asthma symptoms. Knowing the symptoms is important because it enables proactive behavior before someone winds up getting so sick that they are in trouble.

Number 4 on the Fact Sheets is to check the air quality. There can be hot days with fine air quality and cold days with terrible air quality, but days with heat and bad air quality are much more dangerous than days with heat alone. Because of the increasing incidence of wildfire smoke, at night when people open their windows to let in air into their home, that may not be the most adaptive action. CDC is mindful that they need to think in an integrative way about these risks. Again, one of the fundamental aspects of this work is to give people a path to safety that is in place before the heat event happens. Doing this in the moment can be highly challenging.

This approach has been vetted in the domain of asthma and is reaching an audience that has not been fully engaged in this work. CDC partnered with Health Resources and Services Administration, Federally Qualified Health Centers (FQHCs), and charitable clinics to push into the provider community and clinics that are known to serve people without housing, people with SUDs, farm workers, and other high-risk communities. There are still the challenging questions of, "How hot is too hot? When do we know when to take these actions?" Over the past 6 years, there has been an extraordinary partnership between CDC and National Oceanic and Atmospheric Administration (NOAA) to develop the first national scale health-based heat risk forecast, which is called *HeatRisk*.⁸ On this page, people can enter their zip code to get a 7-day forecast and the unique relationship between heat and outcomes in their county, along with actions people can take to keep themselves and their families safe. Recognizing that counties are not homogenous, work is being done to reduce the spatial resolution on this. Many states have started to move forward to more spatially-resolved heat and associations in big cities. For instance, there are several climate zones in Los Angeles that are very different in terms of temperatures.

With *HeatRisk*, there is now an incredibly powerful foundation to give people the opportunity to plan, including an individual with a chronic condition, healthcare providers, someone in a public health office trying to allocate resources, et cetera. This tool enables a level of planning that is potentially much more effective and that is risk stratified. Each color represents an increment in the relationship between heat and health in a particular location.

Since the *HeatRisk* tool was launched with the guidance on Earth Day in April, there have been well over 100,000 hits to that dashboard. There has not been a commensurate response in terms of looking at the guidance.

⁷ <https://www.cdc.gov/asthma/action-plan/documents/asthma-action-plan-508.pdf>

⁸ [cdc.gov/heatrisk](https://www.cdc.gov/heatrisk)

Therefore, Dr. Bernstein said he wanted to solicit thoughts from the ACD about how CDC can do better at getting these tools out through the ACD members' networks, including public health agencies, and consortia of health clinics that serve at-risk populations. CDC is always interested in getting feedback from providers, particularly on guidance documents. The agency has done a good job of getting engagement from a variety of stakeholders, but always would welcome others. It is known that providers need to have things integrated into their work streams to be most effective. The agency welcomes thoughts on how to better integrate the *HeatRisk* tool into electronic health records (EHRs) and that it is incorporated into existing weather apps where people are already getting temperature and air quality forecasts.

In closing, Dr. Bernstein posed the following questions for discussion by the ACD:

- How can we get these tools and guidance out through your networks?
- How can we get feedback from healthcare providers?
- Who else, outside government, should we engage with to address heat and health?
- How can we integrate this into EHRs, apps, et cetera? Where else should this be incorporated?

Discussion Summary

While the agency also is working with FQHCs and community health centers, she also worries about those who are not actually making it to clinics and healthcare providers (HCP). Much was learned from COVID in terms of the value of partnership with community, understanding the issues, and helping identify solutions that would be most impactful. She wondered whether CDC had explored that avenue as well in terms of reaching the most impacted communities. HCP serve one level, but they do not get deep into community. This has been observed with every public health emergency and with COVID in particular, this became clearly apparent. In terms of the questions Dr. Bernstein posed to the ACD, professional organizations have been incredible partners with public health in the past. They have been incredible sources for dissemination of public health information. She suggested exploring those at the national and state levels, given that there are state chapters of many of these organizations that can penetrate into communities and HCP that may not be connected elsewhere. Dr. Morita emphasized that her comment was not meant to dismiss all of the work that has been done and the incredible value of that work.

. Community design is so important, because it turns out that people can do quite well if there is green space set aside for community gatherings.. The healthcare center where this was released was the Brentwood Health Center in the District of Columbia (DC), which has the largest population of homeless people in the City of DC in its care. The FQHCs and the free and charitable clinics have specific programs that reach into these communities—in many ways more effectively than public health agencies and non-profits can. One reason CDC focused on this is because there has been so much work already in cities that have moved from the paradigm of creating centralized cooling centers and to a localized approach to heat resilience that is based upon the science showing that people who die in a heatwave are those who do not have access to air conditioning, are immobile, and/or are socially isolated. These cities have created local buddy systems through community organizations or places where people already are engaged. CDC has approximately \$10 million to support this work. States have been utilizing opiate funds to support this issue, but CDC does not have the resources to support states. CDC's best role is to support state and local partners, particularly the local partners who are doing the great work of trying to find creative ways to reach those most at risk. While the health sector is not uniquely well-equipped to do this, they have been untapped, which is where the opportunity lies. Clearly, the foundational public health infrastructure needs to be supported more. However, CDC's role there is very different, which is to give support to them and listen to them. Most of the ideas are bubbling up from state and local partners. CDC does work with professional associations such as the American Academy of Pediatrics (AAP) and the American Medical Association (AMA) and has learned clearly that providers are not able to absorb this. Heat is idiosyncratic and it is difficult for providers to institute a plan for preparedness in the midst of everything else they must do.

Dr. Morita emphasized that it is a whole public health issue that has not embraced and supported the kind of community support that is necessary for any kind of public health emergency, and they have seen the impact this can have during COVID.

Ms. Valdes Lupi indicated that as soon as The Kresge Foundation learned about the tools, they pushed them out through their Climate Change, Health & Equity (CCHE) initiative partners. The CCHE is a 5-year initiative between the Health and Environment Teams at The Kresge Foundation and 14 community-based non-profit organizations. Providers include grantee partners such as the Medical Society Consortium on Climate and Health (MSCCH), the Alliance of Nurses for Healthy Environments (ANHE), Health Care Without Harm (HCWH), and Essential Hospitals Institute. If there is interest from CDC, the Kresge Foundation could dive deeper with the partners that are part of the CCHE Initiative. She noted that she had joined the ACD meeting from the Grantmakers In Health (GIH) conference in Portland, Oregon where The Kresge Foundation would be hosting a post-conference session on Friday on the impacts of climate change on health and the necessity of building climate resilience. They will continue to promote and amplify all of the messaging and tools that CDC is developing.

Dr. Bernstein thanked Ms. Valdes Lupi for the information. He indicated that one tool that Dr. John Balbus who directs the HHS Office of Climate Change and Health Equity (OCCHE) helped CDC develop is a new Heat and Health Index (HHI) that was recently released. This is a zip code-level tool that looks at the number of ambulance calls in a particular zip code on hot days and adjusts for the social determinants. This is a major step forward because it is known that the same temperature does not mean the same thing in Bangor, Maine and Biloxi, Mississippi. However, the health status of a population, the racial and ethnic composition of a population, and other variables matter to how dangerous heat can be. The HHI creates an apples-to-apples comparison nationally in order to understand how much social determinants influence heat risk in real-time. The nice thing about the ambulance data is that it is very spatially resolved and is almost in real-time. CDC has had conversations with the GreenLatinos and is eager to engage the right stakeholders around this, because it shines a critical lens on the heat issue that it is the social determinants that are hugely influential. The HHI tool can help to objectively see that in a way that was not possible before.

Dr. Sharfstein praised the coordination with the NWS in terms of having an objective and sophisticated means by which to convey heat alerts. His answer to how to reach the clinical community is that local health departments play a critical role and should be engaged in this. As a local Health Officer, he has various relationships with the local health community. He asked what key tools CDC has. Certainly, the map is great. By sending out alerts, they received an immense amount of news coverage in Baltimore. That is good for people who listen to the news or the radio, but it is also good to show up in someone's office to ask if they can open their senior center on the weekends because it is the only air-conditioned place in an area. It is beyond just what the health department does. He asked what CDC is doing for under-funded health departments to have an easy set of actions they can take to have an impact in this area.

Dr. Bernstein responded that the *HeatRisk* tool is color-coded, which is important because it is now risk-stratified. The only people who are going to know that the more tailored approach can be helpful are probably health providers and perhaps the individuals themselves, because these people are not common in the community. The reason CDC is trying to build a bridge between health departments and the medical community is by branching to some sector (secular, public, or otherwise) to be the outreach arm. The act of simply reaching out can save lives. He met the State Health Office from Utah, which is just now going through its first heat wave. She said they do not have messaging, which CDC has and is one of the ways the agency has been supporting state and local health departments. Messages are always best tailored to the local context. During the hottest 3-week period in Boston's history last summer, a Boston resident wrote an Op Ed for the paper saying, "Bring it On," which was about how it was always cold there and how great the heat was. Bostonians do not curtail

events in the summer in the afternoons. They do not care whether it is going to be sunny or cloudy. People in the South, not so much. Therefore, the messages have to understand what the normal behaviors are for people in a community. Compelling work has been done through health departments and clinics that try to reach people through communication.

Dr. Sharfstein asked whether Dr. Bernstein had a sense of what basic actions local health departments should be taking in terms of heat and more generally, how much coverage there is in areas where heat is an issue. Is it 2%? Is it 85%? Is the local health department seen as the key unit of authority?

