All official NCHS BSC documents are posted on the BSC website
(https://www.cdc.gov/nchs/about/bsc/bsc_meetings.htm)

Board of Scientific Counselors
National Center for Health Statistics
Centers for Disease Control and Prevention
https://www.cdc.gov/nchs/about/bsc/bsc_meetings.htm
March 6, 2024

Meeting Summary

The Board of Scientific Counselors (BSC) convened via Zoom on March 6, 2024. The virtual meeting was open to the public (via Zoom).

Board Members Present

John R. Lumpkin, M.D., M.P.H., Chair, BSC
Mollyann Brodie, Ph.D.
Tara Das, Ph.D., M.P.H., M.L.I.S.
V. Joseph Hotz, Ph.D.
Lucila Ohno-Machado, M.D., Ph.D.
Bradley A. Malin, Ph.D.
Andy Peytchev, Ph.D.
Susan Schechter, M.A.
C. Matthew Snipp, Ph.D.
Kelly Hoover Thompson, J.D.
Roland J. Thorpe, Jr., Ph.D.

CDC/NCHS Panelists

Brian Moyer, Ph.D., Director, National Center for Health Statistics (NCHS)	Anjani Chandra	Dagny Olivares
	James Craver	Jennifer Parker
	Carol DeFrances	Lauren Rossen
Rebecca Hines, M.H.S., Designated Federal Official, NCHS, BSC	Cordell Golden	J. Neil Russell
	Carolyn Greene	Alan Simon
	John Halter	Paul Sutton
Irma Arispe	Naomi Michaelis	Benjamin Zablotsky
Amy Branum	Kiana Morris	
Shirley Castillo	Gwen Mustaf	

Public Attendees

Joyce Abma	Stephen Blumberg	Jay Clark
Brian Adams	Jonaki Bose	Steve Cohen
Dzifa Adjaye-Gbewonyo	Lauren Bottoms-McClain	Jenny Couse
Farida Ahmad	Elizabeth Briones	Christine Cox
Lara Akinbami	Debra Brody	Damian Da Costa
Brenda Baker	Lisa Broitman	Tosin Dada
Jane Baumblatt	Christopher Burch	Barnali Das
Andres Berruti	Bill Cai	Matthew Davis
Negasi Beyene	David Carranza	Orlando Davy
Lindsey Black	Te-Ching Chen	Michele Dillon
Martin Blanco	Don Cherry	Tran Dinh

Morgan Earp
Loraine Escobedo
Steven Fink
Sarah Forrest
Sheila Franco
Alicia Frasier
Matthew Garnett
Yelena (Lena) Gorina
Jessica Graber
Rebecca Granger
Alex Griffin
Lello Guluma
Christina Hagen
Nancy Han
Althelia Harris
Yulei He
Alston Hildreth
Seirra Holmes
Robert Hood-Cree
Isabelle Horon
John Hough
Rebecca Hu
Khaleel Hussaini
Katherine Irimata
Bisi Jackson
Elizabeth Jackson
Matt Jans
Christine Jones
Jessica Jones
Jessly Joy
Sibeso Joyner
Talia Kaatz
Azmeh Khan
Jieun Kim
Shannon Kindilien
Brian Kit
Ellen Kramarow
Denys Lau

Jessica Lendon
Monica Leonard
Sarah Lessem
Michelle Liu
Kim Lochner
Chris Lofland
Sri Maheedhara
Neil Malik
Anne Mamish
Crescent Martin
Gladys Martinez
Michael Martinez
Meredith Massey
Juliana McAllister
Frances McCarty
Grace Medley
Prachi Mehta
Justin Mezetin
Donna Miller
Jennifer Moore
Laryssa Mykyta
Kelly Myrick
Zakia Nelson
Amanda Ng
Duong Nguyen
Tina Norris
Colleen Nugent
Titi Okeyode
Van Parsons
Priyam Patel
Ryne Paulose
Sue Pedrazzani
Zachary Peters
Kellina Phan
John Pleis
Deborah Porterfield
Maura Reilly
Dorothy Roper

Asel Ryskulova
Trinidad Sanchez
Loredana Santo
Jennifer Sayers
Paul Scanlon
Jeannine Schiller
Catherine Simile
Gia Simon
Grace Singson
Bryan Stierman
Mike Stobbe
Renee Storandt
Makram Talih
Rashmi Tandon
Chally Tate
Ana Terry
Alexander Tin
Gina Turrini
Anjel Vahratian
William Vaughn
William Waldron
Meagan Walters
Chia-Yih Wang
Xun Wang
Brian Ward
Julie Weeks
Steven White
Anne Williams
Jean Williams
Ashley Woodall
David Woodwell
Yeonjoo Yi
Alana Yick
Henry Yin
Natalie Young
Barbara Zablotsky

Meeting Techs	Jennifer Adona (RLA), Mike Kavounis (RLA)
Minutes	Veronica Kim (RLA), Jessica Tennis (RLA)
Transcriptionist	Debra Gilliam (Caset)

List of Abbreviations

AI	artificial intelligence
BSC	Board of Scientific Counselors
CCQDER	Collaborative Center for Questionnaire Design and Evaluation Research
CDC	Centers for Disease Control and Prevention
CIPSEA	Confidential Information Protection and Statistical Efficiency Act

COVID-19	coronavirus 2019
CSOTUS	Chief Statistician of the United States
DHANES	Division of Health and Nutrition Examination Surveys
DHCS	Division of Health Care Statistics
DHIS	Division of Health Interview Statistics
DMI	Data Modernization Initiative
EHR	electronic health record
FHIR	Fast Healthcare Interoperability Resources
FY	fiscal year
HHS	Department of Health and Human Services
ICSP	Interagency Council on Statistical Policy
IT	information technology
NAMCS	National Ambulatory Medical Care Survey
NASEM	National Academies of Science, Engineering, and Medicine
NCHS	National Center for Health Statistics
NCSES	National Center for Science and Engineering Statistics
NHANES	National Health and Nutrition Examination Survey
NHCS	National Hospital Care Survey
NHIS	National Health Interview Survey
NIOSH	National Institute for Occupational Safety and Health
NPALS	National Post-acute and Long-term Care Study
NSDS	National Secure Data Service
NSF	National Science Foundation
NSFG	National Survey of Family Growth
NVSS	National Vital Statistics System
OIS	Office of Information Services
OMB	Office of Management and Budget
OS-PCORTF	Office of the Secretary Patient-Centered Outcomes Research Trust Fund
PPRL	Privacy Preserving Record Linkage
RDC	Research Data Center
RSAU	recognized statistical agencies and units
RSS	Rapid Surveys System
SAP	standard application process
SHST	Summary Health Statistics for Teens
SO	statistical official
STLT	state, tribe, locality, and territory
VDE	virtual data enclave

Action Step

The BSC approved a motion to establish a workgroup to make recommendations to NCHS on models for the future of NHANES. Dr. Brodie, Ms. Schechter, and Dr. Thorpe volunteered to serve on the workgroup. Dr. Lumpkin encouraged BSC members to share recommendations for outside experts who could serve on the workgroup.

