



National Library of Medicine

Environmental Health Information Partnership

CHANGES IN THE TIME OF AN EMERGING PANDEMIC

PROCEEDINGS
AUGUST 31, 2021

**NATIONAL INSTITUTES OF HEALTH
NATIONAL LIBRARY OF MEDICINE®**

**ENVIRONMENTAL HEALTH
INFORMATION PARTNERSHIP**

**30th Annual Meeting
Virtual
August 31, 2021**

Changes in the Time of an Emerging Pandemic

PREPARED FOR
THE OFFICE OF ENGAGEMENT AND TRAINING (OET)
NATIONAL LIBRARY OF MEDICINE

PREPARED BY
HEALTH, ENERGY, AND ENVIRONMENT
OAK RIDGE ASSOCIATED UNIVERSITIES

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**NATIONAL LIBRARY OF MEDICINE
ENVIRONMENTAL HEALTH INFORMATION PARTNERSHIP MEETING**

Changes in the Time of an Emerging Pandemic

Virtual Meeting

August 31, 2021

2:00 p.m. – 5:00 p.m. ET

Patricia Matthews-Juarez, PhD, Presiding

AGENDA

2:00 p.m. – 2:10 p.m.

Meeting Opening and Welcome

Patricia Matthews-Juarez, PhD

EnHIP Chair

Meharry Medical College

Rueben C. Warren, DDS, MPH, DrPH, MDiv

EnHIP Senior Scientific Advisor

Tuskegee University

M. Nichelle Midón, MSLS, MS

EnHIP Program Lead, National Library of Medicine

2:10 p.m. – 2:15 p.m.

Agenda Overview

M. Nichelle Midón, MSLS, MS

2:15 p.m. – 2:30 p.m.

Open Science and Data Sharing

Lisa Federer, PhD

MLIS NLM Data Science and Open Science Librarian

National Library of Medicine

NIH Common Data Elements (CDE) Repository Update

Robin Taylor

MLIS Lead, NIH CDE Repository

National Library of Medicine

2:30 p.m. – 2:45 p.m.

Citizen Science: Gearing up for Discovery

Katherine Downton, MSLS, AHIP

Head of Research and Education Services

Health Sciences and Human Services Library

University of Maryland, Baltimore

Alexa Mayo, MLS, AHIP

Associate Director of Research and Information Services

Health Sciences and Human Services Library

University of Maryland, Baltimore

2:45 p.m. – 2:50 p.m.	Break
2:50 p.m. – 3:10 p.m.	NLM Update UNITE Initiative Patricia Flatley Brennan, RN, PhD Director National Library of Medicine
3:10 p.m. – 3:20 p.m.	Q&A with Patricia Flatley Brennan, RN, PhD
3:20 p.m. – 3:35 p.m.	COVID-19 Health Equity Task Force (Office of Minority Health) James E. K. Hildreth, MD, PhD President and CEO Meharry Medical College Member, HHS COVID-19 Health Equity Task Force, Data, Analytics, and Research Subcommittee, and Healthcare Access and Quality Subcommittee
3:35 p.m. – 3:45 p.m.	Q&A with James Hildreth, MD, PhD
3:45 p.m. – 3:55 p.m.	Break
3:55 p.m. – 4:00 p.m.	EnHIP Outreach and Engagement Award Announcement LaFrancis Gibson, MPH ORAU
4:00 p.m. – 4:30 p.m.	EnHIP Member Institutions Updates Patricia Matthews-Juarez, PhD Rueben C. Warren, DDS, MPH, DrPH, MDiv
4:30 p.m. – 4:55 p.m.	Acknowledgement: Dr. Luther Williams' Achievements and Acceptance of Papers in the Purdue University Archives and Special Collection
4:55 p.m. – 5:00 p.m.	Closing Remarks and Announcements Patricia Matthews-Juarez, PhD Rueben C. Warren, DDS, MPH, DrPH, MDiv M. Nichelle Midón, MSLS, MS

**PROCEEDINGS OF THE ENVIRONMENTAL HEALTH
INFORMATION PARTNERSHIP (EnHIP) MEETING
AUGUST 31, 2021**

The Environmental Health Information Partnership (EnHIP) convened its virtual annual meeting on August 31, 2021 at 2:00 p.m. ET. The annual EnHIP meeting adjourned at 5:00 p.m.

The theme of the meeting was “Changes in the Time of an Emerging Pandemic.” EnHIP Chair, Dr. Patricia Matthews-Juarez*, Professor, Department of Family and Community Medicine and Senior Vice President, Office of Strategic Initiatives and Innovation, Meharry Medical College, presided.

Representatives from Participating Institutions

Dr. Stephanie Bauer
University of Alaska

Ms. Emma Fernandez
University of Puerto Rico

Dr. João Ferreira-Pinto
University of Texas at El Paso

Dr. Sandra Harris-Hooker
Morehouse School of Medicine

Dr. Jannett Lewis-Clark
Tuskegee University

Dr. Henrique Martins
University of Puerto Rico

Dr. Patricia Matthews-Juarez*
Meharry Medical College

Dr. Aramandla Ramesh
Meharry Medical College

Dr. Kimberlei Richardson
Howard University

Dr. Daniel Sarpong
Xavier University of Louisiana

Dr. Tetine Sentell
University of Hawai'i at Mānoa

Dr. Cheryl Taylor
Southern University and A&M College

Dr. Paul Tchounwou
Jackson State University

Dr. Rueben C. Warren
Tuskegee University

Speakers

Dr. Patricia Flatley Brennan
Director, National Library of Medicine

Ms. Katherine Downton
University of Maryland, Baltimore

Dr. Lisa Federer
National Library of Medicine

Ms. LaFrancis Gibson
Oak Ridge Associated Universities

Dr. James Hildreth
President and CEO, Meharry Medical College

Ms. Alexa Mayo
University of Maryland, Baltimore

Ms. Robin Taylor
National Library of Medicine

**National Library of Medicine (NLM)
Office of Engagement and Training (OET) Staff**

Ms. Blair Anton

Dr. Kathel Dunn

Ms. Franda Liu

Ms. Nichelle Midón

Ms. Louise To

Ms. Amanda J. Wilson, Chief

Oak Ridge Associated Universities (ORAU) Staff

Ms. Kelli Bursey

Ms. LaFrancis Gibson

Ms. Regina Renfro

I. Welcome and Meeting Opening

Founded in 1991, the Environmental Health Information Partnership (EnHIP) convened its 30th Annual meeting on August 31, 2021 at 2:00 p.m. ET. The annual meeting was held virtually due to the COVID-19 pandemic, which required the planned in-person gathering be changed to a remote gathering for the safety of all involved.

Chair: The meeting was called to order by Dr. Patricia Matthews-Juarez, the EnHIP Chair. Her opening remarks included welcoming the EnHIP members. The impact of COVID-19 and the Delta Variant on minorities and other disproportionately affected communities that the historically black colleges and universities (HBCUs), Tribal Colleges, and Hispanic Serving Institutions serve were identified as subjects to be explored and discussed during this annual meeting. Dr. Matthews-Juarez reflected upon other disasters including the devastation caused by Hurricane Ida and concluded her opening remarks with the phrase that we are “one world” as we assist academic and consumer communities to develop data-driven solutions to address current environmental health disparities through research and community (citizen) science.

Senior Scientific Advisor: Dr. Rueben Warren, EnHIP Senior Scientific Advisor was introduced by Dr. Matthews-Juarez to offer his opening remarks. Dr. Warren welcomed the EnHIP members and emphasized the role of science in addressing the COVID-19 pandemic, the impact of climate change on environmental health disparities, and the need to strategically address the issues raised by COVID-19 with trust and trustworthiness.