Dr. Bernstein said he did not think that national-level assessment data are available even for whether various locations have heat plans in place. In terms of basic actions, the number 1 action is a heat plan. Most large cities have those now and continue to iterate them. CDC did some work with the Association of State and Territorial Health Officials (ASTHO) to try to get a sense of what those plans cover. Most of the plans are still using the paradigm model he showed. There is a heat alert, communication is done through mass media, and cooling centers are opened. Many cities throughout the country are now pushing that down to the local level to make it a community-based response. That is the paradigm that CDC is supporting. One of the best things the agency can do is support the best practices through grants. The challenge pertains to what limited support CDC has to give.

Dr. Sharfstein emphasized that Dr. Bernstein has a great vision for this and that there may be ways to go through recognition programs or cohorts that CDC could bring together, and collaboration with the National Association of County and City Health Officials (NACCHO) and others, to try to spread what a good heat plan would be to as many places as possible.

Dr. Martinez asked whether the Tip Sheets, dashboard, et cetera are being translated into other languages. In Texas, Spanish local television and radio stations could benefit from the dashboard and would be a great way to get the message out. He did not hear much about how to address rural communities and wondered whether CDC had thought about utilizing Advanced Health Education Center (AHEC) networks, which train Community Health Workers (CHWs).

Dr. Bernstein said he did not think they had reached out to AHEC at this point, which would be a terrific partner in this effort. He noted that the evidence suggests that rural areas have higher rates of heat-related mortality than urban areas. The paradigm of the cooling center does not translate well to rural areas. The work CDC has done has greater benefit to urban areas where there are more people, but there is a huge amount of work to do, particularly among the farmworker community. As Dr. Cohen mentioned, Secretary Becerra has particularly pulled together an all-of-government approach to that. CDC is trying to figure out the best rural paths as well.

Dr. Fleming expressed appreciation for the point Dr. Bernstein was making about individual risk factors, and particularly that medical risk factors may be one of the best predictors of people who need to be reached during a heat warning. The Tip Sheets appeared to be oriented toward providers, but he wondered if CDC had thought about cross-walking or simplifying those for others in a community, such as community-based organizations (CBOs), that are seeing people during a heat crisis who may have one of these medical conditions and need to be appropriately counseled.

Dr. Bernstein indicated that CDC has other resources that are largely pictograms with minimum text, and resources that are intended to be handed to an individual by a provider or someone else that are intended to be very high-level, with the mantra being "Stay Cool. Stay Hydrated. Stay Informed (know the signs)." They need to find the best spaces for that kind of information. CDC has had very high-level guidance regarding heat for a long time; however, they do not find that it has been very effective. That is because it does not give people tips for

how to stay hydrated or how to stay cool. The Tips Sheets try to delve further into that, but this is where they need feedback in terms of the level of information to include.

Dr. Fleming suggested that perhaps working with homeless shelters or social service agencies to find out what would work best for them could be beneficial.

Dr. Gayle emphasized how great this work is. Having this type of quantifiable dashboard is a huge step forward. She agreed with others who suggested that CDC continue to think about how, outside of health departments and health facilities, this message can be disseminated. She thinks that many people have no idea about the impact heat has and that there is a deep need to get that information communicated. School systems might be one venue through which to distribute knowledge and preventive information—not because children are particularly vulnerable, but children learning about these issues can make a big difference for families.

Dr. Bernstein indicated that while CDC has done a lot of work with schools, this presents an opportunity to do more work. The *HeatRisk* tool could help schools plan sporting events, recess, days on which exams should be given, et cetera. In terms of mortality, people over 85 are more likely to die due to heat. To be clear, heat is likely a cause of infant mortality, adverse pregnancy outcomes, and, he would argue, adverse childhood experiences (ACEs) that carry lifetime health risks. The message that heat most affects the elderly is a very narrow lens of understanding. Particularly as a pediatrician, Dr. Bernstein is mindful that looking in an aggregate way across the lifespan, heat probably has its biggest effects starting in infancy and even in pregnancy. Because death is measured, that tends to be the focus. The performance gap between Black and White students on high stakes exams, such as the New York Regents Examination, is a substantial component of the temperature the day of the test and the week before. It is very clear that Black students do not have equal access to air-conditioned schools as White students. Thinking about not passing a high stakes exam and what that does to one's life, eliminating any fraction of that risk would be worth it. This seems like an easy public health intervention. There have been numerous conversations around schools and this issue, especially as it gets hotter. Schools in the North are designed for heating, not cooling. There is a lot of good work around greening school yards. Schools can be cooled off a lot simply by planting trees and greenspace that reduces heat. CDC is very interested from a school and learning perspective and in terms of disparities.

Data and Surveillance Workgroup (DSW) Update

Julie Morita, MD (Co-Chair, DSW) reminded everyone that when the DSW was first established, it had specific Terms of Reference (TOR). Earlier in 2024, the DSW received some guidance from the CDC regarding their narrowing of the focus and the desire for the DSW to focus on a particular direction. Therefore, the TOR were updated earlier in 2024. The 3 key factors that influenced this pivot were that: 1) CDC recognizes the proliferation of disparate data reporting systems within the agency; 2) there is fragmentation that hinders efficient data management, analysis, and timely decision-making; and 3) streamlining and consolidating reporting systems could improve system effectiveness and efficiency. This meant that the DSW's charge changed. The questions the DSW has been tackling over the past 6 months include the following:

- How can CDC implement a process to comprehensively assess data reporting systems aiming to enhance sustainability, alleviate partner burdens, and minimize potential redundancies?
- How can this process streamline the technical, system, and procedural aspects of CDC's data reporting systems, while establishing clear criteria for identifying and eliminating redundancies?

There is a clear focus on the DSW providing some reflection and guidance to the ACD to consider for recommendations to CDC on how they can implement a process that will result in more streamlined systems that are less burdensome to external partners and that will improve efficiency and effectiveness overall. Over

the past 6 months, the DSW has been hearing updates from various groups within CDC and from some of the downstream players who are heavily impacted by the systems that CDC develops. The Office of the Chief Information Officer (OCIO) staff reviewed current data reporting systems, migration of data to the cloud, ongoing efforts to streamline and consolidate or rationalize systems, and the information technology (IT) data governance process they have been putting in place. Tennessee Department of Health (TDH) staff described redundancies in national notifiable diseases reporting mechanisms and the burden that it places on state, territorial, local, and tribal (STLT) agencies. There is good representation of current and former STLT Health Officials who have validated the concerns raised by the TDH in terms of the true burden that is carried by STLT agencies to comply with what is asked for by CDC. Immediate Office of the Director (IOD) staff described the military closure model, Base Realignment and Closure (BRAC), as a potential approach for data system rationalization. The thought was that this model might be useful for the DSW to think about how they can engage with and provide some insights and reflections about the data system rationalization process. OPHDST staff described the Hospitalization Data Sprint as a successful example of system streamlining, consolidation, and modernization prioritization.

In terms of next steps and to lift up some examples of common themes that have emerged, the DSW plans to assess the hospital system sprint rationalization framework as a potential model for streamlining, consolidating, and rationalizing other disease reporting systems. The DSW also plans to identify criteria for a general system rationalization framework that perhaps could be applied across the agency.

The common themes that have emerged include the following, for which Dr. Morita invited discussion and input from the ACD:

- ❑ There is a need for support for One CDC approach, which is occurring within the context of other HHS collaboration efforts. HHS constructs can constrain or enable CDC efforts. This lifts up what Dr. Cohen recognized earlier, that CDC is not working alone and needs to do this in collaboration with other HHS agencies as well. One example of this is leveraging Health IT-related standards and working with other federal agency partners on policy levers.
- ❑ There is a need to incorporate STLT and healthcare input and impact into the approaches, recognizing that the data are not coming from nowhere.
- ❑ Ideally, systems should be rationalized and technology should be enabled to allow for STLTs and healthcare data to submit similar data only once versus sending the same data to different parts of CDC.
- ❑ Enterprise-wide data and technical standards should be leveraged to decrease the burden on STLTs and healthcare, keeping in mind who is being burdened by the redundancy and duplication of data systems.
- ❑ Existing CDC governance mechanisms should be leveraged and strengthened, including IT data governance (ITDG) and grant governance to support adoption across the agency so that there is a more holistic approach to data systems versus the one-off or siloed types of systems established in the past.

Ultimately, the DSW has created a writing team who will summarize the findings and observations and anticipates sharing these with the ACD to inform formal recommendations to the CDC.

Discussion Summary

Dr. Gayle said she thought this impressive work laid out a great plan and vision.

Dr. Fleming pointed out that this has been a struggle for a long time and found it heartening to see this kind of progress being made, particularly with regard to the emphasis on a CDC-wide approach and potentially a health- and public health system-wide approach.

Dr. Medows expressed her support for the approach, especially with regard to the emphasis on coordinating with healthcare. While this will be a lot of work, it must be done.

Dr. Taylor emphasized how great it is that CDC is tackling this with ACD input. She recalled a presentation from CDC when she and Dr. Sharfstein were Co-Chairing the LW that included the concept of a “front door portal” approach and understanding that CDC laboratories all have different information systems in-house. The concept pertained to states being able to enter CDC and CDC’s responsibility would be to develop from there. She thought that was a good idea because it was like an interim solution, understanding that the long-term solution is enterprise-wide consistency. She liked the “front door portal” and wondered whether that was still on the table or had changed.