<u>Presenters</u>

John Lumpkin, M.D., M.P.H., Chair, BSC, NCHS
Rebecca Hines, M.H.S., Designated Federal Officer, BSC, NCHS
Susan Schechter, M.A., NORC at the University of Chicago
Roland Thorpe, Jr., Ph.D., The Johns Hopkins Bloomberg School of Public Health
Brian Moyer, Ph.D., Director, NCHS
Karin Orvis, Ph.D., Chief Statistician of the United States
James Craver, M.A.A., Deputy Director for Management and Operations, NCHS
J. Neil Russell, Ph.D., Director, Research Data Center (RDC), NCHS
Lauren Rossen, Ph.D., Senior Scientific Advisor, Division of Research Methodology (DRM), NCHS
Dagny Olivares, M.P.A., Associate Director for Communication, NCHS
Benjamin Zablotsky, Ph.D., Senior Survey Statistician, Division of Health Interview Statistics (DHIS)
Alan Simon, M.D., Director, Division of Health and Nutrition Examination Surveys (DHANES)
Amy Branum, Ph.D., Associate Director for Science, NCHS
Anjani Chandra, Ph.D., NSFG Team Lead & Principal Investigator, DHIS
Carol DeFrances, Ph.D., Director, Division of Health Care Statistics (DHCS)
Irma Arispe, Ph.D., Director, Division of Analysis and Epidemiology (DAE)

Welcome and Call to Order

John Lumpkin, M.D., M.P.H., Chair, BSC, NCHS
Rebecca Hines, M.H.S., Designated Federal Officer, BSC, NCHS

Dr. Lumpkin opened the meeting by welcoming BSC members, National Center for Health Statistics (NCHS) staff, invited speakers, and other attendees. Ms. Hines conducted roll call, asking members to introduce themselves and state conflicts of interest. No members expressed conflicts of interest. However, Dr. Peytchev disclosed his involvement with the National Health and Nutrition Examination Survey (NHANES) and noted his intent to recuse himself from related discussions.

New Member Welcome

Dr. Lumpkin introduced new board members Susan Schechter, M.A., and Roland J. Thorpe, Jr., Ph.D., and requested that they share one project from their portfolio that is pertinent to BSC's work and one issue they look forward to engaging on with BSC.

Ms. Schechter is a senior advisor at NORC and has extensive experience working within the Federal Statistical System as a former NCHS employee. In previous projects, Ms. Schechter has (1) designed surveys and methods that yield quality data for evidence-based decision-making in health care, (2) developed and improved measures that meet emerging policy needs related to health equity, (3) worked with federal interagency committees on revisions to the race and ethnicity standards, (4) worked on changes to the short version of disability measures, and (5) worked on a large-scale longitudinal survey of Medicare beneficiaries to implement new measures of health care access for respondents with limited English proficiency, new questions on sexual orientation and gender identity, and expanded questions on experiences of discrimination in health care settings. Ms. Schechter hopes to continue to improve and enhance health equity measurements in BSC efforts.

Dr. Thorpe is a gerontologist and social epidemiologist at the Johns Hopkins Bloomberg School of Public Health and has published research articles using NCHS data, including data from NHANES. Dr. Thorpe is interested in improving the diversity of survey respondents in terms of race, ethnicity, and gender identities across the United States to facilitate evidence-based decisions and policy development.

Leadership Updates

Director's Updates
Brian Moyer, Ph.D., Director, NCHS

Dr. Moyer highlighted key NCHS accomplishments from the past year, reviewed the CDC Moving Forward Initiative, and presented BSC recommendations to NCHS.

NCHS Office Updates
The Office of the Director led a center-wide strategic planning effort to formally develop, advance, and measure goals and activities; contributed to the Associate Director for Data Science and Analytics' agency-wide strategy on the ethical use of artificial intelligence (AI) at the Centers for Disease Control and Prevention (CDC); and started the process to move data to Enterprise Data Analytics and Visualization, a cloud-based set of tools, technology, and resources.

The Office of Science improved processes involving confidentiality, human subject studies, and the Office of Management and Budget (OMB) and streamlined the scientific report review and clearance process.

The Office of Informatics, Governance, and Assurance managed NCHS' information technology (IT) portfolio, which encompasses 17 systems, and supported the transition from on-premises servers to a cloud environment.

The Office of Information Services (OIS) published more than 80 reports, leading to a 45 percent increase in publications since 2019, and released 30 social media graphics, 12 of which received between 60,000 and 90,000 impressions on X (formerly Twitter).

The Office of Management and Operations oversaw NCHS' reorganization, establishing three new offices and restructuring seven offices and divisions.

The Office of Policy Budget and Legislation conducted numerous in-person briefings with members of the House and Senate Appropriations Committees to support the NCHS budget.

NCHS Division Updates
The Division of Analysis and Epidemiology released the first *Health, United States* trend analysis report and Healthy People 2030 web feature, both of which focused on health disparities, and sponsored a meeting on data linkage priorities.

The Division of Health and Nutrition Examination Surveys (DHANES) established a new contract to support the NHANES survey design and invested in new medical examination centers to support the survey's return to the field in Fiscal Year (FY) 2025.

The Division of Health Care Statistics (1) moved data protected by the Confidential Information Protection and Statistical Efficiency Act (CIPSEA) to a secure cloud environment to test software for NCHS' first CIPSEA-compliant cloud system and (2) released a biennial dashboard with data from the National Post-acute and Long-term Care Study (NPALS) and Centers for Medicare & Medicaid Services.

The Division of Health Interview Statistics (DHIS) added new questions to the 2023 National Health Interview Survey (NHIS) on the frequency of everyday discrimination and psychological stress and accelerated timelines for NHIS data release.

The Division of Research and Methodology completed the first round of data collection for NCHS' new Rapid Surveys System (RSS) in collaboration with DHIS and released the NCHS Data Presentation Standards for Rates report and its companion methodology report.