Introduction of the EnHIP Members: Following the welcoming remarks by Drs. Matthews-Juarez and Warren, the EnHIP members introduced themselves by name, affiliations, professional positions, institutions, and the effect of COVID-19 on their institutions and community. The EnHIP members indicated that their institutions and communities are being adversely affected by COVID-19. However, the common theme for the EnHIP members was achieving high vaccine rates and decreasing infection numbers among the general population and vulnerable communities. EnHIP representatives and academic institutions are listed on Page 5.

Introduction of NLM Staff: Ms. Nichelle Midón, NLM Program Officer, introduced Ms. Amanda J. Wilson, Chief of the NLM Office of Engagement and Training (OET), who thanked

the EnHIP Chair and staff for organizing the virtual meeting. Ms. Midón introduced other NLM staff joining the webinar and welcomed the presenters.

Introduction of the Program for the Annual Meeting: Dr. Matthews-Juarez presented the schedule of activities for the virtual meeting. She indicated that this annual virtual program will provide opportunities to ask questions about Open Science and Data Sharing; the Common Data Elements (CDE) Repository; Citizen Science; UNITE; and the work of the COVID-19 Health Equity Task Force.

II. Open Science and Data Sharing

Presenter

Lisa Federer, PhD, MLIS
Data Science and Open Science Librarian,
National Library of Medicine

Highlights: The presentation on *Open Science and Data Sharing* defined “open science” as an umbrella term for a new paradigm for conducting science and disseminating scientific products and processes in an open and freely available way. Her underlying premise is that the initiative should incorporate the FAIR principles, which stands for (F) findable, (A) accessible, (I) interoperable, and (R) reusable. She underscored that scientific research should be findable, accessible, interoperable, and reusable. Data sharing, as discussed, is only one part of the broad scope of open science. Data sharing as a practice can enhance research reproducibility, enable more rapid discovery, increase return on research investment, and increase statistical power by enabling multiple studies to be combined. Dr. Federer shared the two data sharing policies at NIH: the NIH Genomic Data Sharing Policy and the NIH Data Management and Sharing Plan. These policies require submission of a Data Management and Sharing Plan and compliance with the ICO-approved plan.

Dr. Federer emphasized that researchers must think in broad terms about how all data can be shared. The most traditional way of sharing data is that the author of a paper or the researcher would note that data are available upon request; however, she indicated that this is not the most effective way to share data. As a published paper gets older, it is harder to get the data that were used. The preferred way for accessing data is making sure that data are available in a public venue, either in a repository or a data journal. Different kinds of repositories exist. One such

example is NIH's preference that data be placed in subject-specific repositories that accept data related to a particular discipline, data type, or domain, and that can make it easier to search and find data. A second option is a generalist repository that will accept any data, regardless of type or discipline, and that can be useful when no suitable subject-specific repository exists. It is slightly less discoverable, but a useful way to share data when there is not a subject-specific option available. In closing, Dr. Federer indicated that when you talk about data sharing, the key is to think through the mechanism for sharing data ethically. This planning involves investigators learning how to appropriately de-identify human subject data to ensure that human data always come with informed consent, and providing considerations for special populations, such as indigenous data sovereignty.

III. NIH Common Data Elements (CDE) Repository Update

Presenter

Robin Taylor, MLIS
Lead NIH CDE Repository
National Library of Medicine

Highlights: In the presentation on the *NIH Common Data Elements (CDEs) Repository Update* by Ms. Robin Taylor, she used the example of common data elements as standardized, precisely defined questions paired with a set of specific allowable responses. The approach for using CDEs was defined as a *systematic way to ask a question and get a response that can be used across multiple studies, which leads to standardized data collection*. This discussion emphasized the importance of CDEs, using an example of two scientists being funded separately for conducting similar research in alcohol abuse. For instance, if scientist A asks *how many* drinks are consumed, and scientist B asks *if any* drinks are consumed, then scientist C cannot analyze their data because scientists A and B collected their data in different ways. This presentation underscored that if data are collected in a standardized way, such as using CDEs, data can be used in multiple research projects.

From NLM's perspective, the use of CDEs in the NIH CDE Repository is highly encouraged as it provides access to structured human- and machine-readable definitions of data elements that have been recommended or required by NIH and other organizations for research and other applications. A limitation is that the NIH CDE Repository does not store data points, but rather

houses a listing of data elements including questions and formats for responses. The mission of the NIH CDE Repository is to provide access to structured human- and machine-readable definitions of data elements that have been recommended or required by NIH Institutions and Centers and other organizations for use in research.

NLM promotes CDEs through policy, specifically CDE governance. The discussion highlighted the COVID-19 pandemic and the need for data standards and using common data points in research to be able to combine datasets for better understanding the emerging disease. The NIH CDE Governance Committee was charged with three tasks: to determine whether CDEs merit endorsement; to work closely with the NIH CDE Repository team; and to review processes and outcomes annually and continually improve. The CDE Governance Committee uses the following criteria for CDE endorsements: it must be recommended/designated by a recognized NIH body; have a clear definition of the variable as a specified question and a permissible type, set, or range of answers; have documented evidence of reliability and validity; and have a clear licensing and IP status. While these are the essential criteria, a human- and machine-readable format is preferred.

The presentation concluded that the NIH CDE Repository Team and the NIH CDE Governance Committee are working closely together to increase the use of common data elements in NIH-funded biomedical research for greater interoperability and reusability. MS. Taylor provided three links for further information:

- The Health Data Standards blog post: <https://nlmdirector.nlm.nih.gov/2021/01/27/health-data-standards-a-common-language-to-support-research-and-health-care/>
- The NIH CDE Repository web page: <https://cde.nlm.nih.gov/home>
- A self-paced CDE training: <https://www.nlm.nih.gov/oet/ed/cde/tutorial/index.html>

IV. Discussion and Q&A for the CDE Repository

Question:

Dr. João Ferreira-Pinto: Will NLM eventually require all grants to follow the CDE guidelines?

Answer:

Ms. Taylor: It might someday. The CDE Governance Committee is accepting CDEs for review and deciding if they are going to be endorsed. But that is a subgroup to NIH CDE Taskforce, which is currently doing outreach to various institutions and centers about the importance of using CDEs and how to write them into funding opportunities. So, there are no requirements right now, and these groups do not have the authority to make CDE requirements. The CDE initiative is focusing on outreach and promotion at this point.

Summary: NLM Strategic Plan focused on sharing data policies and mechanisms, processes, and procedures on how researchers can generate and share data. Both presentations by Dr. Lisa Federer and Ms. Robin Taylor concurred that the CDE repository would be extremely helpful to all researchers and especially early-stage researchers.

V. Citizen Science: *Gearing up for Discovery Course*

Presenters:

Katherine Downton, MSLIS, AHIP
Head of Research and Education Services
Health Sciences and Human Services Library
University of Maryland, Baltimore

Alexa Mayo, MLS, AHIP
Associate Director of Research and Information Services
Health Sciences and Human Services Library
University of Maryland, Baltimore

Highlights: This presentation *Citizen Science: Gearing up for Discovery Course* focused on the self-paced course that was designed for those wanting to develop or participate in a citizen science project to address local health concerns. Katherine Downton and Alexa Mayo from the University of Maryland, Baltimore were the Principal Investigators. The course on citizen science focuses on the ways the public can engage in and initiate research. The course was funded with awards from the Network of the National of Library of Medicine, Southeastern Atlantic Region, and it was rolled out in May 2021.