Dr. Sharfstein expressed his appreciation, observing that getting systems to work together is not necessarily the most glamorous work in public health. It is important for the systems to move in the right direction, but it also is important for the efforts not to flounder because it is too difficult

Dr. Layden indicated that the OPHDST is still working on the concept of the “front door.” While there is a technical aspect, governance and processes are critical components of this as well. Their OCIO colleagues are working on the technical components, but it is more complex than that. Some of this work falls outside of the CDC. The Office of the National Coordinator for Health Information Technology (ONC) certifies EHRs and can establish public health systems. This was one of the first recommendations of the ACD. The ONC is close to doing this and there should be some Rulemaking. That begins to establish some basic standards that must align with Health-IT to promote the base level of interoperability. There also are levers that are internal to CDC, such as the ITDG Governance Committee that can help to provide a governance structure to address some of the issues raised and that will be agile moving forward, such as avoiding duplication. Sometimes it may be a technical component of data collection that could be used repeatedly, versus the whole system.

Ms. Valdes Lupi asked whether consideration is being given to the different ways in which health departments are structured in terms of highly centralized states versus highly decentralized states. Tennessee is interesting because there is the state and then 6 health districts.

Dr. Layden indicated that the concept of applying standards to systems applies to the technology, not the health departments. That process will have to be worked out to ensure that CDC is not boxing itself in and that it is achievable.

Dr. Martinez emphasized that this is challenging work and it brought to mind those who have the least capacity in terms of STLT agencies. It is important in terms of moving forward and making recommendations that there is flexibility in longitudinal implementation to make sure it keeps moving forward and is not seen as a failure, particularly given that capacity is not uniform across STLTs. He asked whether any thought had been given to providing resources to help build capacity for those challenged capacity-wise so that they can implement the recommendations.

Dr. Layden responded that CDC recognizes that there are STLTs that are at different levels of technical data modernization maturity. In the public health data strategy that lists the 2-year goals across the public health ecosystem, they intentionally included milestones that place more of a health equity lens on electronic case reporting. They also established Implementation Centers, which will provide direct TA to jurisdictions over the next several years. That will begin over the next couple of months. Another component in which CDC has invested is a Workforce Acceleration Initiative (WAI) through the CDC Foundation that will allow for the placement of technical expertise directly in jurisdictions to work with part of the jurisdictions for 2 years. The first cohort of over 40 jurisdictions applied, of which 8 were selected. The rationale for the selection of a small

number from the first cohort was in order to test the process. The release of the Cohort 2 applications was recently announced, and cohorts will be rolled out on a frequent basis. This is a \$70 million investment.

Laboratory Readiness

Reynolds “Ren” M. Salerno, PhD (Acting Associate Director for Laboratory Science and Safety [ADLSS], Office of Laboratory Science and Safety [OLSS], and Center for Laboratory Systems and Response [CLSR]) presented CDC organizational updates, changes the agency is making to strengthen laboratory readiness internally, work that is underway to strengthen laboratory readiness with CDC’s public health laboratory partners, and work the agency is doing with the broader clinical laboratory community to improve readiness.

CDC is acutely aware of the LW report that was released in 2023, with a number of recommendations. Those recommendations have been synthesized down to 6 specific actions that the agency has taken or is in the process of taking to increase laboratory capacity and quality, which are reflected in the following table:

ORGANIZATIONAL ACTIONS	LABORATORY QUALITY ACTIONS
Create unified organization providing cross-cutting laboratory systems support.	Develop a Quality Manual for Microbiological Laboratories (QMML) that provides quality standards for all infectious disease clinical laboratories and separate quality standards for infectious disease surveillance research laboratories.
Identify partners and create agreements for laboratories who will participate in parallel test development efforts to expand developing emergency tests for new pathogens.	Sustain and improve the Infectious Disease Test Review Board (IDTRB) to provide a thorough review of newly developed infectious disease diagnostic tests, ensuring their performance is fit-for-purpose and that CDC shares the test with external partners.
	Pilot a new CDC test development workflow for public health emergencies internal to CDC to identify risks prior to full implementation. The test development workflow will include appropriate subject matter experts (SMEs), laboratory space, instruments, reagents, and supplies.
	Develop an electronic Quality Management System (eQMS) with 6 core modules for effective use within CDC laboratories and implement to a pilot of laboratories for evaluation.

The QMML was published in September 2023. The IDTRB is now well-established and reviews all newly developed tests before they are submitted to the FDA for approval prior to sending them to CDC partners for use. The new test development workflow is now being piloted through the agency’s core laboratory using a new Mpox test that is now under development. The SMEs from the Poxvirus and Rabies Branch (PRB) are providing the expertise. The test is being developed in a way that will make it immediately accessible on platforms that are widely available in public health and other laboratories. CDC also is piloting a new eQMS system internally.

One of the things that Dr. Salerno said he is grateful to Dr. Cohen for is that she regularly explains to the public what constitutes core public health infrastructure. Consistently when she makes this pitch, she uses laboratory, workforce, and data as examples of that core public health infrastructure that is generally cross-cutting and includes the public and private sectors. Dr. Salerno pointed out that it is a new concept for CDC to embrace at the highest levels of the agency that laboratories writ large, as depicted in the figure below, are part of the core public health infrastructure. This means that CDC has an obligation to engage, work with, and collaborate with all of these partners in terms of readiness and response.



When he spoke to the ACD last, Dr. Salerno reminded everyone that he had one title as the Acting Director of the new CLSR. Since then, CDC is in the process of combining that new center, which was highly externally focused and externally engaged with the agency's clinical laboratory partners, with the OLSS that always has been very internally focused on laboratory quality and safety within CDC's laboratories. The idea behind this structural merging of these 2 offices is to reinforce that laboratory systems are fundamental components of the core public health infrastructure in terms of CDC laboratory systems and those same systems that exist across the clinical laboratory community writ large. This includes the 5 components of quality, safety, informatics, workforce, and response readiness. This forces those at the highest levels of the agency to think across these 5 systems as fundamental to CDC's ability to function well within the public health infrastructure.

The Laboratory Response Network (LRN) has been a foundation of public health laboratory work for 25 years or more. The LRN is comprised of a large number of public health laboratories, Department of Defense (DoD) laboratories, and others across the country. Management of the LRN also has now been moved into the new OLSS. That helps CDC, as a cross-cutting organization, to ensure that the way they are talking and working with the broad clinical laboratory community and commercial laboratories is consistent with the way they are working with the public health laboratories in the LRN. CDC was able to establish a large inter-agency agreement with the DoD to enable a contractor to do an extensive amount of work for CDC to help transition LRN assays from platforms that are expiring to new, more modern platforms that essentially will make the LRN assays much more capable and enable higher throughput with those tests. This is enabling CDC to accelerate the evolution and modernization of all existing LRN assays. More specific to the highly pathogenic avian influenza (HPAI) outbreak that is occurring that the agency is working very closely with all public health laboratories to enhance surveillance during the summer months. In addition, CDC is working with a few public health laboratories to port or bridge the agency's H5 510(k) assay onto a high throughput platform that already exists in those public health laboratories so that in the event of an H5 outbreak of a significant size, public health laboratories will not be limited to a single use test and CDC will be able to rely on the high throughput platforms across its public health laboratory infrastructure.

In terms of CDC's relationship with the broader clinical and commercial laboratory sector, a Memorandum of Understanding (MOU) was established in 2018 with the Association of Public Health Laboratories (APHL), the American Clinical Laboratory Association (ACLA), and the Council of State and Territorial Epidemiologists (CSTE).

Realizing during the pandemic that the agency did not have enough partners in the MOU in terms of surge testing needs and capacity in the broader laboratory community, the size of the MOU was extended to include the Advanced medical Technology Association (AdvaMed), the Association for Molecular Pathology (AMP), the Administration for Strategic Preparedness & Response (ASPR), and College of American Pathologists (CAP), COLA, and the National Independent Laboratory Association (NILA). In March 2024, a new bilateral MOU was signed with the ACLA, which is the professional organization for the approximately 50 largest commercial laboratories in the US which has become a critical partner for the CDC. With ACLA's help, CDC is now engaging a number of commercial laboratories on the HPAI outbreak in terms of seeking their assistance not only for enhanced surveillance over the summer, but also potentially preparing them to bring on an H5 test of their own to expand the capacity for H5 testing if that becomes necessary.

Dr. Salerno reminded everyone that in November 2023 when he spoke to the ACD, he mentioned that CDC had just published 2 Requests for Information (RFIs) for the private sector, with one focused on surge testing directed toward commercial laboratories and the other focused on new test development directed primarily toward reagent manufacturers. CDC is now finalizing a Request for Proposals (RFP) that not only will incorporate new test development and surge testing, but also data. This is a collaboration with the OPHDST. The hope is that this RFP will be published in late summer and represents an explicit opportunity for the private sector partners in laboratory diagnostics to engage formally with CDC in these areas. The agency is very excited about this development, which they have been working on for a couple of years.

In closing, Dr. Salerno emphasized that the activities he described were directly responsive to many of the recommendations from the LW of the ACD. CDC still has a lot of work to do in this broad area, but they are optimistic that they are making good progress. He then posed the following questions for the ACD's consideration and discussion:

- What other factors should we consider to ensure we can be successful in increasing laboratory capacity and quality during a response?
- Are there other partners we should be including in this critical core focus area?

Discussion Summary

Dr. Taylor expressed sincere and heartfelt congratulations for the incredible progress that has been made. She especially liked the figure of the wheel depicting “Laboratory Partners in Readiness and Response.” She asked whether the OLSS has the workforce and mechanisms in place to get the people they need. One of the areas of concern the LW raised with the ACD was that there are administrative processes in place, for all of the right reasons, but which make it difficult to recruit and retain scientists. She also asked whether, in addition to traditional laboratory capacities and capabilities partners, CDC is working with point-of-care and home use device development partners that might not be needed right away in a large outbreak, but certainly would be needed eventually.