The Division of Vital Statistics implemented a bi-directional mortality data exchange as part of CDC's Data Modernization Initiative (DMI); the exchange was first implemented in Idaho, with plans to expand to additional states throughout 2024.

CDC 2024 Priorities
The CDC Moving Forward initiative aims to share science and data faster; translate science into practical policy; prioritize public health communications, with a focus on the general public; develop a CDC workforce to respond to future threats; and promote partnerships across the public health community. The CDC Director, Dr. Mandy Cohen, has collaborated with the senior leadership team to ensure that the agency is focused on the following major areas in 2024: (1) readiness and response against potential infectious and non-infectious health threats domestically and globally; (2) improvement of mental health through efforts related to overdose and suicide prevention, prioritizing initiatives that focus on upstream interventions that prevent related morbidity and mortality; (3) support for young families through efforts focused on upstream prevention activities, including collaborative initiatives and priorities across

agencies and HHS, to ensure that children and families can thrive; and (4) continuation of agencies working as one team moving forward—a collaborative effort referred to as One CDC.

Related to the priorities from CDC's Moving Forward Initiative, Dr. Moyer outlined NCHS' key priorities for the upcoming year. In 2024, NCHS aims to achieve the following goals that are mapped to strategic objectives:

Objective(s)	Priority	Planned Efforts
2.1, 2.2, 2.3	Expand the availability of high-quality and timely public health statistics to improve health and provide real-time data for federal, state, and local decision-making (e.g., evidence-based policymaking).	• Employ nowcasting and model-based estimation to produce more timely, detailed statistics. • Develop real-time geocoding capability in the National Vital Statistics System (NVSS) to improve the quality of geographic data. • Develop natural language processing and machine learning algorithms for electronic health records (EHRs) to identify hospital encounters involving stimulants, code health insurance plans, and find a sustainable enterprise approach for harnessing EHR data. • Pilot test methods for the 2025 NHANES cycle. • Implement RSS, calibrating surveys against NHIS, to provide quality data for decision-making.
2.1, 2.2, 2.3	Improve the timeliness and quality of maternal health data.	• Develop state capacity and best practices for timely linkage of maternal deaths with corresponding birth or fetal death records. • Develop a full Birth and Fetal Death Reporting implementation guide using the Fast Healthcare Interoperability Resources (FHIR) standard for electronic health data exchange. • Release preliminary estimates from the National Ambulatory Medical Care Survey (NAMCS). • Release public use data files from the 2022-2023 National Survey of Family Growth (NSFG) with full pregnancy histories and associated maternal health data on contraception, infertility, and sexual/reproductive health conditions. • Release RSS data on access to contraception.
2.2	Enhance the compatibility of data systems between NCHS' and states, tribes, localities, and territories (STLTs).	• Modernize NVSS. • Increase the number of jurisdictions using the Vital Records Death Reporting (VRDR) FHIR implementation guide. • Test the interoperability of data exchange using the VRDR FHIR implementation guide between jurisdictions and NCHS.
1.1, 1.2, 1.3	Share, link, and protect data to help implement the Foundations for Evidence-Based Policymaking Act of 2018 (or the Evidence Act) and National Secure Data Service (NSDS).	• Conduct new data linkages across federal entities to gain insight and build evidence for policymaking and agency learning agendas in a cost-effective manner. • Leverage expertise in privacy preserving technology to increase partnerships and improve access to linked data. • Collaborate with OMB and the National Science Foundation (NSF) on pilot projects to develop an NSDS. • Implement a new virtual data enclave (VDE) with secured access.
3.1, 3.2	Strengthen the NCHS workforce by upskilling staff, building capacity, and fostering diversity.	• Help staff access professional development programs internal and external to CDC. • Improve internal communications. • Pursue agency and center diversity, equity, inclusion, accessibility, and belonging goals. • Advance the One CDC effort to build and sustain a worldclass, diverse workforce.

Dr. Moyer also announced NCHS's new Rapid Survey System (RSS), which launched in 2023. The first round of data was released in February 2024 and contained data on long COVID, breast cancer screening, and genetic testing, among other topics. RSS provides reliable and actionable data for decision-making, and provides a new mechanism for CDC programs to partner with NCHS by sponsoring one or more survey questions. With RSS, NCHS can publish data in less than 6 months and plans to conduct the survey several times each year.

<u>*Update on BSC Recommendations to NCHS*</u>
Dr. Moyer concluded his presentation with updates on BSC's recommendations to NCHS related to (1) sharing information on AI more broadly and (2) including measures of discrimination and heightened vigilance for use in NCHS surveys.

- A CDC-secure chatbot powered by Microsoft Azure Open AI (i.e., ChatGPT) is now available to CDC staff. Guidelines establishing principles and practices for responsible use, development, and procurement of generative AI technologies across CDC were available to all staff since February. CDC is also working with the CDC Foundation to schedule meetings with STLTs to discuss AI and machine learning to inform the HHS AI Taskforce's Public Health Workgroup.
- NCHS collected data on discrimination and heightened vigilance through NHIS during 2023 and expects to release data by July 2024. In addition, the Collaborative Center for Questionnaire Design and Evaluation Research (CCQDER) continues to analyze these measures to support the validity of their application to various NCHS surveys. Lastly, DHIS is expecting to publish on the prevalence and relationship of discrimination measures with health outcomes.

Chief Statistician's Updates
Karin Orvis, Ph.D., Chief Statistician of the United States

Dr. Orvis leads the coordination of the U.S. Federal Statistical System and its engagement with the international statistical community. The U.S. Federal Statistical System is a decentralized, interconnected collective comprised of the Office of the Chief Statistician of the United States (CSOTUS); 16 OMB-recognized statistical agencies and units (RSAUs), including NCHS; 24 statistical officials (SOs) representing all Chief Financial Officers Act agencies; 100 other statistical programs across the federal government; the Interagency Council on Statistical Policy (ICSP); and the Federal Committee on Statistical Methodology. The U.S. Federal Statistical System aims to provide useful, objective, impartial, and high-quality statistical data and meaningfully expand data access for evidence-building purposes. These reliable statistics will help guide the execution of HHS' mission and inform on the effectiveness of HHS' policies and programs in serving the American public.

Dr. Orvis noted that Dr. Moyer serves as both the designated SO for the Department of Health and Human Services (HHS) and the statistical agency head for NCHS. SOs lead their respective major cabinet agencies to help coordinate statistical programs within and across departments and critically advise respective departments on statistical issues, data quality, and more. She also explained that ICSP, which includes both statistical agency heads and SOs, work collaboratively across statistical agencies, units, and programs to identify cross-agency challenges and opportunities to improve federal statistics more broadly and serve on an agency's respective data governance board, as required by the Evidence Act.