Description of Planning of the Gearing Up for Discovery course: The goal of the course is to teach people how to apply citizen science strategies for addressing community and

environmental health challenges. A planning team developed the course and involved two citizen scientists, people with expertise planning online courses, and people with expertise in community outreach endeavors. External advisors were also available to provide their knowledge of citizen science. The course planning began with a scan to identify all existing training opportunities on citizen science, so as not to reinvent the wheel. The audience for the course is anyone who aspires to develop small-scale projects, including people in underserved communities that are at the high school level and above. The course content addresses the purpose of, and the approaches to, citizen science in general, but specifically to how it can be used to address community and environmental health issues. The course is composed of five modules: 1) approaches to and benefits of citizen science, 2) applications to community and environmental health, 3) steps involved in project planning, 4) methods for collecting and organizing data, and 5) how to communicate results to the wider community. The course was animated using stories and characters to make the coursework more interesting, and the instructional technologist unified the content to achieve the look and feel of the course. The course is five weeks of self-paced/asynchronous learning, offered through the edX platform; a certificate of completion is available for a small fee (\$25). As the project began, the planning team determined the audience and developed learning objectives and detailed course outlines. The audience for the course is anyone who aspires to develop small-scale projects, including people in underserved communities that are at the high school level and above.

The course begins with a general overview of citizen science, a full spectrum of participation that can be applied to research, and steps for how citizen scientists can participate in research, such as through large crowd-sourced projects and small community-initiated projects. The overview shows how citizen science is used to address health and wellness concerns, specifically in relevant real-life projects. It demonstrates challenges of developing projects from scratch and how to search for options for navigating those challenges. The course overview also focuses on clarifying terminology, including “citizen,” which is a controversial title, but is still used in the course because it is terminology that is widely known and used. However, it does name alternative terms for citizen science: public participation science, community science, participatory science, and public science. The second part of the course focuses on steps for planning a citizen science project. Project planning includes determining the problem, formatting a research question, building a team to reach the goals, and outlining any resources that would be

helpful. Ethical questions are also provided for consideration during project planning, in particular, privacy issues.

The *data collection* section of the course prepares learners for the actual work of identifying and planning strategies for data collection. Participants learn about types of data and the methods and tools for collecting those data. The course describes effective testing methods that answer the question(s) posed in the research. Data collection focuses on safety and legal concerns so that volunteers are not put at risk and do not become involved in trespassing.

The course follows an outline for how to manage data from a layperson's perspective. The outline is tailored for audiences that are high school aged and older. Participants focus on understanding file types and data storage and formatting. The course concludes with guidance on how to effectively communicate the results of the project. This phase involves considering with whom to share results and how to do that most effectively. Emphasis is placed on disseminating results to smaller groups and communities rather than journals. The course underscores that small projects can have a better audience through community health centers or local health services.

Challenges: This presentation discusses challenges of how to measure success when working in the edX platform and how restrictive it can be. The *Gearing Up for Discovery* course was developed with assessment strategies including quizzes, surveys, and enrollment matrices that can help guide subsequent versions of the course. Promotion of the course is ongoing. The following link to the course was shared: <https://www.edx.org/course/citizen-science-gearing-up-for-discovery>

VI. Round Table Discussion and Q&A with Citizen Science: *Gearing up for Discovery* Course

Comments:

Dr. Henrique Martin expressed a concern about misinformation overpowering science. She suggested that a course like this can include information that can counter misinformation and create better science, especially around COVID 19.

Response:

Dr. Cheryl Taylor offered that there is a comprehensive report from the Surgeon General on health misinformation and how we need to address it. She added that the report has practical suggestions and she provided the link to the Surgeon General's Report. The Chair added that NLM and the EnHIP can disseminate trustable and accurate information using social media.

Concluding Remarks:

Dr. Emma Fernandez concluded that one of the first things that is needed is to conduct an assessment within the community because people are hesitant to receive the COVID-19 vaccine for varying reasons. She also said that some communities are very well organized with appointed leaders and suggested that EnHIP reach out to those leaders and provide correct information and that will make a big difference especially around misinformation about COVID-19.

Dr. Warren noted that while the project is exciting, there is concern that the politicization of the word "citizen." There is a better term that can be used to garner interest from those that would be put off by the terminology.

Ms. Katherine Downton acknowledged that the citizen science community discusses using different terminology, and the concerns about this term are heard, understood, and discussed in the *Gearing Up for Discovery* course.

Dr. Warren responded that it is really important when trying to attract new partnerships to get the terminology changed as soon as possible, and Ms. Downton agreed.

Dr. Matthews-Juarez offered that individual communities are defining and redefining what they are doing in community research, while adhering to the existing concepts guided by their own culture.

It is essential to provide communities with the right information from the voices of the people they trust. Misinformation is difficult to dispel, even when countered with simple and direct methods.

VII. NLM Director's Update

Patricia Flatley Brennan, RN, PhD
Director, National Library of Medicine

Ms. Nichelle Midón introduced Dr. Patricia Flatley Brennan, NLM Director, with an overview of her current work on programs and the NLM Strategic Plan. Dr. Brennan began her presentation by thanking the EnHIP members for their efforts, as the partnership is incredibly important to NLM. The EnHIP partnership facilitates the support and improvement of health from a public health perspective. NLM is implementing its strategic plan, the pillars of which are 1) accelerating discovery and advancing health through data-driven research; 2) reaching more people in more ways through enhanced dissemination and engagement; and 3) building a workforce for data-driven research and health.

Highlights: Libraries are more important than ever given the current disasters, such as the COVID-19 pandemic, storms and hurricanes in the Southeast, and wildfires in California, Dr. Brennan stated. For example, NNLM Region 3 published information regarding Hurricane Ida and provided assistance to manage DOCLINE; and working as closely with partners. She invited EnHIP members to provide ideas or assistance in this regard. Her update covered three (3) main areas: the importance of data during COVID-19; the NIH RECOVER Initiative and the NIH UNITE Initiative; and RADx opportunities.

THE IMPORTANCE OF DATA DURING COVID-19. NLM is uniquely concerned with the information flow directly related to COVID-19 and understands the importance of rapid testing and diagnostics. NLM's RADx Program has several components as an almost 2 billion dollar initiative. These components include RADx Tech, a highly competitive, three-phase challenge to identify the best candidates for at-home or point-of-care COVID-19 testing; RADx-UP, an interconnected community-engaged research project focused on implementation strategies to enable and enhance COVID-19 testing in vulnerable populations; RADx-rad, the development and advancement of non-traditional approaches or new applications of existing approaches for testing; RADx-ATP, rapid scale-up of advanced technologies to increase, enhance, and validate throughput to create ultra-high throughput laboratories and "mega labs";

and Data Management Support, to build an infrastructure for and support coordination of the various data management needs for several ongoing COVID-19 support efforts.

NIH RECOVER (Researching COVID-19 to Enhance Recovery) Initiative: This NIH initiative seeks to understand, prevent, and treat Long COVID (Post-Acute Sequelae of SARS CoV-2 infection, or PASC). NLM considers it extremely important to get out into the community and deliver assessments. The RECOVER initiative will be asking a series of questions including: what does recovery from SARS-CoV-2 infection look like among different groups; how many people develop new symptoms after acute infection; why do some people develop these health effects while others do not; how many people continue to have symptoms after acute infection; what causes these health effects; and does SARS-CoV-2 infection trigger changes in the body that increase the risk of other conditions?

The NIH UNITE Initiative: Dr. Brennan discussed the long-term reorganization of the scientific workforce and scientific products to better serve society. The NIH UNITE Initiative was launched in 2020 using guidance from the advisory committee. UNITE is designed to address two key issues: ensure that biomedical research is devoid of hostility grounded in race, sex, and other federally protected characteristics; and commit to delineate elements that may perpetuate structural racism in biomedical research within NIH and the extramural community, leading to a lack of personnel inclusiveness, equity, and diversity. These teams have two key targets. The first target is that all ideas presented must be given an equal and fair amount of review, without regard to current dogma, precedents, or who presents the ideas. The second target is that NIH redresses the fundamental causes of these disparities and inequities and identify research programs that could implement effective interventions and ameliorate problems. Additionally, UNITE incorporates five working targets: a) understanding stakeholder experiences through listening and learning; b) looking for new research on health disparities, minority health, and health equity while being clear to remember the importance of culturally and personally meaningful access to health care; c) improving the NIH culture and structure for equity, inclusion, and excellence; d) transparency, communication, and accountability with NIH's internal and external stakeholders; and e) using the extramural research ecosystem to change policy, culture, and structure for promoting workforce diversity. In conclusion NIH will

look more closely at the diversity of their workforce, and no organization should shy away from taking a step back and looking at the bigger picture.