Dr. Salerno responded that CDC is making progress in terms of workforce/mechanisms, but there is more work to do in this space. Not surprisingly, it is difficult to attract people to CDC with extensive clinical laboratory diagnostic background and experience. That is not the kind of laboratory scientist that the agency is historically good at recruiting. They are trying a variety of ways to change and improve that, but this is likely to continue to be something CDC needs to work on for some time. They have significantly raised the level of importance of clinical diagnostics within the agency. For instance, a lot more training is available now than there was even a year ago for CDC’s own scientists. The QMML expectations, new laboratory developed tests (LDT) rule, and new FDA Quality Management System Regulation (QMSR) are compelling the agency’s laboratory scientists to become much more familiar with these sorts of clinical diagnostics expectations. In terms of engagement with manufacturers of point-of-care and self-tests, one of the new members of the MOU group for surge testing, AdvaMedDx, which is the professional organization of the majority of those companies. CDC is working with specific commercial laboratories on the H5 issues and also is working with specific manufacturers of tests systems in large laboratories regarding H5. The one-on-one conversations with companies that develop point-of-care and self-tests are not nearly as advanced as CDC’s conversations with the companies that are building tests specifically for moderate- and high-complexity laboratories. The agency continues to maintain close relationships, ties, and communication with ASPR and the NIH Rapid Acceleration of Diagnostics (RADx®) program, both of which also have extremely good connections with companies that are focused on point-of-care. CDC briefs them regularly on what they foresee coming in the future and where the agency hopes they will put their investments for new point-of-care device development.

Dr. Taylor said that one thing she learned during the COVID-19 pandemic was the importance of local laboratories. She did not think enough attention was paid to them, nor were they funded enough. The importance of local public health and public health laboratories cannot be overstated. This came up earlier with regard to the heat and health advisory. That is a lesson that national public health has to learn. Having the appropriate diagnostics is very important moving forward.

Dr. Sharfstein expressed appreciation for the work that has been done at CDC and Dr. Salerno’s personal leadership. One of the things the LW learned is that CDC has 2 important roles. It is a huge laboratory with many complex components and as a laboratory, it works with other laboratories. But then there is the policy role that is completely separate from getting the laboratory system to work. CDC could spin off its laboratories as a subsidiary of CDC, but would still need a very serious laboratory division because laboratories are so important to public health. The challenges during COVID occurred on both sides. Everyone tends to focus on the laboratory challenges themselves, but the laboratory system was not working which created a double failure in a way. He asked how the new effort is structured, how CDC is thinking about the policy problem, which might involve solving a problem that does not even involve the CDC laboratory at all, and how they are thinking about the 2 different missions.

Dr. Salerno responded that one of the challenges at CDC in his opinion was that the agency had completely separate groups working on those separate issues. The externally facing system policy laboratory people were separate and distinct from the people who were focusing on the laboratory work inside the agency that was part of the same pandemic response. They are now trying to bring those 2 groups together into a single larger organization. What he envisions, has proposed, and for which he is awaiting official approval is essentially that he will have 3 Deputies: 1 who will have the responsibility of oversight of quality and safety in all of CDC's laboratories; 1 who will have the responsibility of readiness and response and engaging the laboratory system writ large (e.g., public health and relationships with clinical and commercial laboratories and interagency partners); and 1 who will be responsible for management and operations, communications science, and related activities. His hope is that this new organizational structure will allow CDC to understand and recognize these different functions, and to be able to see where those functions need to overlap and understand and complement each other.

Dr. Salerno stated the substantive laboratory work remains outside of the 3-Deputy organization that he just described. The SME laboratories will remain in their centers, so there still is a level of independence between the work at CDC and how the laboratory systems will function in terms of preparedness and response. He recognized that there is inevitable tension and perhaps even COIs in terms of how they think about laboratory work at CDC versus commercial laboratories.

Dr. Sharfstein emphasized that he was less worried about that than he was about how commercial laboratories get paid for participating in the national response. While that is not a direct CDC issue, it falls down on the agenda because it is not so much about the CDC laboratory, but commercial laboratories might not even participate unless there is a clear way for them to do it. This is important for the system and CDC needs to say that it is important.

Dr. Gayle asked why it is such a challenge for CDC to attract the type of laboratory scientist capacity that the agency needs.

Dr. Salerno replied that CDC is very good at getting people who want to work on exotic and rare pathogens, specifically from a research point-of-view (POV). For instance, he thinks they have the best scientists in the world for viral characterization in terms of examining an emerging pathogen to understand how it is evolving, where it came from, how to recommend vaccine development for a particular pathogen or variant. The agency is really good at that level of laboratory science. The annual influenza vaccine depends entirely on CDC influenza laboratory scientists to provide the "recipe" for the annual vaccine. CDC also is really good at developing diagnostics for particularly exotic and unusual pathogens that are rarely seen in a clinical environment. Where the agency struggles, and this is a point that the LW made in its report published last year, is that CDC also has an important clinical diagnostic role. The agency does a lot of confirmatory testing for public health laboratories. Hepatitis is a good example, the tests for which are difficult to obtain in many states and localities. Oftentimes, CDC becomes the place that provides hepatitis A, B, and C testing for particular localities. That is traditional clinical diagnostic testing, which is very different from laboratory research on exotic pathogens. Because clinical diagnostics is a small percentage of the amount of laboratory work the agency does, they do not recruit people specifically for clinical diagnostics or whose entire professional experience is in clinical diagnostics because CDC is looking in general for researchers who are able to perform clinical diagnostics when necessary, but spend the majority of time of important research, surveillance, and characterization work that is needed for exotic agents in many cases. Clinical diagnostic laboratory experience is critical in terms of test development for diagnostic tests that CDC wants to very quickly put into the public health laboratory or clinical commercial laboratory space. That was the challenge CDC had, especially 4 years ago. Where the agency needs to improve from a

workforce POV regards how to strengthen CDC's clinical diagnostic capacity without losing the important laboratory capacity around novel research, characterization, and development.

Dr. Fleming recalled that clearly there were issues with COVID that the LW identified in terms of surge capacity and working with the private sector, and CDC has taken some important steps to rectify those issues. He asked whether there are still some inherent limitations in rapidly producing new diagnostics. In a worst-case scenario in which H5N1 suddenly becomes transmissible from human-to-human, he could imagine a huge surge in demand for testing throughout the country. He asked what realistically, even in a perfectly working system, would be the lag between the recognition of the need for that test and the ability to make it widely available.

Dr. Salerno acknowledged this as a great but very difficult question. CDC is working on the lag. In the case of H5N1 at least they know what H5N1 is and they have an existing series of tests for influenza that go from influenza A, to influenza subtyping, to H5 specific testing. They are now in the process of enhancing the readiness of the commercial laboratory sector to have an H5 test on the shelf, ready to go, and ready to submit to FDA for clearance that they could bring online rapidly in the event of an H5N1 human outbreak. They are struggling now with access to positive controls, which are needed for test development. It is exciting that the agency is making a lot of progress in partnering with the National Institute of Standards and Technology (NIST), which developed synthetic positive controls to CDC during Mpox in 2022, which jump-started the ability to extend the CDC 510(k) non-variola Mpox orthopoxvirus test to 5 commercial laboratories. FDA seems much more open-minded about the use of synthetic positive controls if CDC can provide them with data that they work. That is a huge step forward with FDA's thinking about test validation. CDC is continuing to decrease the gap in time, but it is going to be a struggle—especially for a novel agent. Dr. Salerno said that he thought they were trying to do to prepare for a novel agent for which there is no test (e.g., the January 2020 scenario) is to try to get a number of private manufacturers and commercial laboratories under contract with CDC as a warm base that could be turned on as soon as they notice that something unusual is occurring. Ideally then, CDC would have access to all of the private companies' expertise, staff, and knowledge rather than simply relying upon a single SME laboratory at CDC. The agency also is making better use of the Centers of Excellence (COEs) within the public health laboratory network, which are being engaged specifically on H5N1 so that they can take a much more active role on H5N1 diagnostics.

Dr. Taylor emphasized the importance of keeping genomics in mind, especially with regard to ribonucleic acid (RNA) viruses. It is critical not to lose the capacity and capability that were built during COVID.

Dr. Salerno recognized that while he has been focusing on diagnostics, characterization is extremely important and will become more so. Public health and commercial laboratories have a lot more capabilities now to do that kind of genomics work, so that is on their minds as well.

Social Determinants of Health

Karen Hacker, MD, MPH (Director, National Center for Chronic Disease Prevention and Health Promotion [NCCDPHP]) provided an update on CDC's SDOH work since last she presented to the ACD in November 2022. At that time, she reported that the agency had developed a CDC SDOH Framework and launched an agency-wide Task Force. Since that time, the framework has been disseminated widely. The framework includes 6 pillars, at the heart of which is health equity. CDC views health equity as the umbrella under which concepts like SDOH reside. It is SDOH strategy that hopefully will help move toward health equity and diminish the disparities that are known to exist. Over the past 2 years, there has been a great deal of interest in SDOH from HHS, the White House, and the field.

