NCIPC Board of Scientific Counselors
Closed Session
May 3, 2023

National Center for Injury Prevention and Control
Centers for Disease Control and Prevention
Atlanta, Georgia

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DEPARTMENT OF HEALTH AND HUMAN SERVICES
PUBLIC HEALTH SERVICE
BOARD OF SCIENTIFIC COUNSELORS (BSC)
Centers for Disease Control and Prevention (CDC)
National Center for Injury Prevention and Control (NCIPC)

Forty-Second Meeting
May 3, 2023

Virtual / Teleconference Meeting
Closed to the Public

Summary Proceedings

The Forty-Second meeting of the National Center for Injury Prevention and Control (NCIPC; Injury Center) Board of Scientific Counselors (BSC) was convened on Wednesday, May 3, 2023 via teleconference and Zoom. The BSC met in closed session in accordance with the Privacy Act and the Federal Advisory Committee Act (FACA). Dr. Chris Harper served as Chair.

This meeting was closed to the public in accordance with the determination that it was concerned with matters exempt from mandatory disclosure under Sections 552b(c)(4) and 552b(c)(6), title 5, U.S. Code and Section 10(d) of the Federal Advisory committee Act, as amended (5 U.S.C. Appendix 2). The Scientific Review Officer explained policies and procedures regarding avoidance of conflict-of-interest situations; voting and priority rating; and confidentiality of application materials, committee discussions, and recommendations. Committee members absented themselves from the meeting during discussion of, and voting on, applications from their own institutions, or other applications in which there was a potential conflict of interest, real or apparent.

Upon establishing a quorum, a secondary review was conducted for the following NCIPC Notice of Funding Opportunity Announcements (NOFOs)

1. **RFA-CE-23-001** – Evaluating Practice-based Programs, Policies, and Practices from CDCs Rape Prevention and Education (RPE) Program: Expanding the Evidence to Prevent Sexual Violence (U01).

2. **RFA-CE-23-008** – "Research Grants to Develop and Validate a Prognostic Tool of Mental Health Sequelae After Traumatic Brain Injury for Adolescent Patients (U01)",

Certification

I hereby certify that to the best of my knowledge, the foregoing minutes of the May 3, 2023 NCIPC BSC meeting are accurate and complete:

6/27/2023

Date

Christopher R. Harper, PhD
Designated Federal Officer (DFO)
Board of Scientific Counselors
National Center for Injury Prevention and Control
Centers for Disease Control and Prevention

Attachment A: BSC Member/Ex Officio Attendance

Acting BSC/SRC Chair

Christopher R. Harper, PhD
Designated Federal Officer (DFO)
Board of Scientific Counselors
National Center for Injury Prevention and Control
Centers for Disease Control and Prevention

NCIPC BSC Members

Amy Bonomi, PhD, MPH
NCIPC BSC Co-Chair
Founder, Social Justice Associates
Affiliate, Harborview Injury Prevention & Research Center
University of Washington

Eric Caine, MD
Professor of Psychiatry, Emeritus
Department of Psychiatry
University of Rochester Medical Center

Elizabeth Habermann, PhD
Professor, Department of Health Services Research
Mayo Clinic College of Medicine and Science

Yvonne Johnston, DrPH, MPH,MS,RN, FNP
Associate Professor & Founding Director
Master of Public Health Programs
Division Of Public Health
Decker College of Nursing and Health Sciences
Binghamton University

Angela Lumba-Brown, MD
Clinical Associate Professor, Emergency Medicine and Pediatrics
Co-Director, Stanford Brain Performance Center, Director of Research

Ramiro Martinez, Jr., PhD
Professor
School of Criminology and Criminal Justice
Northeastern University

Jeffrey P. Michael, EdD
Leon S. Robertson Faculty Development Chair in Injury Prevention
Visiting Scholar in the Johns Hopkins Center for Injury Research and Policy