EnHIP and Relevance to NIEHS: The NIEHS funds research programs and centers of excellence is related to the development of a better understanding of environmental health. Within the centers of excellence, there is specific community engagement coordination to make sure the work of the centers addresses the work of the community. Additionally, the NIEHS funds work to ensure the grants and programs funded provide practical solutions in the community. There is a partnership for public health that is designed to translate research into practical community solutions; this is a path forward for EnHIP members.

She concluded her presentation with the apology from Dr. Francis Collins, NIH Director, She quotes:

“To those individuals in the biomedical research enterprise who have endured disadvantages due to structural racism, I am truly sorry. NIH is committed to instituting new ways to support diversity, equity, and inclusion, and identifying and dismantling any policies and practices at our own agency that may harm our workforce and our science.”
– Francis S. Collins, MD, PhD, NIH Director

VIII. COVID-19 Health Equity Task Force (Office of Minority Health)

HHS COVID-19 Health Equity Task Force, Data, Analytics, and Research Subcommittee, and Healthcare Access and Quality Subcommittee

James E. K. Hildreth, PhD, MD
President and CEO
Meharry Medical College

Dr. Warren introduced Dr. James E. K. Hildreth. Dr. Hildreth is an outstanding scientist, administrator, and scholar whose work is recognized not only in health care, but also in immunology and HIV research— there could be no greater voice during the pandemic than Dr. Hildreth.

Highlights: Dr. Hildreth presented an overview of the COVID-19 virus and population health, its impact on chronic diseases and minorities, and the current state of vaccines. Facts are 1) the COVID-19 pandemic has affected more than 217 million people worldwide, and 2) it accounts

for over 4.5 million deaths. When looking at the disease from a racially homogenous viewpoint, in the United States, African Americans and Hispanic populations have a higher rate of all major chronic conditions that has led to a disproportionate burden of severe COVID-19 disease and death among these populations. He stated that data on COVID-19 disparities have been astounding, with more than twice the number of COVID-related deaths in Black communities compared to white communities. This has revealed underlying health equity issues and disparities, which have been longstanding, but the pandemic has shone a light for everyone in the world to see.

Development of Vaccines: Response and Approval: Dr. Hildreth indicated the global scientific response is unprecedented, with effective collaboration among big pharma companies that has never been seen before. Three (3) vaccines have been approved for use in the United States with Emergency Use Authorization (EUA); Pfizer, Moderna, and the Janssen vaccines. Additionally, on August 24, 2021, the Pfizer-BioNTech mRNA Vaccine was granted Biologics License Application (BLA), or full approval. This will change the dynamic in terms of willingness for people to be vaccinated, and organizations large and small will be comfortable mandating vaccinations, he stated. Trials are currently underway for vaccines to be extended to individuals 6 months of age and older, and reviews will be underway by the end of 2021 with vaccines available in early 2022. Today, (August 31, 2021), 5.3 billion shots have been administered around the world, with 369.5 million shots given in the United States (53% of the population). He added that no one who gets the vaccines now should consider themselves “guinea pigs” due to the experience we all have now with vaccines.

COVID 19 Variants: Dr. Hildreth indicated that variants have been in the news and on the minds of scientists and public health officials in a big way. The COVID-19 variants have emerged in several countries, raising concerns about more rapid community spread and vaccine failure. The World Health Organization (WHO) has labeled the most critical variants as Alpha, Beta, Gamma, and Delta. The variants are all caused by a position in the spike protein, which makes the protein less immunogenic. The Delta variant has changed everything, almost making it a new fight. It first appeared in India in April 2021 and is primarily responsible for reversing all the progress that has been made against COVID-19 up to that point; the Delta variant is now the dominant variant in the U.S. and other countries. The variants are not a surprise given that

all RNA viruses mutate. Mutations can change epitopes, sites that antibodies bind, that result in escape from the immune system. Mutations require active infection and thus the likelihood of mutations increase if the virus is allowed to freely spread in a population.

Dr. Hildreth reported that, on a research level, we know that the Delta variant is recognized less by antibodies, and it binds with a higher affinity to its receptor, which means it takes less virus to cause an infection. In addition, this variant can have a viral load in the upper respiratory tract that is as much as 1,000 times higher than the Alpha variant or other strains of SARS-CoV-2. Given all these markers, it is not surprising that this variant is causing more infections and is responsible for the current 4th wave we are experiencing.

A View from the President’s COVID-19 Health Equity Task Force: This taskforce on which Dr. Hildreth serves is charged with making recommendations to President Joe Biden to eliminate health inequities revealed by the COVID-19 pandemic, and to ensure that if there is another pandemic, minorities will not bear the disproportionate burden of the disease. The current work of the Task Force is distributed among four workgroups: 1) Data Analytics and Research (whether or not data are reported and the quality of the data); 2) Healthcare Access and Quality (recommend how to get underserved population access to quality healthcare); 3) Communications (the importance of trusted messengers and having communities involved as well as having interagency communication to make the most effective use of resources); and 4) Xenophobia and Structural Drivers of Racism and Discrimination. Dr. Hildreth reported that work began in February 2021 and over 300 recommendations have been listed, and that the group is currently working on paring that number down to a more feasible and manageable list for final recommendations to President Biden by October 2021. He stated that he is very encouraged by the work on the Task Force, which is ably led by Marcella Nunez-Smith, MD, MHS at Yale School of Medicine.

IX. Q&A with Dr. Brennan and Dr. Hildreth

Question:

Dr. Sandra Harris Hooker, Morehouse School of Medicine: Do either of you have thoughts about post-COVID-19 health conditions of vulnerable populations and, specifically, how to provide funding to these populations to assist with treatment?

Answer:

Dr. Hildreth: The COVID-19 Task Force is focused on this area of concern as many people will develop long-term COVID-19 symptoms (“long haulers”) and many affected individuals do not have insurance. The Task Force is concerned with patients that will not have access to healthcare due to lack of insurance or poor insurance, and it intends to ensure there are treatment centers for individuals regardless of insurance status. Many large hospital systems are setting up long hauler COVID-19 treatment centers for their patient panels, so the Task Force is interested in those who are not patients of those hospitals to make sure they can access treatment. And, because Black and Brown people have had a disproportionate burden of disease, this will extend to a disproportionate burden of patients who are classified as COVID-19 long haulers.

Question:

Dr. Matthews-Juarez: What is the role that you see for EnHIP in carrying out the objectives in the Strategic Plan of the NLM?

Answer:

Dr. Brennan: The confluence of COVID-19 and the rising awareness of social injustice has provided NLM with the opportunity to make sure NLM does not design future constraints into existing research. This recognizes the need to do more on community partnership-based research, and Dr. Brennan would like to hear ideas from EnHIP on how to open the pipeline to the future of science to everyone. Specifically, she would like to hear how to incorporate types of science and research that is exciting for students K–12 and baccalaureates, and that would help them see there is a pathway between science and society that scholarship enables. She said that her biggest fear is that misinformation and dismissiveness of science-based approaches will kill a generation’s curiosity.