In November 2023, the White House released *The US Playbook to Address Social Determinants of Health*⁹ (Playbook) that was led by Dr. Sandra Ford. The Playbook highlights ongoing and new actions from across all of the federal agencies in support of “moving the needle” on social circumstances. To accompany the Playbook, HHS released a *Call to Action: Addressing Health-Related Social Needs in Communities Across the Nation*.¹⁰ CDC been very involved in this, with Dr. Hacker representing the agency during the meetings that continue to be convened for this ongoing whole of government approach. A number of CMS rules are now making it possible for the healthcare system to provide reimbursement for a number of these social needs. Thus, the Playbook has added an amazing new challenge and opportunity for the field.

CDC’s SDOH Task Force was led by Dr. Hacker in collaboration with leadership from the Office of Policy, Performance, and Evaluation (OPPE) and the Office of Health Equity (OHE) and worked with 6 subcommittees since 2022. The SDOH Task Force achieved a number of accomplishments, including the following:

- Redesign and update of the main SDOH webpages on cdc.gov, which went live recently
- Competencies review and training recommendations
- Partnership analysis tool
- List of various internal SDOH working groups
- Deep dive into SDOH variables
- Rewrite of *Principles of Community Engagement* introductory chapter, with the third edition soon to be published
- Synthesis report on ways to enable blending and braiding of federal funding, which will be shared with the CDC’s new Grants Governance Board as one input as they determine tools that are going to be useful
- 4 internal webinars to share findings

SDOH is an important cross-cutting driver of health that encompasses many of CDC’s agency-wide priorities, in particular mental health and substance use and the supporting young families priorities. While there was a potential sizeable increase in prior President’s Budgets, Congress did not take action to increase CDC’s line. Given that there are now limited resources that are dedicated to this work, the SDOH Task Force is transitioning from an agency-wide task force to a council that will mirror the way that the NCIPC is handling the Behavioral Health Coordinating Unit (BHCU). This newly configured agency-wide council will sit in the NCCDPHP and includes representatives from all of CDC’s centers. They will still receive additional support from the OHE and OPPE. The mission of this group is to continue to work going forward, educational activities, sharing information, and driving the SDOH work across the agency.

While NCCDPHP has been leading the charge, many of the CDC centers also have been involved in the SDOH work, ranging from surveillance to analysis and funding perspectives. In reviewing the Notices of Funding Opportunity (NOFOs) across the entire agency, 5 centers were identified as having focused in a substantial way on SDOH in their NOFOs. All 25 of the NCCDPHP’s NOFOs focused on SDOH or related issues. To provide a flavor of some of these activities, the National Center for HIV, Viral Hepatitis, STD, and Tuberculosis Prevention (NCHHSTP) has a long history of working in the area of social determinants. They have hosted multiple webinars, bringing authors and researchers to the fore; funded 32 states and local health departments through their federal Ending the HIV Epidemic (EHE) initiative in the US NOFOs, which provided flexibility for health departments to use funds for support of housing. The National Center for Health Statistics (NCHS) recently launched the Data Query System (DQS), which brings together data from multiple external sources and major NCHS data on nutrition, visibility, and health insurance. The OPHDST’s Public Health Data Strategy (PHDS) is now going to include SDOH data-related elements. A data call is planned to understand all of the CDC surveillance

⁹ <https://www.whitehouse.gov/wp-content/uploads/2023/11/SDOH-Playbook-3.pdf>

¹⁰ <https://aspe.hhs.gov/sites/default/files/documents/3e2f6140d0087435cc6832bf8cf32618/hhs-call-to-action-health-related-social-needs.pdf>

systems that include SDOH questions. As reported earlier in the day, CDC also is engaged in heat and health work.

Specific to NCCDPHP updates and activities, NCCDPHP recently completed work with ASTHO and NACCHO in the Getting Further Faster (GFF) Initiative. GFF is a retrospective evaluation of multi-sector partnerships that were successfully addressing SDOH. Over the first 2 years, a great deal was learned that was then used for many of NACCHO's own NOFOs. The third year focuses specifically on examining the relationship between public health and the clinical delivery system, as well as what is occurring in the human services space. As part of this work, NCCDPHP started a Community of Practice (CoP) for multi-sector partnerships to learn more about what each of them is doing and to guide some of their efforts. They also are working with ASTHO to focus on the CHW landscape, which is emerging as a major new area. While an existing NCCDPHP grant focused specifically on CHW will be ending in a year, a lot of activity is underway related to the sustainability of this workforce.

The Behavioral Risk Factor Surveillance System (BRFSS) introduced an optional Social Determinants of Health and Equity Module in 2022 in which 39 states participated and for which data are now available. Measures are included that mirror what CMS is asking clinical delivery systems to do in terms of their Health-Related Social Needs (HRSN) Screening Tool. These data are now being analyzed. Publications that already have resulted from these analyses include a *Morbidity and Mortality Weekly Report (MMWR)* focused on racial and ethnic differences in SDOH and health-related social needs,¹¹ and a *Vitalsigns™* focused on mammography and its relationship to SDOH.¹² Several other papers are anticipated to be published shortly, including a foundational paper examining the relationship between major chronic diseases and SDOH.

NCCDPHP identified 5 key domains of SDOH that they thought were particularly connected to chronic disease, including connections to clinical care, food insecurity, the built environment, tobacco policy, and social connectedness. A couple of years ago, the center contracted with RTI International to conduct an environmental scan to assess the status of each of these areas.¹³ There is still a lot to do in terms of building the evidence for the field to understand what works and what does not work. That scan has been posted on the NCCDPHP website, presented to all of the center's colleagues within HHS, and is being used by NCCDPHP as a guideline for its research agenda. NCCDPHP also is working on measures, which they have narrowed down. They have been working with multi-sector partners to understand real-world feasibility issues. The ultimate goal is to narrow that down to 3 areas in each of the 5 key domains of SDOH.

There is a single line item across the agency that is specifically focused on SDOH. In FY21, NCCDPHP received \$3 million dedicated to funding planning grants related to SDOH. In FY22, that line increased from \$3 million to \$8 million. Over the course of those 2 years, NCCDPHP was able to fund a number of planning grants. A number of planning grants also were funded in 2023. A total of 71 organizations have been funded to develop implementation-ready SDOH Accelerator Plans. The funding those 3 years was approximately \$8.725 million. Last year, funding was expanded to enable 5 projects that had developed their SDOH Accelerator Plans to implement them plans. There was a good mix of rural and urban applications.

To provide a few examples, Savannah, Georgia? is interested in improving access to healthy food and has collaborated with the Forsyth Farmer's Market to bring healthy foods to their communities through a mobile food truck. To date, they have provided 80 residents with vouchers and intend to expand that dramatically. A rural community in Illinois also is interested in food security, so they have established mini food centers. The first center was opened on May 1, 2024 at the Teen Turf, Inc. and already has supported over 4,000 community members in Lee County to have access to nutritious foods. A second May market is being planned. With 3 years

¹¹ <https://www.cdc.gov/mmwr/volumes/73/wr/mm7309a3.htm>

¹² <https://www.cdc.gov/vitalsigns/mammograms/>

¹³ https://www.cdc.gov/health-equity-chronic-disease/media/pdfs/ES_Executive-Summary_508c.pdf

to achieve their goals, NCCDPHP is monitoring the 5 implementation projects to determine how they are doing and whether this is feasible. Another example is the Simulation Model of Interventions Linking Evidence to SDOH (SMILES) research project, the purpose of which is to estimate the long-term impacts of various community interventions in order to model some of the policies, practices, and programs to determine the return on investment (ROI) and health outcomes over time. The hope is that the SMILES tool will be available to CDC internally and available externally to CDC partners. The first year of that project is being completed.

While the President's Budget included sizable increases in the past, those increases were not included in the final budget. Unfortunately, the FY24 SDOH budget was decreased to \$6 million. While the implementation projects will be continued this year, NCCDPHP will be unable to fund the planning grants. The hope is that there will be level funding in the next budget.

A tremendous amount of work is underway with multiple other agencies. In particular, Dr. Hacker described a series of rules being enacted by CMS that are changing the field. The first is the 1115 Waiver, which is allowing states that apply for these waivers to consider using their Medicaid dollars for a variety of health-related social needs, including CHWs. The second is the rule requiring health organizations to screen for social means was intended to be implanted by 2024, which is also moving forward. The third is the Physician Fee Schedule that was recently released, which now allows Medicare dollars to cover some of the health-related social needs. The human services realm is trying to figure out how to contract with healthcare providers (HCP) and that public health is included. To that end, NCCDPHP has partners with the Agency for Community Living (ACL) to make sure that public health is part of the Community Care Hubs. Moving into the second year of this, CMS will be awarding grants to organizations and public health is squarely at the table. NCCDPHP sees public health being able to wrap itself around much of what is occurring in the clinical delivery system, recognizing that referrals can be made for a variety of needs but if certain recourses are not available in communities, it will be a frustrating experience for patients and providers. Keeping public health at the table and encouraging state health department directors to work collaboratively with their Medicaid and people in the field at the local level is critically important.

Discussion Summary

Dr. Medows expressed appreciation for Dr. Hacker's presentation and her candor with regard to the budget, but stressed that she was disappointed to hear about the lack of funding for promising projects. Without that funding, it is going to be difficult to make any movement. In terms of CMS, she asked whether it would be possible to formalize the agreement between the federal government and state public health partners with the state Medicaid agencies. Even if they cannot conduct the interventions, it should be possible to share community- and zip code-level data about health disparities, SDOH and help assess whether the interventions are effective.