The Evidence Act helps advance the U.S. Federal Statistical System's efforts. Title I of the Evidence Act emphasizes collaborations between data-focused roles, including departmental chief data officers who oversee the data infrastructure and accessibility; SOs who oversee the statistical activities, data quality, confidentiality, and production to support evidence-building; and evaluation officers who help drive learning agendas and evaluation activities. Title III of the Evidence Act requires RSAUs and their parent

units to facilitate their respective statistical work and increase data accessibility across the government and for the public. Within Title III of the Evidence Act, CIPSEA 2018 requires RSAUs to safely provide access to sensitive, restricted data for evidence-building purposes through the following four steps: (1) produce and disseminate relevant and timely statistical information, (2) conduct accurate and credible statistical activities, (3) facilitate objective statistical activities, and (4) ensure confidentiality and exclusive statistical use of data collected for statistical purposes.

In alignment with the federal charge from the Evidence Act, the Office of CSOTUS and ICSP are preparing new regulations whose top priorities include a new standard application process (SAP) and a potential NSDS. The new SAP aims to standardize the approval pipeline across RSAUs for internal and external requests for restricted data access and will later incorporate additional federal entities interested in SAP participation. NSDS seeks to enhance the U.S. Federal Statistical System's capacity and innovation for coordination, data linkage, data access, data confidentiality, and shared research and development.

The passage of the Creating Helpful Incentives to Produce Semiconductors and Science Act of 2022 required a demonstration project for NSDS within the National Center for Science and Engineering Statistics (NCSES) and NSF. In FY23, ICSP and NCSES championed projects that assessed the feasibility and functions of NSDS, including an environmental scan and select testing of privacy-preserving technologies and an ongoing project on discovering new opportunities for interoperable health data. Dr. Orvis noted that NSDS provides many opportunities to improve data linkage between federal programs, statistical agencies, and STLTs. She shared that she, Dr. Moyer (on behalf of ICSP), and Dr. Emilda Rivers (on behalf of NCSES) are exploring possible projects for FY24 and beyond. She also shared the creation of the America's Data Hub Idea Bank through which individuals can submit ideas and offer diverse perspectives on challenges or functions for feasibility testing. Dr. Orvis concluded her presentation by noting that additional information on highlighted projects, as well as those not mentioned that are under purview of CSOTUS or the U.S. Federal Statistical System, can be found on StatsPolicy.gov.

Discussion/Reaction by the Board
Dr. Brodie asked whether CDC's AI guidance would be publicly available and when the data on discrimination and heightened vigilance measures would be released. Dr. Moyer commented that the AI guidance will be shared publicly when it is ready for additional agencies and that he had no additional information on the release date of the requested data.

Dr. Hotz requested details on the timeline for the release of information related to NSDS' privacy-preserving strategies and methodologies, as well as whether any information has already been released. Dr. Orvis noted that each NSDS project has a different timeline, and that detailed information, as well as solicitations for future project proposals, is available online through America's Data Consortium. In addition, NSDS seeks to expand the ongoing effort by statistical agencies that examine the impacts of various privacy-preserving technologies within their respective agencies. Moreover, the Advisory Committee on Data for Evidence Building has recommended the provision of a sandbox environment in which federal and non-federal researchers can collaboratively test different technologies, functions, and features on datasets and share lessons learned. Lastly, Dr. Orvis is working with Chief Data and Privacy Officers on addressing AI and its potential impact related to the re-identification risk for data providers.

Data Modernization Initiative Updates & Discussion

NCHS DMI Project Updates
James Craver, M.A.A., Deputy Director for Management and Operations, NCHS

Mr. Craver provided a brief overview of the DMI, noting its focus to improve the timeliness of data access while preserving the high quality and accuracy of data. The DMI aims to establish a well-connected, resilient, adaptable, and sustainable data system that can respond quickly to public health emergencies while facilitating the daily, core operations of CDC and NCHS.

To organize ongoing DMI activities across CDC as part of the CDC Moving Forward effort, the Public Health Data Strategy outlines data, technology, policy, and administrative actions that are essential to the efficient and secure exchange of critical core data. The Public Health Data Strategy aims to accomplish four goals in 2 years: (1) strengthen the core of public health data, (2) accelerate access to analytic and automated solutions to support public health investigations and advance health equity, (3) visualize and share insights to inform public health action, and (4) advance open and interoperable public health data. Mr. Craver added that 10 of the 15 milestones for these goals are complete.

NCHS Virtual Data Enclave (VDE)
J. Neil Russell, Ph.D., Director, RDC, NCHS

Per requirements of the Evidence Act, to expand data access, NCHS developed the Virtual Data Enclave (VDE) that hosts and provides secure, remote access to restricted, CIPSEA-protected NCHS data. The VDE operates nearly 24 hours per day, 7 days per week and offers researchers increased accessibility to data (e.g., additional researcher groups, scheduling flexibility) and decreased cost to researchers (e.g., less travel, no required background investigation). In addition, fees to use the VDE are the same as the fees to use the NCHS Research Data Center (RDC). Early feedback from researchers indicate that the VDE closely mimics the in-person RDC experience.

Dr. Russell described the VDE IT system, which is designed to prevent unauthorized disclosure of restricted-use data. He noted that the VDE is hosted on National Institute for Occupational Safety and Health (NIOSH) servers at CDC headquarters through a data access agreement between NCHS and NIOSH; security measures protecting the VDE include encryption, system logs, and multifactor authentication. VDE security measures also disable specific technology features (e.g., no internet or email access, no printing or downloading of data, no copy/pasting of data. A data use agreement is required between NCHS and the researcher's employer to mitigate user-based disclosure risks that technology functions cannot control (e.g., taking photos of the computer screen). In addition, RDC and NCHS staff review researcher output for disclosures prior to release of the output to the researcher.

The VDE project is currently in Phase I, where the VDE is fully operational for CDC employees, with four CDC projects accepting data and six additional projects in the onboarding process. The VDE is also fully operational for other federal employees, with one Food and Drug Administration project accessing data and three Department of Housing and Urban Development projects in the onboarding process. In Phase II, NCHS plans to expand VDE access to non-federal researchers.

Discussion/Reaction by the Board
Dr. Malin asked whether VDE operational costs included costs for both human capital and the computational environment. Mr. Russell clarified that the costs are for the operational infrastructure, NIOSH staff, and relevant contractors.