Dr. Hildreth to comment on the overarching concepts of science, scholarship, and workforce science pathways for developing the next generation of scientists, as presented by Dr. Brennan. Dr. Hildreth acknowledged that the leadership of Dr. Brennan at NLM has been fantastic, and that NLM is one of the great resources on the planet. He also acknowledged

that he was on Dr. Francis Collins' Advisory Panel and had publicly thanked him for doing something extraordinary in public leadership, which was his apology on behalf of his agency for their history of bias. He acknowledged concern about the bashing of science and scientists seen over the last year, which may discourage young people from pursuing a career in science. Meharry Medical College has adopted two middle schools in an effort to set up a national virtual institute where Meharry medical students would rotate around U.S. cities and partner with other middle schools for the purpose of promoting knowledge and the pursuit of truth. He added that there is nothing more important to the future of science and medicine than showing students how exciting and gratifying the study of science can be. He noted that he is happy to see the epiphany happening around the country that all lives do matter, and everyone can contribute to the solutions. Communities have great solutions to problems if we find the right way to engage them, he stated. Additionally, he indicated that the EnHIP member institutions is one of the great resources to that end.

Comments: EnHIP Members

Dr. Pat Matthews-Juarez, Meharry Medical College: EnHIP, Citizen Science, and Next Generation of Scientists: Dr. Brennan's consistency and commitment to maintaining the EnHIP Partnership are commendable. Having communities and groups participate in community science is really important. On mentoring the next generation of scientists, she stated that programs for young people and students, such as the Saturday Science Academy at Charles Drew, are great opportunities to give young people the confidence and ideas that they can accomplish wonderful things.

Ms. Emma Fernandez, University of Puerto Rico: On mentoring and coaching the next generation of scientists: The university undergraduate students were tasked with developing an innovative product that can help with the current pandemic. Those students developed a face mask and have applied for a patent for a dynamic face mask that provides protection even when eating and drinking. The students reported that this endeavor made them excited about science and engineering concepts. Regarding community (citizen) science, the university has given funds to different community organizations to support programs addressing the COVID-19 pandemic, and they have received outstanding responses. The infrastructure has been beneficial for community science.

Dr. Tetine Sentell of the University of Hawai'i: Creating the pathways for young scientists: The passion in which faculty members have seen their students engage is helping to build these pathways around community-oriented solutions, and the university is charged with keeping the level of engagement to ensure safety, security, and plausibility for them to keep growing in science.

Dr. Rueben Warren, Tuskegee University National Center for Bioethics in Research and Health Care: On the presentations by Dr. Brennan and Dr. Hildreth- Both presentations were very much appreciated. The public apology from Dr. Francis Collins is important to translate apology into action—the intention of doing “good” into the work of doing “good”. The country is ready to do “good,” and we need to translate that into science, for not only biomedical science but behavioral science as well.

Dr. Daniel Sarpong, Xavier University at Louisiana: We acknowledged NIH for its effort in the community engagement arena. We are still behind in terms of guidelines and logistics because, when working with communities, sometimes we cannot uphold the same guidelines of how we manage work products, especially in terms of grants. There is very little money for grants going into the community, and there are many different guidelines for the community organizations to get awarded grants.

Dr. Brennan: This message will be forward to NIH to hopefully create more flexibility and accountability for community organizations.

Dr. Hildreth: This was also one of the recommendations that the Health Equity Task Force is making; that there be new funding mechanisms that allow communities to compete for funds for implementing the most effective programs.

Dr. Cheryl Taylor of Southern University and A&M College: We may have to transform the language that we use about community, because when we talk about community, it is often described as a group population, when in fact, community should be used to represent people. There is a profound need for interdisciplinary collaboration in our communities; the more evidence and standards we use for collaborating, the more effective we will be able to be around equity and justice. An example is Louisiana when the hurricane hit, and that COVID 19-related news took a back seat to disaster preparedness. Guidelines for evacuation were put in place that

were leading people to COVID-19 hotspots, without an accompanying reminder to take personal precautions to prevent viral exposure.

Dr. Ferreira-Pinto, University of Texas at El Paso: The community in the abstract, because it is the community-based organizations and their leaders, and those leaders need help with implementing their resources. It is not possible to go door-to-door and reach the community on an individual level, so the focus needs to be more on organizations that have a reach into community members.

Dr. Matthews-Juarez commented what defines a community is subjective, depending if you are in a rural or urban area.

Summary:

Dr. Brennan: The NLM relies on the EnHIP partnership to funnel their community findings to NLM and thus NIH in order to grow understanding and resources. She would appreciate keeping the dialogue open between EnHIP and NLM and being informed if she can be helpful to the member institutions.

Dr. Hildreth: To put COVID 19 behind us, we have to find a way to talk to each other and not at each other; to continue fighting the virus and not each other. He added that the work EnHIP is doing in engaging communities, facilitating conversations, and showing cultural humility is important because communities have the solutions, they just need guidance and resources, which EnHIP provides.

X. EnHIP Outreach and Engagement Awards Announcement

Ms. LaFrancis Gibson announced the 2021 EnHIP Outreach and Engagement Award recipient institutions. The four recipients and their project titles are Benedict College, *Using NLM Databases to Educate Minority Communities on COVID-19 and other Emerging Zoonotic Diseases*; Charles R. Drew University of Medicine and Science, *COVID-19 and the Environmental Health Impact on Our Community*; Southern University A&M College, *Access to Health Literacy for Life: Learning the National Library of Medicine Resources Online*; and University of Texas at El Paso Library, *Developing Evidence-Based Research and Health Literacy Capacity in University of Texas at El Paso Health Science Students for the Purpose of*

Disseminating Reliable Health-Related Information to Extended Family Members in a Historically Underserved Latino Border Community. A detailed list of projects can be found in Appendix A.

Drs. Matthews-Juarez and Warren thanked ORAU and congratulated the 2021 awardees. Dr. Warren stated that he looks forward to the results of work for the awardees.

XI. EnHIP Member Institution Updates

Dr. Stephanie Bauer, University of Alaska: The University is aware of the problem of COVID-19 across the state and has come to terms with the enormous impact on Native peoples. The university has participated with other university branches across Alaska in using the pandemic to connect students across different disciplines to public health, environmental science, and also making connections to the humanities, including the history of Alaska, anthropology, and the study of Native experiences. A variety of sectors are thinking about how to use programs across the university to listen to Indigenous communities, considering, in particular, the way they have been impacted by COVID-19 and listening to how they would like to participate in university studies and support Indigenous students and their educational success across the universities.

Dr. Henrique Martins and Ms. Emma Fernandez, University of Puerto Rico: The pandemic has changed the flow of the university, with students no longer working on campus, which slows a number of projects that are student driven. However, students are more involved in education and participating in more educational committees. In terms of grants, it was difficult for students to get supplies and into campus labs to continue research. The students also had problems getting in touch with research participants in an effective way. The university has funding that cannot be used because students cannot perform the studies; however, the faculty has been moving forward with applying for more grants and other funding that is available. In that sense, the university has seen a number of grants associated with the pandemic. This is good, but also worrisome to think of how the university is going to transition its investigators and also sustain them.

Dr. Ferreira-Pinto, University of Texas at El Paso: The college and university were responsive in dealing with the COVID-19 pandemic because, being a community college, all of the students live in the community. The college had been able to create a very good program for

vaccination and testing, which made the university a hub for the community. The rate of COVID-19 in El Paso is very low because the community, especially students, adhered to mask mandates. Additionally, he said that more than 95% of students and faculty have received a COVID-19 vaccination. The university is data driven and handles a large amount of research, and added that the students engage the community to disseminate the university resources. The university is essentially training a workforce for the future. The university is also preparing for incoming refugees. In terms of leadership changes, the university has a new president, Dr. Heather Wilson. Dr. Wilson is a former Air Force commander, who has responded excellently to the pandemic and the changes necessary at the university.

Dr. Daniel Sarpong, Xavier University of Louisiana: There have been no leadership changes at the university. Regarding COVID-19, Xavier transitioned to remote learning in 2020, and students used online collaborative tools. To ease this transition, the university had required students to train on those collaborative tools. Louisiana is seeing a disproportionate number of minorities affected by COVID-19, and Xavier has been lucky to be part of a number of COVID-19-related research and collaboration initiatives with other organizations. As for community engagement, the university quickly began to engage with the community through panel discussions that created a strong foundation for working together as partners.