Dr. Hacker responded that NCCDPHP has been working with CMS for over a year to determine how they could best use data from the BRFSS as opposed to conducting their own survey. She is optimistic that CMS will be giving indications to Medicaid Directors that this is an avenue that they should pursue, recognizing that Medicaid is a state program that differs from state to state. NCCDPHP will be providing a toolkit at the end of the Summer that focuses specifically on CHW in terms of helping them understand what is occurring in the financial realm. They also have been working closely with ASTHO to educate Health Department Directors about how they can work with their Medicaid Directors and understand the 1115 waivers. While NCCDPHP may not be able to mandate anything, they are trying to provide education.

Dr. Medows emphasized that she knows the public health, CMS, Medicare, and Medicaid realms well. While Medicaid is state implemented, it also is partially federal funded. The data and analytics agreement needs to be formalized and a case needs to be made about these data not being replicated at an additional cost to the Medicaid and Medicare programs. The Medicare program is federally implemented. She explained that she was trying to ensure that the good work NCCDPHP and its teams are doing is not taken as nice to have, but instead are integrated as part of daily operations. Sometimes the contract and the money have to be added to the conversation. That way, NCCDPHP is embedded in the solution as opposed to being advisors on the sideline. Recognizing that it was not her decision to make, she expressed her hope that Dr. Hacker could advocate for this. The same health disparities and avoidable deaths should not continue for another decade that could have been intervened with earlier. The housing and food project examples are great, but this must be done on a large scale.

Ms. Valdes Lupi stressed that the political environment is problematic to the point that in some states, jurisdictions are not permitted to talk about SDOH. Instead, they have to describe SDOH as “non-medical drivers of health.” Reflecting on the work of many members of the ACD and the Health Equity Workgroup (HEW) did in terms of recommendations, she asked NCCDPHP to share any progress or developments about NOFOs and ways to ensure that community organizations receive funding, particularly given that some jurisdictions will not be able to work in the ways that Dr. Hacker described to tackle persistent health inequities. She requested more information about the recipients of the grants from the NOFOs Dr. Hacker described, emphasizing that one of the recommendations from the HEW was to ensure that community-based organizations (CBOs) were receiving funding.

Dr. Hacker indicated that the funding provided under the Addressing Conditions to improve population health Project (ACTion) NOFO had to be allocated to STLT health departments due to the appropriations language. However, the REACH grants can be allocated to coalitions at any level. All of these involve multiple partnerships. Funds might be allocated to a governmental organization, but are often then given out to a variety of others. Funds may be allocated to local health departments as well. NCCDPHP has had more flexibility with this line item than they have had with many other grants that are required to be allocated to states. At this point, the ACTion have been allocated to counties, states, and cities. There is a lot of frustration in the field that smaller community organizations that have forever been the places where CHWs are hired, trained, and work in their communities do not necessarily have access to these types of grants. For NCCDPHP’s own CHW grant, most of the health departments that were funded worked with community organizations that already had CHW in place. No new programs were being funded through that NOFO, which also supported the existing CBOs to partner with their local health departments. Many of NCCDPHP’s grants do not have much more open eligibility, but it ultimately depends upon who applies for those grants. Some still have highly specific language about who NCCDPHP can and cannot fund. They have been working with CDC’s Public Health Infrastructure Center (PHIC) to think about creative ways to try to get resources to community organizations, which are known to have been absolutely critical during the pandemic in terms of reaching populations because of trust factors and other reasons. Some of the Learning Collaboratives that NCCDPHP is working on with ASTHO and NACCHO in this case are bringing many of those folks to the table. Community organizations do not necessarily know that Medicaid reimbursement might be available. There are many layers to unpack, but from her perspective and NCCDPHP’s perspective, figuring out how to get resources in the hands of people who make the most difference is critical.

Dr. Medows asked whether NCCDPHP has communicated with the American Hospital Association (AHA) or America’s Health Insurance Plans (AHIP), both of which fund CHWs. NCCDPHP has the knowledge, data, and analytics that they need to better train CHWs. This represents another opportunity not only to partner, but also to formalize partnerships. This is part of their operational budgets, which represent funding streams that could reduce the worry about funding programs year-to-year. Otherwise, these groups are going to duplicate efforts and create it themselves.

Dr. Hacker noted that to public health, SDOH refers to the bigger community systems and policies. Health systems are thinking more about individual needs. Some health departments have individual services for which they would like to be reimbursed, but if the policy systems and environment are not in place, all of the screening and referrals that are made will not make a difference. This was a finding of the Accountable Health Communities (AHC) evaluation. Public health can play a role in pushing these policies, which is why NCCDPHP has been focusing a lot of energy into obtaining the evidence to understand what that roster looks like. The issue with reimbursement is that it incrementalizes much of this work in terms of questions about whether it would be paid on a fee-for-service (FFS) basis or would be value-based. This is not the skillset of many organizations, and some organizations are not interested in becoming a HCP. They are interested in continuing their mission. Because the times are changing, Dr. Hacker believes that public health can help play a role by figuring out what they can do to support activities at the local and state levels. As in public health, there is a lot of jargon in the healthcare delivery system, so it is important to understand where those intersect. They have been working with CHW state groups that are making themselves known and are interested in helping to create policies at a state level for credentialing, certification, reimbursement, and so forth. In addition, each state is different.

Dr. Medows clarified that she was not talking about the incremental or the individual. She meant the national health insurance plans or national hospital associations that have statewide efforts and are physically building the buildings for the homeless and food markets. She was asking NCCBPHP to be the source of expertise that informs their policies and where they allocate their capital dollars. There is a mission and operational incentive for them to do it, but when they build residential facilities or extend their funding to food banks, it would be smart if the people locally who know the most about SDOH at a community, state, or regional level were there.

Dr. Hacker emphasized that they are working with the healthcare system and CMS, and they have an upcoming meeting scheduled with the AHIP, so they are moving in that direction.

Dr. Fleming noted that one of the HEW's recommendations was that most of CDC's categorical programs should have SDOH in mind because of their influence on the conditions on which they are working, including infectious diseases. The HEW's hope was that more of the current categorical line-item funding that is not specifically labeled SDOH would be invested by those programs in tackling these underlying issues. He asked whether CDC has a way of assessing or monitoring the extent to which that is happening or not. As everyone knows, measurement is key to determining progress.

Dr. Hacker stressed that the first thing they did was review all of the NOFOs, looking specifically for words like "SDOH" or "determinants." As she noted, 5 centers were including that information in their NOFOs. While that is not everybody, at least there is a baseline in terms of moving forward. All 25 of the NOFOs published by NCCDPHP included language to this account, which was well-received by the field. They often hear from the field that there are too many siloed funding streams. Noting SDOH in the NOFOs allowed them some flexibility to look across programs. They are about to conduct a data call to discuss surveillance to identify where SDOH questions are being included in surveillance. This should be completed by the end of the Summer in terms of being able to understand the baseline. She sees the members of the council as having a responsibility of driving this agenda, because it is an ongoing process. Because each center focuses on different issues, it is unlikely to be a one-stop-shop for everybody, but the intent is to keep this on the radar regardless of the ultimate funding stream in order to "get it into the drinking water," so to speak.

Communications and Public Engagement Workgroup (CPEW)

Octavio N. Martinez, Jr., MD, MPH, MBA, FAPA and Ronda Medows, MD (CPEW Co-Chairs) provided an update on the CPEW. The extended membership nomination period closed on April 26, 2024. A total of 33 completed packages were received by the deadline. The panel assembled to review the applications was comprised of the CPEW Co-Chairs, the ACD Chair, and the CPEW DFO. When reviewing the 33 applications, the panel considered diversity in terms of geography and skillsets, perspectives, and voice. The panel engaged in a robust discussion about how many members the CPEW should have. The TOR stipulates a maximum of 15 members, which the panel decided would allow for inclusion of diversity and a range of perspectives. Invitations were sent in the last few days to 15 individuals to join the CPEW. In addition, Drs. Martinez and Medows will serve as CPEW Co-Chairs, Drs. Fleming and Sharfstein will serve as ad hoc ACD Member Consultants, and Ms. Galatas will serve as the DFO. They are excited about the CPEW and are looking forward to beginning work. Those who were not selected among the 15 members were notified that the CPEW would like to retain their information for potential possible use of their expertise in the near future.

Discussion Summary

Dr. Morita asked whether the TOR had been determined or were still in development.

Dr. Fleming indicated that the ACD voted on the TOR during the last meeting and that the ACD members would be provided with the final version.

Ms. Galatas reported that she already has received acceptance from 8 of the 15 potential members, which reflects how excited people are about the CPEW.

Highly Pathogenic Avian Influenza A(H5N1)

Demetre Daskalakis, MD, MPH (National Center for Immunization and Respiratory Diseases [NCIRD]) provided an update on HPAI A(H5N1). Regarding background, influenza A(H5N1) “bird flu” is widespread in wild birds worldwide. It has resulted in outbreaks among commercial poultry, backyard bird flocks, wild terrestrial, and marine mammals, and domesticated animals. Human infections with H5N1 viruses are rare, usually after close contact with infected birds. Very rarely, human infections with H5N1 have occurred after exposure to other infected animals. There was a significant spike in infections in 2015 related to an outbreak that occurred in Egypt. Sporadic infections have been reported in 23 countries since 1997, with a case fatality proportion of >50%. Notably, only a small number of human cases have been reported since 2022. While this virus is still circulating, it is not generating a lot of detected human disease.