Dr. Hotz requested details on the prioritization strategies used to decide between the VDE and a Federal Statistical RDC for non-federal researcher's project. Dr. Hotz also asked whether all projects will be eligible for VDE use, regardless of proximity to a Federal Statistical RDC site. Mr. Russell noted that non-federal researchers will be able to select the NCHS VDE as their mode of access to data, adding that the U.S. Census Bureau has its own VDE with approximately 80 projects, and that researchers from

institutions that fund the Federal Statistical RDCs likely receive subsidized access and are unlikely to select the NCHS VDE.

Model-based Early Estimates
Lauren Rossen, Ph.D., Senior Scientific Advisor, DRM, NCHS

Dr. Rossen provided an update on the Model-based Early Estimates project, which seeks to improve tracking of public health priorities and health equity. The overall aim of the project is to develop approaches that improve the timeliness and granularity of data from small groups or geographic areas for evidence-based decision-making. To achieve this goal, Dr. Rossen's team developed automated pipelines that reduced manual processes for modeling and analysis and could be applied to (1) small area estimation models to collect greater geographic detail from surveys and NVSS and (2) nowcasting methods to improve the timeliness of available vital statistics estimates.

Dr. Rossen reviewed the project's timeline and statuses of major deliverables. The first major deliverable was an analytical tool for small domain estimation, named the enhanced modified Kalman filter, and Dr. Rossen's team is currently finalizing two reports related to the tool. The next major deliverable was the production of state-level estimates from NHIS for various health outcomes by demographic group. As part of this deliverable, Dr. Rossen's team developed automated programs for estimation using small area estimation tools (e.g., area-level models) and evaluated the programs' estimates. She explained that the evaluation of any model-based estimates approach is critical to (1) understand the limitations of estimates, (2) devise strategies to communicate the accuracy and uncertainty to data users, and (3) inform appropriate usage of model-based estimates. She provided an example evaluation from her team that compared the percentage point differences between direct and small area estimates for specific outcomes (i.e., conditions associated with elevated risk for severe COVID-19 outcomes) demographics and highlighted that the evaluation produced statistical patterns that aligned with the team's expectations. In addition to the automated programs, Dr. Rossen's team is developing data visualization and dissemination products to share state-level estimates with data users. Dr. Rossen provided example heat maps showing state-level patterns of populations at risk for severe COVID-19 outcomes across racial and ethnic groups. She also shared a confidence interval table to highlight the current degree of uncertainty for model-based estimates. The team is currently working on a series of data visualization dashboards to display model-based estimates and the associated uncertainty.

Dr. Rossen's team plans to generate documentation and user guides for data analysts and end users, while continuing to evaluate estimates and further develop data visualization dashboards, and hopes to expand this project to other data systems (e.g., the National Hospital Care Survey [NHCS]). Dr. Rossen concluded her presentation by seeking guidance and technical assistance on developing implementation strategies for where estimates should be released (e.g., integrated into existing programs, separate experimental estimates page) and the threshold at which the percentage of uncertainty is too large for the estimates to be useful.

Discussion/Reaction by the Board
In response to Dr. Rossen's concluding questions, Dr. Peytchev noted that he would seek estimates under the same program as a data user. In terms of uncertainty, Dr. Peytchev noted that confidence intervals could be included in figures when releasing data that are unstable. Dr. Brodie agreed with Dr. Peytchev's recommendations.

Dr. Brodie suggested that Dr. Rossen's team set parameters for flagging and communicating the model uncertainty, because users will only use the estimates if they understood the model and had confidence in the data. She expressed concern that the small area estimates do not include relevant variables, such as

vaccine uptake rate, which is a powerful driver in her own research; however, she acknowledged that NCHS cannot include information that surveys did not measure.

Dr. Lumpkin read a question posed by Dr. Loraine Escobedo in the Q&A chat regarding the application of suppression rules and whether these rules would vary by geographic or demographic detail. Dr. Rossen noted that if her team decides to apply suppression or flagging rules, these rules would not be determined by level of geographic or demographic detail but, because of increased levels of uncertainty.

Ms. Schechter recommended that the team proceed conservatively with caution in its initial threshold for decision-making related to suppression rules and uncertainty. She added that users will be excited to access state-level estimates and that the team can directly communicate that it is seeking feedback from data users.

Integrating the NCHS Website Modernization Project and CDC Digital Communication Modernization Work
Dagny Olivares, M.P.A., Associate Director for Communication, NCHS

OIS is leading the NCHS Website Modernization Project, which is a multi-year initiative that seeks to modernize the primary digital access point to the nation's health statistics (i.e., the NCHS website) and address current challenges related to disconnected information, obsolete formats, and difficulties in discovering, accessing, and navigating NCHS data and resources. Concurrent with NCHS' work, CDC launched an agency-wide, multi-year Digital Communication Modernization Project designed to improve CDC's overall communication efforts with optimized web content aligned with users' needs; streamline processes and improve tools in digital communication; build best practices into web publishing processes; reduce web content maintenance burden and make resources available for other priorities; and ensure better digital communication for all audiences.

Ms. Olivares noted that the NCHS and CDC digital communication teams had complementary objectives and coordinated their efforts to inform and support their respective projects. However, during the initial 15 months of the NCHS project, both teams expected that many of CDC's planned improvements would not be available in time to benefit the NCHS project because of its shorter timeline. To accelerate CDC's Digital Communication Modernization Project, CDC launched the Clean Slate initiative. Clean Slate is a Digital Communication Modernization and CDC Moving Forward effort to relaunch the CDC website with optimized content, a unified design, and navigation. This relaunch is necessary for a variety of reasons. Internal reviews of CDC's COVID-19 response indicated that the agency needs to improve its process to more quickly disseminate accurate information to the public. External reviews indicated that CDC needs to adapt to industry standards and processes. In addition, consumers and professional users are overwhelmed and need an approachable, user-friendly website, because the current website is unsustainable with more than 200,000 pages of resources and processes.

The Clean Slate initiative helps advance the NCHS project. Clean Slate enables NCHS to leverage resources and solutions (e.g., increased user testing, new web content management interface, bulk migration of digital assets) that would have been too costly, time-consuming, or impractical for NCHS to develop and implement on its own. Importantly, Clean Slate provides a new approach, tools, and requirements that map directly to the following six NCHS priorities: (1) clear communication principles; (2) comprehensive content strategy; (3) digital first principles; (4) information architecture, navigation, and taxonomy; (5) user experience; and (6) website management processes. CDC's new system standardizes a digital style guide across the agency. CDC Office of Communication recommends that all centers within the agency, including NCHS, establish a digital communication strategist position. NCHS is looking at strategically increasing the use of visuals and graphics in its new webpages (where appropriate) and has identified additional work to complete after Clean Slate is finished.