Dr. Kimberlei Richardson, Howard University: Howard had been one of the major vaccinations sites in D.C., so, in addition to the faculty in the hospital and school, many of the community members were able to get vaccinated quickly. Last year, online learning was implemented. During this year, faculty began person-to-person learning with no small amount of hesitancy and are still looking at getting permission to allow virtual learning in the future. A compromise is being sought between the faculty needs in terms of feeling comfortable teaching virtually and students' wishes to attend in-person. Additionally, the university established a relationship with one of the local companies in order to start clinical trials.

Dr. Tetine Sentell, University of Hawai'i: Updates to a number of programs and engagements from basic science to behavioral science, and point of delivery of care for vaccines and other resources was presented. Increased enrollments are on the rise for public health, social work, and other disciplines. There are still ongoing issues, such as procurement and capacity caps. Building health equity with Indigenous communities remains a challenge, which is being addressed.

Dr. Lewis-Clark, Tuskegee University: The University established a partnership with the community, and it also has a lab at the university where COVID-19 testing is done. The changes from last year to this year have thrust the school into doing things outside of their comfort zone. This year, virtual, hybrid, and in-person teaching has garnered a lot of feedback and implementation suggestions.

Dr. Paul Tchounwou, Jackson State University: Last year the university appointed a new president, Thomas Hudson. As Dr. Hudson is a former JSU alum, the school is very excited about his appointment, especially because he looks to move JSU to the next level of academic excellence. A new provost, Dr. Alisa Mosley, was also appointed. The two new additions are also exciting due to the new strategic plan in the works for the university. The pandemic caused a lot of negative impact, especially on research, due to limited access of labs and lack of capacity to staff the labs. However, last year JSU was able to get their program renewed for health disparities research. Notification from NIH was received that JSU is funded for the next five years. The new grant has a focus on community engagement, health disparities research related to cancer, and COVID-19-related projects. In addition, he said JSU recently won a grant from the National Institute on Drug Abuse (NIDA) focused on adult drug abuse disparities.

Dr. Cheryl Taylor, Southern University and A&M College: The mission of the university was consistent with the mission of EnHIP. There are increased enrollments, and they have maintained a university-wide campaign titled “Don’t Wait, Vaccinate.” As a state institution, vaccinations cannot be mandated, but masks are required. The university center had been serving as a COVID-19 testing and vaccination site but became a disaster shelter over the weekend as a result of the hurricane. The university is currently navigating between a state of emergency and a COVID-19 hotspot; however, a recent survey resulted in overwhelming agreement for in-person learning, and hybrid classes are currently being conducted. The Nursing Supply and Demand Commission (Dr. Taylor is a member) at the state level, and the committee is dealing with the challenge of members of health professions who are going on social media and encouraging people not to get vaccinated. There is an ongoing project to help communities learn how to access NLM resources in an effort to combat the misinformation.

Dr. Aramandla Ramesh, Meharry Medical College: No new appointments in leadership. State and federal funding has been received as Meharry is the TN CEAL (Tennessee Community

Engaged Alliance Against COVID-19) site. The college is conducting several research projects on COVID-19 vaccine uptake and research in health disparities. Additional funding for community engagement has been received. In addition, Meharry has clinical trials in progress related to COVID-19 vaccine.

XII. Acknowledgement: Dr. Luther Williams

Dr. Warren acknowledged the kind of excellence in leadership that evolves from our institutions: the HBCUs, the Hispanic Serving Institutions, and the Tribal Colleges. Recognizing the strength of our institutions and the people that serve them, Dr. Warren officially recognized Dr. Luther Williams, whose papers are archived at Purdue University. Dr. Williams has been recognized as an academician, a scientist, a scholar, and a scientific manager and mentor. He has mentored, coached, and advised many scholars, administrators, and students. Dr. Warren noted that Dr. Williams is former Provost and Vice President of Academic Affairs at Tuskegee University, a graduate of Miles College, and received his PhD from Purdue University. Dr. Warren extended congratulations to Dr. Williams on his achievements and acceptance of his papers in the Purdue University Archives and Special Collection.

EnHIP agreed to consider spotlighting individuals such as Dr. Williams in recognition of scholars and leaders that have created change for environmental health.

XIII. Closing Remarks

Dr. Warren: This pandemic has been a challenge, but that is how you succeed—by overcoming challenges. The future brings opportunity. He thanked EnHIP members and looks forward to the next EnHIP meeting. He also thanked Dr. Matthews-Juarez for her outstanding leadership.

Dr. Matthews-Juarez: It has been a unique year, with a focus on assisting communities to understand the dangers of and protecting from contracting COVID-19, while accepting that the pandemic is not going away soon. We must continue to feel hopeful and aspirational. Toward that end, EnHIP has an obligation to correct misinformation/disinformation by using its resources and networks through data-driven interventions and community engagement. EnHIP will continue to work with young people and institutions about the science around COVID-19

and encourage listening to the scientists, while becoming ambassadors of truth, trustworthiness, and disseminators of trustworthy information.

A round of thanks to Drs. Patricia Brennan, James E. K. Hildreth, Rueben Warren, all of the presenters, the EnHIP members, Ms. Amanda Wilson, Ms. M. Nichelle Midón; Ms. LaFrancis Gibson, and the many staff who made this 30th Annual EnHIP meeting possible.

This meeting is adjourned.

APPENDIX A: EnHIP PROJECTS 2021

ENVIRONMENTAL HEALTH INFORMATION PARTNERSHIPS EnHIP AWARDEES 2021

Benedict College

“Using NLM Databases to Educate Minority Communities on COVID-19 and Other Emerging Zoonotic Diseases”

Benedict College’s project aims to advance EnHIP’s strategic objectives through student-led research and presentations on NLM resources and collaboration with the Columbia Housing Authority on disseminating presentation information to local residents. This project is being conducted in response to the disproportionate impact of COVID-19 and other zoonotic pathogens on communities of color. The primary goals of the project are to improve student presentation skills, increase the awareness, use, and exposure of NLM information resources related to COVID-19 and zoonotic diseases among students and the college community, while also informing the local at-risk minority community. After completing classroom training on NLM databases and resources, students within Benedict College Student Environmental Health Association (SEHA) will conduct competitive research projects on COVID-19 and other emerging zoonotic diseases. Research findings will be reported through presentations to the college community and judging faculty and library staff. Top selected presentations will be professionally video recorded for dissemination to approximately 15,000 Columbia Housing Authority residents.

Charles R. Drew University of Medicine and Science

“COVID-19 and the Environmental Health Impact on Our Community”

Charles R. Drew University of Medicine and Science in partnership with King/Drew Medical Magnet High School proposes a project to combat the high number of health inequities in South Los Angeles. The overarching goal of the project is to provide and share information on the impact that COVID-19 and environmental health have on the local community by providing health information which will aid in the reduction of health disparities. High school and college students will complete a series of training sessions on how to access and utilize NLM COVID-19 and environmental health-related resources and ultimately serve as Jr. EnHIP ambassadors to the project. Jr. EnHIP ambassadors will then assist with training members of partnering and community organizations on use of NLM resources. In collaboration with partners, a symposium will be hosted for students, faculty, community members, and organizations with the goal of participants gaining a better understanding of health inequities in the community related to COVID-19 and environmental health. In addition, the symposium will feature experts in related fields and will allow Jr. EnHIP ambassadors the opportunity to provide interactive demonstrations on the use of NLM resources to participants.