As of June 6, 2024, the USDA had confirmed that 84 herds of dairy cows were infected with HPAI across 9 states in the US. This information is updated on a daily basis on the USDA website. This strain of HPAI also has been detected in wild birds, cats, racoons, opossums, and mice in close proximity to dairy farms. This began with detections identified in cattle. On April 1, 2024, Texas announced its first human infection of HPAI A(H5N1) virus in an adult working at a commercial dairy farm. This case has been described in great detail in the *New England Journal of Medicine (NEJM) Case Report*. This individual developed conjunctivitis on approximately March 27, 2024, was provided with oseltamivir (Tamiflu) antiviral treatment, and recovered. Contact tracing focused on household contacts, who also were provided with oseltamivir (Tamiflu). No illnesses or drug-related adverse events (AEs) were reported in household contacts. There was some radio silence in terms of what was occurring with new human detections, and increasing numbers of individuals were being monitored by local public health as more herds were being detected. On May 22, 2024, a second case associated with a dairy cow outbreak was announced in Michigan. This individual also reported mild symptoms. On May 30, 2024, Michigan reported another case associated with dairy cows. This case occurred in a dairy farm worker who was exposed to cows,

making this another incident of cow to person transmission. Notably about this case is that unlike the others that reported only conjunctivitis, this individual also reported symptoms that are more commonly seen with influenza, including HPAI, of respiratory symptoms. This individual also was offered oseltamivir (Tamiflu) as were his close contacts.

In terms of the status, one of the key components to addressing a HPAI outbreak in animals is monitoring of humans with exposure. The effectors of this in this situation are local and state health departments. Dr. Daskalakis emphasized how important local and state health departments have been in monitoring individuals on farms who have been exposed to dairy cows that have been detected to have HPAI. In general, the guideline for monitoring is that individuals who are exposed to poultry or other highly pathogenic avian influenza should be monitored for 10 days after last exposure. At the time of this ACD meeting, at least 44 people had been tested and over 390 people are being or have been monitored following potential exposure. It is notable that this is one of the reasons the cases were identified in Michigan, which was engaged in monitoring. When symptoms emerged among those individuals, they were referred to testing. That led to the diagnosis of the 2 most recent cases. This is a great example of how important the public health infrastructure is to address novel influenza viruses.

In addition to this type of monitoring, simultaneous industrial strength strategies are being used to increase surveillance. CDC developed a summer surveillance strategy that enhances nationwide surveillance and extends what the agency does into the summer. Typically, as the influenza season subsides, there is a different strategy for surveillance. This strategy is about extending that surveillance deeper into the summer. The plan includes increasing the number of influenza virus specimens tested and subtyped in public health laboratories across the US and requesting that state and local health departments increase outreach to their care providers to raise awareness about A(H5N1) so that individuals who are detected with conjunctivitis or respiratory illness are screened if warranted by their exposure. This means that this approach will maintain increased levels of testing during the summer months when generally there tends to be lower influenza activity. Beyond that industrial strength strategy, CDC also is working with local jurisdictions to identify the appropriate opportunities to conduct field studies. This involves more in-depth epidemiologic protocols that link surveys to testing, which will include serology and viral detection depending upon the situation. For this effort, CDC is working closely with local public health departments that are in turn working closely with their state agriculture colleagues to identify the best time, place, and environment that are conducive to do this work. Progress continues to achieve this goal.

Along with those efforts, CDC has its standard influenza surveillance systems that are used during the year. These systems have been important in understanding what is occurring with more herd and human A(H5N1) detections. CDC's syndromic surveillance is being used to assess ED visits for symptoms when areas are identified in which a herd is detected to have HPAI, and test surveillance among public health and commercial laboratory testing for influenza is followed to be able to identify any changes in trends. The message to date is that across syndromic surveillance and influenza testing systems, there have been no indicators of unusual influenza activity for this time of the year in people, including avian influenza A(H5N1). The constellation of systems that CDC uses to monitor influenza has now expanded to include wastewater surveillance of influenza A. This has been important because it has allowed for monitoring of about 288 sites from 37 states to determine whether there is influenza A activity. When influenza A activity is detected, CDC looks back at the other surveillance systems and test positivity and reaches out to its colleagues in agriculture and public health departments to determine whether there is an explanation for why there is detection. The explanations to date have included that there is a dairy in a sewer shed area, there are farms in a sewer shed areas, there is a late blip in normal influenza season, and so forth. When detections occur, CDC is pursuing them with a strategy that involves connecting to state public health and looking at the constellation of systems.

This is also an opportunity to highlight how important seasonal preparedness is for an event such as this, with a new scenario. While this is not a “novel threat” per se because CDC has been tracking HPAI A(H5N1) very closely for over 2 decades, this highlights the importance of monitoring what is occurring domestically and globally with seasonal influenza. CDC serves as both a National Influenza Center (NIC) and a Collaborating Center (CC) for Surveillance, Epidemiology, and Control of Influenza within the World Health Organization’s (WHO’s) Global Influenza Surveillance and Response System (GISRS) and as the largest global and resource and reference center supporting public health interventions to control and prevent pandemic and seasonal influenza. This includes CDC’s domestic commercial and public health laboratories, which help to monitor what is occurring with the influenza virus to inform development of candidate vaccine viruses (CVVs). There are 2 previously identified CVVs for this A(H5N1) that appear to be useful in this situation. That work that occurred years ago is now reflected into the fact that these candidate vaccines viruses are available, which shaves 8 to 12 weeks off of the process for creating a vaccine to address a novel or emerging influenza.

Regarding next steps for the HPAI response, seasonal surveillance efforts will be sustained to ensure rare cases of A(H5N1) in the community would be detected. Higher right-sizing goals will be maintained for influenza-positive specimens characterized in public health laboratories, with an ability to detect a novel influenza virus circulating at 0.5% prevalence. Public health laboratory specimen sources will be expanded in commercial and clinical laboratories to monitor for increased influenza-positive specimens for subtyping in public health laboratories; intensive care unit (ICU) for hospitalized specimens; and local and HRSA clinics in impacted states. Follow-up efforts will continue for areas that flag influenza in syndromic and wastewater data. Laboratory-confirmed influenza-associated hospitalization surveillance will continue through the Influenza Hospitalization Surveillance Network (FluSurv-NET). Monitoring will continue of workers with recent exposure on A(H5N1)-confirmed farms. Provider outreach will continue for influenza testing beyond influenza season, particularly for patients with a recent history of relevant exposures.

In closing, Dr. Daskalakis posed the following questions for ACD discussion:

- Do you have any recommendations for how best to communicate about sensitive outbreaks like H5N1 with the public, partners, industry, and other groups?
- How do we appropriately respond to outbreaks like H5N1 that may initially pose little risk to the public at large, but there is high public alarm/fear of the illness or alternatively, a general lack of concern among the public? We want to protect the public’s health and respond appropriately considering the public’s risk, vaccine fatigue, and other concerns.
- What are ways to assess the prevalence of human infection?
- What priority research questions should we be asking to better understand this outbreak?

Discussion Summary

Dr. Fleming observed that as noted, H5N1 is uncommon in humans but case reports suggest that it is most commonly highly lethal. He asked how that might want to caveat that conclusion, recognizing that it is the most severe infections, including lethal infections, that are most likely recognized and diagnosed. Therefore, to a certain extent, that conclusion about its relative rareness and lethality may be a surveillance artifact.

Dr. Daskalakis agreed that there is definitely a detection bias for more severe cases. Data from the poultry experience in which serology was performed for individuals with high exposures did not have a lot to say about what was seen with those poultry exposures, and there was not a lot of evidence of undiagnosed infections. With that said, this is exactly why CDC is interested in enhanced epidemiologic studies with individuals exposed

in this situation. When assessing where virus is being found, the cow mammary gland is one of the places where it is frequently identified. Data from the FDA showed that up to 20% of retail milk tested had remnants of HPAI, but pasteurization addressed this. This is a complex situation in terms of reaching farm workers. There may be mild illness that people are not necessarily associating with exposure to cows. This is an area in which CDC might collaborate with local health departments to provide standardized survey and testing strategies in order to compare apples-to-apples.

Dr. Fleming posited that the FDA surveillance seemed one step closer to where the infection is than wastewater surveillance and asked whether there are any plans to continue that type of surveillance moving forward.

Dr. Daskalakis indicated that the FDA is working closely with the USDA to identify strategies to conduct more surveillance. The USDA recently announced a program that will assess milk on farms as a pilot to determine if that can be used in effect as the wastewater of this response.

Dr. Taylor thought she recently saw that Canada's surveillance had found no evidence of the virus in milk, which she thought was interesting in terms of Michigan, the Great Lakes, and movement of birds. She also noted that CDC has previously used leftover serum samples from large commercial laboratories, so the other possibility would be newborn screening bloodspots taken from rural areas. This was done for coronaviruses, so it should be feasible in the Midwest and rural states.

Dr. Daskalakis confirmed that Canada's surveillance correlated to what the US has found. The thought is that if this is a cow-to-cow phenomenon, Canada has reported on scenario on a poultry farm that is not far from a dairy farm that also experienced the outbreak. The USDA is exploring that in great detail. This does not seem to be a case of cows, to wild birds, to different cows. It seems cow-to-cow.