In addition, Clean Slate has required NCHS to shift its focus from information architecture, navigation, taxonomy, and user experience to content transformation and optimization. Ms. Olivares noted that in the spring and summer of 2023, her team worked with NCHS programs to identify online content that will be maintained, transformed, retired, or provided in alternate ways. Since the fall, her team has been working to transform and optimize content. All content must have a specific communication goal that addresses a defined, validated user need and will be organized using page templates to provide content in a data-driven, research-based, and user-centered manner. Webpages will be consolidated and more consistently structured, as well as have tailored links, plainer language, and NCHS branding. Ms. Olivares concluded her presentation by sharing a link to disseminate and provide feedback on the beta version of the CDC website, which is available for 1month beginning February 27, 2024.

Discussion/Reaction by the Board
Dr. Peytchev commented that many people have preferred to use Google to search for content and that the innovations and changes to the websites did not mention search capability. Ms. Olivares responded that search capability is part of the taxonomy effort, which she anticipates will drive a relationship between the website pages and improve the quality of search results compared to the current website's hierarchical relationship between pages. Global website taxonomy will also enable appropriate content tagging so that related content can surface in search results. Ms. Olivares noted, however, that taxonomy is part of the transformation phase and is not expected to be at full functionality by this spring or summer.

NHIS-Teen: First Findings

Benjamin Zablotsky, Ph.D., Senior Survey Statistician, DHIS

Funded by the Public Health Data Modernization Initiative, NHIS-Teen is a survey that aims to (1) determine the feasibility of teenager-reported and online data collection, (2) produce nationally representative estimates of teenager health, and (3) compare parent- and teenager-reported health data. NHIS-Teen collects self-reported data on teenagers linked with family-level demographics data. The 95-question, 15-minute survey is open through March 2024 to teenagers whose parents completed the NHIS Sample Child Interview and provided permission. Major topic areas included in the survey are physical activities and sleep, doctor visits, injury, mental health, social and emotional supports, meditation and yoga, stressful life events, and bullying and discrimination. Many of these topics are also addressed in the Sample Child Interview for comparison.

Approximately 6 in 10 parents gave permission for NHIS to survey their teenagers and about 46 percent of teens invited to complete the survey did so. The vast majority (96 percent) of teenagers who begin the survey submit it, completing on average 99.2 percent of questions, and the average time to completion is 14 days. A methodology report is available on the NHIS-Teen website.

The results of NHIS-Teen are available in a web-based tool called the Interactive Summary Health Statistics for Teens (SHST), which displays 10 topics and 45 health outcomes. The results may be grouped by desired demographic, geographic, or socioeconomic characteristics. Using SHST, OIS created graphics displaying topline results regarding mental health, bullying, and sleep. After the survey closes, DHIS will develop a nationally representative sample of teen health from July 2021 to December 2023, update SHST, publish an NCHS internal report and journal articles, and present the results of NHIS-Teen at conferences.

NHIS has collaborations within CDC that focus on the concordance of teenager- and parent-reported data. Statistically significant differences were found in levels of bullying, concussion symptoms, and stressful life events in the two sets of data, which underscores the need for more teenager-reported data.

Discussion/Reaction by the Board

Dr. Zablotsky asked the Board what currently unaddressed topic areas should be included in future research. Dr. Lumpkin asked to what extent positive skills, as opposed to deficits or detractions from health, are covered by the survey. Dr. Zablotsky explained that NHIS-Teen does include questions about social skills and physical exercise but agreed that many topic areas of interest to the NHIS team, such as bullying and stressful life events, are inherently deficit focused.

Dr. Lumpkin asked whether state-level data are available. Results of NHIS-Teen may be broken out by region or urbanicity, but not yet by state.

Dr. Hotz asked why NHIS-Teen data will not be released publicly and gave examples of previous studies by private companies of teenagers that did release data. Dr. Zablotsky explained that teenagers participating in the survey had been assured that their data would not be released, and that confidentiality is an essential part of producing reliable data, especially with the potential for teenager-reported data to be identified by parents. Dr. Peytchev noted that there are likely options for data release that do not include identifiable microdata.

Dr. Thorpe affirmed the value of a nationally representative survey by a government agency, because of their broader reach and relatively greater ability to capture diversity. Dr. Lumpkin underscored the importance of understanding youth health for NCHS and for communities.

NHANES Request for Board of Scientific Counselors Workgroup on Models for the Future of NHANES

Alan Simon, M.D., Director, DHANES

NHANES is a population-based survey of 5,000 participants annually and consists of in-home interviews and in-person exams in Mobile Examination Centers. Data are reported in two-year periods. NHANES is the sole survey capturer of many types of data, including data on environmental exposures, diet, and audiometry. Consequently, more journal articles are based on NHANES data than any single clinical or epidemiologic biomedical study. These data are also commonly used to inform federal policy and clinical guidelines.

In February 2023, the NHANES team began a 10-year contract with RTI International to conduct interviews and exams. NHANES's ethics review board package has been submitted and the OMB 60-day notice is being reviewed. RTI International is on track to begin surveying in January 2025.

To improve mobility of the Mobile Examination Centers and increase response rates, three trucks will replace the trailers formerly used. To improve statistical power, the NHANES team will use 20 primary sample units each year instead of the former 15. This change will require five teams on the ground. The NHANES team will also switch from primary sampling units of counties to primary sampling units of Public Use Microdata Areas, which are logistically easier to sample. The team stopped oversampling by age and race because of logistical difficulties during the height of the COVID-19 pandemic but will soon reinitiate this approach. Efforts have also been made to streamline the interview and exam processes for users. Challenges to NHANES include declining response rates, increasing survey costs, and decreasing budgets in partner organizations that fund the survey. The NHANES team aimed to survey 30 primary sample units per year, but funding is insufficient. Therefore, single-year data files and estimates for smaller socioeconomic groups will not be possible.

The current model of data collection and financing for NHANES is stable through 2028. The scale of the survey causes difficulties in implementing changes quickly, so long-term changes are now under consideration. Dr. Simon proposed convening a team to consider the future of NHANES. One option is a workshop by the National Academies of Science, Engineering, and Medicine (NASEM) that would help define and design the survey ahead of each cycle. While reputable, NASEM is quite costly and may move too slowly. Though a NASEM workshop has not been ruled out, the NHANES team proposes that the Board establish a Workgroup to determine the future of NHANES. Such Workgroups can work closely with NHANES and bring in outside expertise. BSC workgroups have demonstrated an ability to move quickly. Dr. Simon hopes to assemble a team in summer 2024 to consider how NHANES will move forward and have a recommendation in summer 2025 but acknowledges that more time may be needed.