APPENDIX A: EnHIP PROJECTS 2021

Southern University and A&M College

“Access to Health Literacy for Life: Learning the National Library of Medicine Resources Online”

In response to the alarming rates of death and disability due to chronic diseases and COVID-19 among African Americans in Louisiana, Southern University and A & M College is proposing a project aimed to facilitate access, awareness, use, and training on NLM health information resources to African Americans across generations. The overall goal of the project is the formation of new groups of African American users of NLM resources. Led by John B. Cade Library and volunteer community advisory teams, the university librarians and community health experts’ staff will provide culturally tailored training modules using NLM information resources to more than a dozen community and campus partners. The trainings will include targeted health disparity content focused on prevention and management of COVID-19 and other chronic diseases that impact the African American community. Trainings will include a combination of online training and hybrid training methods. The overall hope at the conclusion of this project is for the targeted community to become engaged with NLM resources for life.

The University of Texas at El Paso

“Developing Evidence-Based Research and Health Literacy Capacity in University of Texas at El Paso Health Sciences Students for the Purpose of Disseminating Reliable Health-Related Information to Extended Family Members in a Historically Underserved Latino Border Community”

In collaboration with the non-profit, non-governmental organization (NGO) Alliance of Border Collaborative, the University of Texas at El Paso will conduct a project designed to develop evidence-based health literacy, research, and community engagement skills in undergraduate health science students serving as student health ambassadors who live in historically underserved, Spanish-speaking communities in West Texas along the U.S.-Mexico Border. The project will incorporate creative and engaging approaches to combating the high diabetes diagnosis rates in El Paso County, TX. The overall goal of the project is to address health equity in the largely Latino community by focusing on health literacy and diabetes prevention. As part of the project, the student health ambassadors will complete a series of trainings, web-based videos, and workshops on health literacy proficiencies and the use of NLM and HHS information resources. After that, the student health ambassadors will engage and train their nuclear and extended families to improve their health literacy about the potential dangers of diabetes and change negative attitudes towards diabetes prevention behaviors, such as exercise and nutrition.

APPENDIX B: DIRECTORY OF GUEST SPEAKERS

ENVIRONMENTAL HEALTH INFORMATION PARTNERSHIPS DIRECTORY OF GUEST SPEAKERS

Patricia Flatley Brennan, RN, PhD
Director, National Library of Medicine
8600 Rockville Pike
Bethesda, MD 20894

Ms. Katherine Downton, MSLIS, AHIP
Head of Research and Education Services
Health Sciences and Human Services
Library
University of Maryland, Baltimore
620 W. Lexington Street
Baltimore, MD 21201
TEL: 410.706.7373
E-mail: kdownton@hshsl.umaryland.edu

Ms. LaFrancis Gibson, MPH
ORAU Health Education Specialist
Section Manager
P.O. Box 117, MS-32
Oak Ridge, TN 37831
TEL: 865.241.6649
E-mail: lafrancis.gibson@orau.org

Lisa Federer, PhD, MLIS
NLM Data Science and Open Science
Librarian
8600 Rockville Pike
Bethesda, MD 20894
TEL: 301.827.4399
E-mail: lisa.federer@nih.gov

James Hildreth, MD, PhD
President and CEO
Meharry Medical College
1005 Dr. D. B. Todd Jr. Boulevard
Nashville, TN 37208
TEL: 615.327.6904
E-mail: officeofthepresident@mmc.edu

Ms. Alexa Mayo, MLS, AHIP
Associate Director for Research and
Information Services
Health Sciences and Human Services
Library
University of Maryland, Baltimore
620 W. Lexington Street
Baltimore, MD 21201
TEL: 410.706.1316
E-mail: amayo@hshsl.umaryland.edu

Ms. Robin Taylor, MLIS
NLM Lead for the NIH CDE Repository
8600 Rockville Pike
Bethesda, MD 20892
TEL: 301.827.6725
E-mail: robin.taylor@nih.gov

APPENDIX C: SPEAKER BIOGRAPHIES

ENVIRONMENTAL HEALTH INFORMATION PARTNERSHIPS SPEAKERS BIOGRAPHIES

Patricia Flatley Brennan, RN, PhD, is the director of the National Library of Medicine (NLM). She came to NLM in August 2016 from the University of Wisconsin-Madison, where she was a professor in the School of Nursing and College of Engineering. She is a pioneer in the development of innovative information systems and services. A past president of the American Medical Informatics Association, Dr. Brennan was elected to the Institute of Medicine in 2001. She is a fellow of the American Academy of Nursing, the American College of Medical Informatics, and the New York Academy of Medicine.

Ms. Katherine Downton, MLIS, is the Head of Research and Education Services at the University of Maryland, Baltimore. Ms. Downton leads a team of librarians who support and collaborate with the Schools of Medicine, Nursing, Pharmacy, Dentistry, and Social Work at the University of Maryland, Baltimore (UMB). She has years of experience providing expert search services; participating on systematic review teams; and training students, faculty, and clinicians in searching for evidence. She also has past experience as an education coordinator in libraries and has served as a liaison to diverse fields in the health and social sciences and worked with students and faculty in the sciences. She received her MS in Library and Information Science from the University of Illinois at Urbana-Champaign.

Ms. LaFrancis Gibson, MPH, CHES, is the Health Education Specialist Section Manager at Oak Ridge Associated Universities (ORAU). Ms. Gibson has over 10 years of public health and outreach experience in developing various projects and programs. Her experience includes project management, program implementation, training, health promotion, and community outreach. Ms. Gibson's expertise is in managing multiple projects, aligning cross-functional teams with common goals, and delivering projects on time and on budget. She received her MPH in Epidemiology from East Tennessee State University.

Lisa Federer, PhD, MLIS, is the Data Science and Open Science Librarian at the National Library of Medicine (NLM) focusing on efforts to support workforce development and enhance capacity in the biomedical research and library communities for data science and open science. Prior to joining NLM, Lisa spent five years as the Research Data Informationist at the National Institutes of Health Library, where she developed and ran the Library's Data Services Program. She holds a PhD in information studies from the University of Maryland and an MLIS from the University of California, Los Angeles as well as graduate certificates in data science and data visualization.

APPENDIX C: SPEAKER BIOGRAPHIES

James Hildreth, PhD, MD, is the 12th president and chief executive officer of Meharry Medical College. Dr. Hildreth graduated from Harvard magna cum laude in chemistry and graduated with a PhD in immunology from Oxford University in England. He obtained his MD from Johns Hopkins University School of Medicine in Baltimore and became the first African American in the 125-year history of Johns Hopkins School of Medicine to earn full professorship with tenure in the basic sciences. Dr. Hildreth later became director of the NIH-funded Center for AIDS Health Disparities Research at Meharry Medical College. He currently serves on the following boards: Nashville Health Governing Board, General Board of Higher Education and Ministry, St. Jude Children's Research Hospital Graduate School of Biomedical Sciences, and Nashville Healthcare Council.

Ms. Alexa Mayo, MLIS, AHIP, is the Associate Director for Research and Information Services at the University of Maryland, Baltimore where she provides leadership for the public service initiatives. In addition to her experience in delivering instruction to undergraduate and graduate students, she has collaborated on community-based health information projects with a variety of partners – community health workers in HIV/AIDS clinics, faith communities throughout Maryland, local high school students and teachers, staff at community-based organizations state-wide, and university-sponsored global initiatives. Ms. Mayo received her master's in Library Science from Simmons College. Her background includes developing innovative research services, health information outreach, community engagement, and global health.

Ms. Robin Taylor, MLIS, joined the National Library of Medicine (NLM) as the lead for the National Institutes of Health (NIH) Common Data Elements (CDE) Repository, hosted by NLM. She supports daily operations of the repository, provides user support, coordinates quality assurance, collaborates with NIH and external partners, and develops strategic goals and objectives. Previously, Ms. Taylor worked in libraries for seven years overseas, and as a Digital Library Specialist at the Library of Congress. She earned a master's degree in Library and Information Science from San Jose State University and a bachelor's degree in English from Davidson College.