Dr. Sharfstein asked where there has been the most success getting onto farms in terms of partners. He recently met with a group of people who are involved in agricultural extension, which puts them on the farm frequently and has resulted in trust with dairy farms. In some places, local health departments engaged in similar work. He asked whether themes are emerging of who is open to access. In addition, he wondered how far the development of a vaccine for this strain likely would get in terms of Phase 1 trials, Phase 2 trials, and so forth. Regarding the second discussion question about communications, when he was a Health Officer in Maryland during the Ebola outbreak in West Africa, they found it was most helpful not to conduct the press conferences themselves and include a variety of speakers such as hospital representatives, people from the West African immigrant community, et cetera. He wondered who the most trusted names are relevant to dairy farms and dairy farm workers.

Dr. Daskalakis indicated that prior relationships between agriculture and public health have been one of the important markers of success in terms of engagement with farm workers and the farms on which they work. Another is for public health to address the concerns of dairy farmers in a feasible manner, such as implementing strategies for active monitoring that does not involve obtaining sensitive information from the farm workers. In terms of vaccine development, there are 2 CVVs that match this virus. ASPR recently announced that they will be moving forward with filling and finishing several million doses of vaccine. Human trials have been conducted, from which sera will be used for neutralization studies. From the perspective of vaccine development and next steps in manufacturing, all of this work is occurring within a preparedness stance because there is no recommendation for vaccinating anyone in the US to date. The USG and ASPR are moving forward to ensure that vaccine is vialled and ready. While some vaccine already has been vialled, some regulatory steps and decisions also must be made. All of this is in process in case there is a clinical and public health indication for moving forward with the vaccine effort, whatever size that may be. Regarding communications and engaging with the community where they are, it is crucial to leverage CDC's rural health experience and CDC and HHS partnerships

with organizations that represent farm workers and those that focus primarily on rural and migrant health is crucial and to be linguistically appropriate. Thus far, infographics have been created in 2 languages and other languages are in queue based on relationships with organizations that deal with farm workers.

Dr. Sharfstein suggested inviting trusted messengers to help convey information so that it does not appear to be public health versus the world. Instead, the world should be part of the public health messaging.

Dr. Martinez emphasized the importance of appropriately tailored messages for each audience and local media, plain language, transparency, and keeping it simple. Using language such as “human trials” concerns people who are outside of the research arena because they do not understand what that means. He expressed appreciation for the culturally competent approaches CDC is taking with farm workers.

Closing Remarks / Adjourn

David Fleming, MD (ACD Chair) expressed gratitude to the ACD members for their engagement, wisdom, and excellent discussion; Dr. Houry and the wonderful ACD support staff who made this meeting possible through a remarkable amount of work; and to Dr. Cohen and all of the CDC leadership for their attendance and willingness to engage with the ACD on these important discussions. Regarding the agenda for October 2024 meeting, he invited members to submit suggestions via email. An agenda item that arose during this meeting pertained to artificial intelligence (AI) as there are components of AI that have implications for all of the areas of interest to the ACD, such as equity, data, and communications. He also reminded everyone to submit ideas for nominees for future ACD members.

Debra Houry, MD, MPH (DFO) expressed gratitude to Dr. Fleming for helping to “steer this ship.” She thanked the ACD members for their thoughtfulness and robust engagement, and the CDC staff for their work behind the scenes to make the meeting seamless.

With no further business posed or questions/comments raised, the meeting was officially adjourned at 2:49 PM ET.

Certification

I hereby certify that, to the best of my knowledge and ability, the foregoing minutes of the June 6, 2024 meeting of the Advisory Committee to the Director, CDC are accurate and complete.

08/28/2024

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 – 06-30-2025

DESIGNATED FEDERAL OFFICER

Debra Houry, MD, MHP

Deputy Director for Program and Science
Chief Medical Officer
Centers for Disease Control and Prevention

MEMBERS

Helene D. Gayle, MD, MPH

President
Spelman College
Atlanta, Georgia
Term: 12-11-2023 – 06-30-2027

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

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
AAP	American Academy of Pediatrics
ACD	Advisory Committee to the Director
ACEs	Adverse Childhood Experiences
ACLA	American Clinical Laboratory Association
ACTion	Addressing Conditions to improve population health Project
ADLSS	Associate Director for Laboratory Science and Safety
AdvaMed	Advanced medical Technology Association
AE	Adverse Event
AHEC	Advanced Health Education Center
AMA	American Medical Association
AMP	Association for Molecular Pathology
ANHE	Alliance of Nurses for Healthy Environments
APHL	Association of Public Health Laboratories
ASPR	Administration for Strategic Preparedness & Response
ASTHO	Association of State and Territorial Health Officials
BHCU	Behavioral Health Coordinating Unit
BRAC	Base Realignment and Closure
BRFSS	Behavioral Risk Factor Surveillance System
CAP	College of American Pathologists
CBO	Community-Based Organization
CC	Collaborating Center
CCHE	Climate Change, Health & Equity
CDC	Centers for Disease Control and Prevention
CHW	Community Health Worker
CLSR	Center for Laboratory Systems and Response
CMS	Centers for Medicare and Medicaid Services
COE	Center of Excellence
COI	Conflict of Interest
CPEW	Communications and Public Engagement Workgroup
CSTE	Council of State and Territorial Epidemiologists
CV	Curricula Vitae
CVV	Candidate Vaccine Virus
DEI	Diversity, Equity, and Inclusion
DFO	Designated Federal Officer
DoD	Department of Defense
DQS	Data Query System
DSW	Data & Surveillance Workgroup
ED	Emergency Department
EIS	Epidemic Intelligence Service
EOC	Emergency Operation Center
eQMS	Electronic Quality Management System
ET	Eastern Time
FDA	Food and Drug Administration

Acronym	Expansion
FluSurv-NET	Influenza Hospitalization Surveillance Network
FQHC	Federally Qualified Health Center
FY	Fiscal Year
GIH	Grantmakers In Health
GISRS	Global Influenza Surveillance and Response System
HBCUs	Historically Black Colleges and Universities
HCP	Health Care Providers/Personnel
HCWH	Health Care Without Harm
HEW	Health Equity Workgroup
HHI	Heat and Health Index
HHS	(United States Department of) Health and Human Services
HIV	Human Immunodeficiency Virus
HPAI	Highly Pathogenic Avian Influenza
HRSA	Health Resources & Services Administration
HRSN Screening Tool	Health-Related Social Needs Screening Tool
ICU	Intensive Care Unit
IDTRB	Infectious Disease Test Review Board
IOD	Immediate Office of the Director
IT	Information Technology
ITDG	Information Technology Data Governance
JSU	Johns Hopkins University
LDT	Laboratory Developed Test
LRN	Laboratory Response Network
LW	Laboratory Workgroup
MOU	Memorandum of Understanding
MSCCH	Medical Society Consortium on Climate and Health
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
NCHS	National Center for Health Statistics
NCIPC	National Center for Injury Prevention and Control
NCIRD	Center for Immunization and Respiratory Diseases
NCHHSTP	National Center for HIV, Viral Hepatitis, STD, and Tuberculosis Prevention
<i>NEJM</i>	<i>New England Journal of Medicine</i>
NIC	National Influenza Center
NIH	National Institutes of Health
NILA	National Independent Laboratory Association
NIST	National Institute of Standards and Technology
NOAA	National Oceanic and Atmospheric Administration
NOFO	Notice of Funding Opportunity
NWS	National Weather Service
NWSS	National Wastewater Surveillance System
OCCHE	Office of Climate Change and Health Equity
OCIO	Office of the Chief Information Officer
OD2A	Overdose Data to Action
OPPE	Office of Policy, Performance, and Evaluation

Acronym	Expansion
OHE	Office of Health Equity
OLSS	Office of Laboratory Science and Safety
ONC	Office of the National Coordinator for Health Information Technology
OPHDST	Office of Public Health Data, Surveillance, and Technology
PCEs	Positive Childhood Experiences
PHAP	Public Health Associate Program
PHDS	Public Health Data Strategy
PHIC	Public Health Infrastructure Center
Playbook	<i>The US Playbook to Address Social Determinants of Health</i>
QMML	Quality Manual for Microbiological Laboratories
RADx®	Rapid Acceleration of Diagnostics
ROI	return on investment
RNA	Ribonucleic Acid
RSV	Respiratory Syncytial Virus
RWJF	Robert Johnson Wood Johnson Foundation
SAMHSA	Substance Abuse and Mental Health Services Administration
SCOTUS	Supreme Court of the United States
SDOH	Social Determinants of Health
SME	Subject Matter Expert
SMILES	Simulation Model of Interventions Linking Evidence to SDOH
STLT	State, Tribal, Local, and Territorial
SUD	Substance Use Disorder
TB	Tuberculosis
TDH	Tennessee Department of Health
TOR	Terms of Reference
US	United States
USDA	US Department of Agriculture
USG	United States Government
VRBPAC	Vaccines and Related Biological Products Advisory Committee
WAI	Workforce Acceleration Initiative
WG	Workgroup, Work Group, Working Group
WHA	World Health Assembly
WHO	World Health Organization

Attachment #3: Workgroup Minutes

Workgroup Name	Date	Link to Minutes
Data and Surveillance Workgroup	February 23, 2024	https://www.cdc.gov/about/advisory-committee-director/pdf/February23-2024-ACD-DSW.pdf
	March 29, 2024	https://www.cdc.gov/about/advisory-committee-director/pdf/March29-2024-DSW.pdf
	April 15, 2024	https://www.cdc.gov/about/advisory-committee-director/pdf/April15-2024-ACD-DSW.pdf
	April 26, 2024	https://www.cdc.gov/about/advisory-committee-director/pdf/April26-2024-ACD-DSW.pdf
	May 31, 2024	https://www.cdc.gov/about/advisory-committee-director/pdf/May31-2024-DSW.pdf