Discussion/Reaction by the Board
Ms. Schechter asked whether NHANES already has identified potential plans, or whether a new solution must be found. Dr. Simon indicated that a new solution must be found; although the NHANES team has some starting ideas, it has been primarily focused on shorter-term goals.

Board members highlighted the benefits of a NASEM workshop. Drs. Brodie, Hotz, and Ohno-Machado noted that NASEM has significant credence to lend a workshop recommendation. Dr. Hotz also indicated that NASEM could use co-funding mechanisms to lower costs for organizations with which they hold workshops. Dr. Hotz also indicated that the scope of the question may be beyond the capacity of a workgroup. Dr. Ohno-Machado also indicated that a NASEM workshop may be able to provide recommendations on the desired timeline.

Drs. Brodie and Ohno-Machado indicated support for the development of a new workgroup. Dr. Brodie highlighted the BSC workgroup's ability to move quickly and work closely with the NHANES team. Drs. Lumpkin and Ohno-Machado suggested that a NASEM workshop and a BSC workgroup could function in parallel and suggested that the workgroup help refine the question for the NASEM team and do so at a lower cost.

Dr. Lumpkin asked whether the BSC members were in favor of establishing a workgroup to make recommendations to NCHS on models for the future of NHANES. Dr. Ohno-Machado motioned to establish the workgroup, and Dr. Hotz seconded the motion. No discussion was forthcoming, so the Board proceeded to vote by rollcall. With seven approvals and in the presence of a quorum, the motion was approved.

Dr. Brodie, Ms. Schechter, and Dr. Thorpe volunteered to serve on the workgroup. Dr. Lumpkin encouraged BSC members to share recommendations for outside experts who could serve on the workgroup.

Brainstorming an NCHS Research Agenda

Amy Branum, Ph.D., Associate Director for Science, NCHS

In 2023, NCHS published 87 in-house reports across a variety of formats. The most common reports are data briefs which have generated the most media engagement. Other key outputs are National Health Statistics Reports and National Vital Statistics Reports. The shortest reports are Health E-Stats, which have a maximum of 500 words. The longest reports are Series reports, which can be more than 200 pages. NCHS also publishes regularly in journals.

NCHS has developed products to support reports including blogs, graphics, data visualizations, and interactive data tools. Visuals, some of which are designed for social media, are effective in driving traffic

to the reports. In 2023, NCHS tracked 377 unique media articles about its work from sources including ABC News and the *New York Times*.

Dr. Branum asked the Board about the NCHS research agenda and dissemination efforts:
1. Given the diversity in both the topics and the type of products we produce, is NCHS hitting the right balance?
2. Should NCHS be focusing publication efforts differently in terms of the types of reports or products?
3. Does the Board use NCHS products currently and/or find them useful?
4. Are there gaps in scientific content that NCHS could play a role in filling?
5. Should we consider incorporating more visual data in NCHS report tights, such as data briefs?
6. Should NCHS consider other avenues of dissemination beyond reports?

Discussion/Reaction by the Board
Dr. Brodie, Dr. Malin, Dr. Peytchev, and Ms. Schechter praised NCHS's shorter reports for their broad reach and utility in combating misinformation. Dr. Brodie explained that the KFF relies on the shorter, more public reports for information and avoids duplicating NCHS research efforts. Ms. Schechter affirmed the reach of NCHS work and appreciated the engaging data visualizations.

Board members agreed that NCHS is striking a good balance in terms of types of reports. Drs. Malin and Peytchev explained that they use the data produced by NCHS and in-depth Series reports more than other content.

Board members discussed the content of NCHS reports. Dr. Brodie encouraged NCHS to continue to produce accurate, timely data on mental health, infectious diseases, suicide, and other topics of public interest. These data are also important for researchers who need to cite the information for their own work. She affirmed the need for NCHS to facilitate a wide array of coverage rather than a central organizing plan.

Dr. Brodie asked how much Dr. Branum and the NCHS team focus on disseminating data to nonmedia organizations such as legislatures. Dr. Branum said that they are working to expand their reach by briefing both HHS and CDC. NCHS also provides 4-week notice prior to the release of any report so that interested parties can ask for information and NCHS can reply.

Board members discussed publishing reports with provisional NCHS data in addition to the current practice of reporting finalized data. To stay nimble and provide the timeliest information, Dr. Lumpkin encouraged NCHS to move to a web-based orientation instead of a paper product. Publishing online data updates instead of final reports only will allow NCHS to explain why updates were necessary in the form of footnotes. Dr. Peytchev cautioned that not every dataset lends itself to provisional publication, especially if data are likely to change dramatically before finalization.

"Round Robin" Updates

NSFG Update
Anjani Chandra, Ph.D., NSFG Team Lead & Principal Investigator, DHIS

NSFG collects data on fertility, family formation and growth, and reproductive health. NSFG is household-based, selecting one representative per household to survey based on a screening interview. This survey is conducted in four overlapping 16-week quarters, each of which has three Phases. Phase 1 is web-only, lasts 4 weeks, and comes with a $2 incentive for screening interviews and an additional $40 incentive for the main survey. Phase 2 contains web and face-to-face features, lasts 8 weeks, and uses the

same incentives as Phase 1. Phase 3 samples nonrespondents, contains web and face-to-face features, lasts 4 weeks, and comes with a $5 incentive for screening interviews and an additional incentive for the main survey.

In September 2020, the NSFG team began a new contract with RTI International. The new contract will enable RTI International to continue collecting data through 2029, with a goal of 5,000 cases per year and an expectation to release four data files containing 2 years of data each. The first such release is scheduled for the end of 2024 and will contain data from 2022-2023.

NSFG was changed before data collection began in 2022 by shortening and restructuring content to reduce respondent burden, moving the screening interview online, and expanding web screener tasks such as informed consent and an electronic life history calendar for females. The NSFG team made improvements to the survey to accommodate respondents in same-sex marriages and cohabitations. Work with cosponsors and CCQDER led to the inclusion of a section on childhood events, replacement of the American Community Survey's disability series with the Washington Group Short Set, and the addition of a series of questions about menstrual problems for females.