APPENDIX D: DIRECTORY OF REPRESENTATIVES

Patricia Matthews-Juarez, PhD, Chair

Vice President of Faculty Affairs and Development and Professor
Meharry Medical College
1005 Dr. D. B. Todd Jr. Boulevard / Nashville, TN 37208
TEL: 615.327.6526
E-mail: pmatthews-juarez@mmc.edu

PARTICIPATING HISTORICALLY BLACK COLLEGES AND UNIVERSITIES, HISPANIC-SERVING INSTITUTIONS, ALAKSA NATIVE-SPEAKING INSTITUTIONS AND TRIBAL COLLEGES

Benedict College

Milton Morris, PhD, MPH, DAAS, CFSP
Director, Department of Environmental
Health Sciences
Benedict College
1600 Harden Street
Columbia, SC 29204
TEL: 803.705.4608
E-mail: milton.morris@benedict.edu

Charles R. Drew University of Medicine & Science

Dolores E. Caffey-Fleming, MS, MPH
STEP-UP and Project STRIDE Program
Coordinator
Charles R. Drew University of Medicine &
Science
1748 East 118th Street, Room N153
Los Angeles, CA 90059
TEL: 323.249.5716
E-mail: deefleming@cdrewu.edu

Colorado Mountain College

Jill A. Ziemann, MS Ed
Director
Go2Work Programs
Gateway/Women In Transition/GarCo
Sewing Works
Colorado Mountain College
802 Grand Avenue
Glenwood Springs, CO 81601
TEL: 970.384.8518
E-mail: jziemann@coloradomtn.edu

Florida A&M University

Johnnie L. Early, II, PhD, RPh, Fellow,
NPhA
Dean and Professor
College of Pharmacy and Pharmaceutical
Sciences
Institute of Public Health
Florida A&M University
1415 S. Martin Luther King, Jr. Boulevard
Tallahassee, FL 32307
TEL: 850.599.3171
E-mail: johnnie.early@fam.edu

Hampton University

Arlene Montgomery, PhD, RN
Associate Professor
School of Nursing
Hampton University
110 William Freeman Hall
Hampton, VA 23668
TEL: 757.727.5672
E-mail: arlene.montgomery@hamptonu.edu

Haskell Indian Nations University

Phillip C. Marshall, MS
Acting Dean
Natural and Social Science
Haskell Indian Nations University
129 Sequoyah Hall
155 Indian Avenue
Lawrence, KS 66046-4800
TEL: 785.749.8404, ext. 325
E-mail: pmarshall@haskell.edu

APPENDIX D: DIRECTORY OF REPRESENTATIVES

Howard University

Robert Copeland, Jr., PhD
Associate Professor
Department of Pharmacology
Howard University College of Medicine
520 W Street NW, Room 3408
Washington, DC 20059
TEL: 202.806.6311
E-mail: rlcopeland@howard.edu

Jackson State University

Paul B. Tchounwou, ScD, MSPH, MSc
Associate Dean and Distinguished Professor
College of Science, Engineering and
Technology
Jackson State University
P.O. Box 18540
Jackson, MS 39217
TEL: 601.979.0777
E-mail: paul.b.tchounwou@jsums.edu

Navajo Technical University

Steven Chischilly, MS, ABD
Associate Professor
Environmental Science and Natural
Resources
Navajo Technical University
P.O. Box 849
Crownpoint, NM 87313
TEL: 505.786.4147
E-mail: schischilly@navajotech.edu

Oglala Lakota College

Jessica Zephier, MSN, RN
Chairperson
Department of Nursing
Oglala Lakota College
P.O. Box 861
Pine Ridge, SD 57770
TEL: 605.867.5856, ext. 11
E-mail: jzephier@olc.edu

Southern University and A&M College

Cheryl Taylor, PhD, RN, FAAN
Chairperson, Graduate Nursing Program
Director
Office of Nursing Research
Southern University and A&M College
J. K. Haynes Building 170, Swan Street
P.O. Box 11794
Baton Rouge, LA 70813
TEL: 225.771.2632
E-mail: cheryl_taylor@subr.edu

Texas Southern University

Judith Mazique, JD, MPH
Assistant Professor
Environmental Health
College of Pharmacy and Health Sciences
Texas Southern University
3100 Cleburne Street
Houston, TX 77004
TEL: 713.313.4335
E-mail: mazique_jx@tsu.edu

Tuskegee University

Jannett Lewis-Clark, OTD, MOT, OTR/L,
CLT
Department Head, Allied Health and
Program
Director, Occupational Therapy
Tuskegee University
John A. Kenny Hall, Room 71-271
Tuskegee, AL 36088
TEL: 334.725.2385
E-mail: jlewisclark@tuskegee.edu

University of Alaska Anchorage

Raymond Anthony, PhD
Department of Philosophy
University of Alaska Anchorage
3211 Providence Drive
Anchorage, Alaska 99508
TEL: 907.786.4459
E-mail: afrxa@uaa.alaska.edu

APPENDIX D: DIRECTORY OF REPRESENTATIVES

University of New Mexico

Robert Otto Valdez, PhD
Professor
Family & Community Medicine and
Economics
University of New Mexico
1 University of New Mexico
MSC02-1645
Albuquerque, NM 87131-0001
TEL: 505.903.3258
E-mail: rovaldez@aol.com

Xavier University of Louisiana

Daniel F. K. Sarpong, PhD
Endowed Chair of Health Disparities
Director, Center for Minority Health
Disparities Research & Education
College of Pharmacy
Xavier University of Louisiana
1 Drexel Drive
New Orleans, LA 70125
TEL: 504.520.5345
E-mail: dsarpong@xula.edu

University of Puerto Rico

Diógenes Herreño-Sáenz, PhD
Associate Professor
Department of Pharmacology and
Toxicology
School of Medicine
University of Puerto Rico
P.O. Box 365067
San Juan, PR 00936-5067
TEL: 787.758.2525, ext. 1005
E-mail: diogenes.herreno@upr.edu

University of Texas at El Paso

João Ferreira-Pinto, PhD
Associate Research Professor
Director of Research and Special Projects
Director, Center for Interdisciplinary Health
Research & Evaluation (CIHRE)
University of Texas at El Paso
500 West University Avenue
El Paso, TX 79902
TEL: 915.747.7295
E-mail: joao@utep.edu

APPENDIX E: EXECUTIVE COMMITTEE

ENVIRONMENTAL HEALTH INFORMATION PARTNERSHIPS EXECUTIVE COMMITTEE

Patricia Matthews-Juarez, PhD
Chair
Senior Vice President
Office of Strategic Initiatives and
Innovation, Office of the President
Professor, Department of Family and
Community Medicine
Meharry Medical College
1005 Dr. D. B. Todd Jr. Boulevard
Nashville, TN 37208
TEL: 615.327.6526
E-mail: pmatthews-juarez@mmc.edu

Rueben C. Warren, DDS, DrPH, MDiv
Senior Scientific Advisor
Director, National Center for Bioethics in
Research and Health Care
Tuskegee University
John A. Kenney Hall, Suite 44-107
Tuskegee, AL 36088
TEL: 334.725.2314
E-mail: rwarren@tuskegee.edu

Ms. LaFrancis Gibson, MPH
ORAU Health Education Specialist
Section Manager
P.O. Box 117, MS-32
Oak Ridge, TN 37831
TEL: 423.432.0713
E-mail: lafrancis.gibson@orau.org

Amanda J. Wilson
Chief, Office of Engagement and Training
National Library of Medicine
8600 Rockville Pike
Bethesda, MD 20894
TEL: 301.496.4777
E-mail: amanda.wilson@nih.gov

M. Nichelle Midón, MSLS, MS
EnHIP Program Lead
National Library of Medicine
8600 Rockville Pike
Bethesda, MD 20894
TEL: 301.496.4777
E-mail: muriel.midon@nih.gov

Louise To, MLISc, MEd
Engagement Specialist
National Library of Medicine
8600 Rockville Pike
Bethesda, MD 20894
TEL: 301.496.4777
E-mail: louise.to@nih.gov