The 2022-2023 NSFG contained 9,957 cases, 56 percent of which were female. Approximately 74 percent of cases were enrolled online. Oversampling efforts of teens and Black populations fell short of targets. The NSFG team planned to conduct an experiment by conducting only face-to-face interviews in 2022 and multimodal interviews in 2023, but staffing challenges related to COVID-19 made this approach impossible. A similar future experiment would require more funding and more field interviewers. The 2022-2023 NSFG did conduct an incentive experiment, which showed that higher incentives led to higher response rates, especially among Black, Hispanic, and teenage respondents, and reduced over-representation of college-educated voters. Under the higher incentive condition, NSFG found some indication of changes to key estimates. Therefore, NSFG has been approved to increase incentives in Phases 1 and 2 from $40 to $60 beginning in 2024.

Other alterations to NSFG planned for 2024-2025 include making a few small changes to the survey and using a respondent-selected PIN in conjunction with the provided passcode to enhance privacy and security. NSFG is evaluating the use of QR codes to encourage and facilitate participation in the main survey based on the success of a similar initiative for the screening interview. As data from 2024 are collected, the NSFG team will monitor results to make any other necessary changes. The team is also consulting with cosponsors to attain OMB and ethics review board approvals on time.

The Data Review Board will meet on September 19, 2024, to analyze 2022-2023 data. In preparation for that meeting, the NSFG team is evaluating recodes, finalizing variables acceptable for public use, and considering strategies to bolster protections against external intruders.

Update on DHCS EHR Activities
Carol DeFrances, Ph.D., Director, DHCS

DHCS conducts the National Health Care Surveys, a collection of nationally representative, establishment surveys including NHCS, NAMCS, NPALS, and the National Electronic Health Record Survey. These surveys are transitioning from medical record abstraction to collection of administrative and EHR to provide estimates about encounters with providers. These data collections also include surveys of health care providers to understand the experience of providing care.

NAMCS and NHCS are the first of these surveys to transition to electronic data collection. To collect, process, analyze, and store these data, DHCS built a CIPSEA-compliant cloud. The cloud environment makes EHR data collection more cost-effective and sustainable, provides faster processing time for large

amounts of data, and enables DHCS to use open-source languages such as R and Python. DHCS has developed an FHIR implementation guide approved by HL7. DHCS is conducting an FHIR pilot study of clinical sites to assess the feasibility of automatic FHIR data exchange to improve volume, quality, completeness, and timeliness of data collection from clinical sites.

NAMCS contains a health center component and a physician component. The health center component collects EHR data from federally qualified health centers. This survey is NCHS' first EHR data collection. NAMCS began collecting data in 2021 and will have preliminary national estimates from 2022 and 2023 in the form of interactive data visualization by summer 2024. By fall 2024, NAMCS data from 2022 will be available as a public use file, the first such file available from NAMCS using EHR data. NAMCS health center data will be linked to the National Death Index and administrative data from the Department of Housing and Urban Development by August 2024, and Medicaid data by August 2025 through funding from the Department of Health and Human Service's Office of the Secretary Patient-Centered Outcomes Research Trust Fund (OS-PCORTF).

NAMCS' provider component is working with the EHR vendor, AthenaHealth, to collect encounter data from its 95,000 clinicians registered in the National Health Care Surveys public health reporting registry. DHCS will collect test data for validation by July 2024. If funding is available, DHCS will collect production EHR data from the AthenaHealth clinicians in 2025.

For NHCS, DHCS collects claims or EHR data from a nationally representative sample of nonfederal, noninstitutional hospitals with six or more in-patient beds. This was the first survey to collect EHR data along with administrative claims data. The survey started in 2011, and the first national estimates for inpatient stays and emergency department visits will be released in April 2024. NHCS has received funds from the OS-PCORTF to develop algorithms that use AI technology to process EHR clinical notes to improve the identification of patients with opioid-involved encounters.

DAE Update
Irma Arispe, Ph.D., Director, DAE

Executive branch agencies require data on health and health outcomes to shape policy. Under the Evidence Act, agencies must develop learning agendas and evidence questions. NCHS's Data Linkage Program has leadership and expertise on innovative linkage methods and products that will be helpful to the formulation of the NSDS, as demonstrated in NCHS's work to link Transformed Medicaid Statistical Information System to various other data including some of Medicaid enrollment and claims data.

NCHS is partnering with NSF and NCSES to support the 5-year NSDS Demonstration Project that will facilitate data integration and data access infrastructure for evidence building. NCHS will provide guidance on two of the project's six building blocks for NSDS: the protection of privacy and the establishment of a standard NSDS data sharing agreement. Accessing data in secure ways has been a challenge for evidence building, but privacy-enhancing technologies can mitigate privacy risks and facilitate data linkage, analysis, and dissemination. NCHS will provide a proof of concept for NSDS linkage based on a Privacy Preserving Record Linkage (PPRL) model. The proof of concept will link NHIS and NCSES's Survey of Earned Doctorates. NCHS has used commercial and open-source PPRL technology to implement and improve linkage methodology across HHS as it responds to Evidence Act requests.

In the past NCHS has produced a partially synthetic public use linked mortality file. The NCHS Data Review Board has approved the first fully synthetic linked data file, for which NCHS is developing a service to verify synthetic results against restricted data. This service will allow NCHS to conform to

Evidence Act tiered access requirements, expand data use, and create standards for data assessments that can be used by other agencies.

NCHS has used AI technologies to advance data linkage algorithms by improving data quality and efficiency for very large datasets. NCHS anticipates that this work will inform other entities attempting to link large volumes of data.

In fall 2023, NCHS conducted an internal strategic planning meeting on data linkage, during which NCHS considered the following questions:
1. How can NCHS best use data to support the Evidence Act?
2. What linkages might NCHS request under the Evidence Act to inform NCHS's evidence building needs?
3. How should the NCHS Data Linkage Program evolve to support NCHS's Evidence Act responses?
4. How should the NCHS Data Linkage Program evolve to prioritize current and new data linkages?

In 2024, NCHS will release 18 data linkages structured toward efficiency and involving partnerships. This effort includes two synthetic data linkages with internal verification processes.

Discussion/Reaction by the Board
Dr. Malin suggested that NCHS link data with the Departments of Labor and Education. Dr. Arispe agreed, and noted that such linkage would align with CDC efforts to investigate social determinants of health.

Public Comment

No public comments were received by the Board.

BSC Wrap-up and Future Plans

Drs. Lumpkin and Moyer thanked attendees and speakers for their participation in today's meeting.

The meeting was adjourned.

To the best of my knowledge, the foregoing summary of minutes is accurate and complete.

_____/s/_____	_____July 22, 2024_____
John R. Lumpkin, M.D., M.P.H.	DATE
Chair, BSC	