Elizabeth Miller, MD, PhD
NCIPC BSC Co-Chair
Professor and Chief
Children's Hospital of Pittsburgh
University of Pittsburgh Medical Center

Maury Nation, PhD
Professor of Human and Organizational Development
Peabody College
Vanderbilt University

Steve Ondersma, PhD
Clinical Psychologist and Professor
Division of Public Health and Department of Obstetrics, Gynecology, and Reproductive Biology
Michigan State University

Rosalie Pacula, PhD
Elizabeth Garrett Chair in Health Policy, Economics & Law
Professor of Health Policy and Management
Price School of Public Policy
University of Southern California

John A. Rich, MD
Professor, Department of Health Management and Policy
Director, Center for Nonviolence and Social Justice
Rich Drexel University

Ali Rowhani-Rahbar, MD
Professor, Department of Epidemiology
University of Washington

Rohit P. Shenoi, MD
Professor of Pediatrics
Department of Pediatrics
Section of Emergency Medicine
Baylor College of Medicine

NCIPC BSC Ex Officio Members

Melissa Lim Brodowski, PhD, MSW
Acting Director, Office of Early Childhood Development
Administration for Children and Families

Dawn Castillo, MPH
Director, Division of Safety Research
Centers for Disease Control and Prevention
National Institute for Occupational Safety and Health

Mindy Chai, JD, PhD
Health Science Policy Analyst
Science Policy and Evaluation Branch
National Institutes of Health
National Institute of Mental Health

CAPT Jennifer Fan, PhD
Acting Deputy Director
Office of the Director
Center for Substance Abuse Prevention
Substance Abuse and Mental Health Services Administration

Lyndon Joseph, PhD
Program Officer, Division of Geriatrics and Clinical Gerontology
National Institute on Aging
National Institutes of Health

Valerie Maholmes, PhD, CAS
Chief, Pediatric Trauma and Critical Illness Branch
National Institutes of Health
Eunice Kennedy Shiver National Institute of Child Health and Human Development

Bethany D. Miller, LSCW-C, MEd
Supervisory Public Health Advisor
Division of Child, Adolescent and Family Health
Health Resources & Services Administration

Jane K. McAinch, MD, MPH, MS
Senior Medical Epidemiologist
United States Food and Drug Administration
Regulatory Science and Applied Research (RSAR) Program
Regulatory Science Staff (RSS)
Office of Surveillance and Epidemiology (OSE)
Center for Drug Evaluation and Research (CDER)

CDC NCIPC Attendees

Kathleen Basile, Ph.D
Matthew Breiding, Ph.D
Victor Cabada, M.P.H.
Joyce Dieterly, MPH
LCDR Carlisha Gentles, PharmD, BCPS, CDCES
Derrick Gervin, Ph.D, MSW
Arlene Greenspan, DrPH, MPH, PT
Candis M. Hunter, PhD, MSPH, REHS/RS
Tonia Lindley
Karin Mack, Ph.D.
Donna Polite
Celeste Sanders, PhD
Thomas Simon, Ph.D.
Mikel Walters, Ph.D.

Aisha Wilkes, M.P.H.
Amanda Garcia-Williams, Ph.D., M.P.H.

Attachment B: Acronyms Used in this Document

Acronym	Expansion
ABU	Approved But Unfunded
ADS	Associate Director for Science
ATSDR	Agency for Toxic Substances and Disease Registry
BSC	Board of Scientific Counselors
C2H	Close to Home
CDC	Centers for Disease Control and Prevention
COI	Conflict of Interest
DFO	Designated Federal Official
DIP	Division of Injury Prevention
DOP	Division of Overdose Prevention
DPH	Department of Public Health
DSA	Data Sharing Agreement
DVP	Division of Violence Prevention
ED	Emergency Department
ERPO	Extramural Research Program Office
ESI	Early-Stage Investigator
ET	Eastern Time
FACA	Federal Advisory Committee Act
FY	Fiscal Year
HHS	(Department) Health and Human Services
LOS	Letter of Support
MOU	Memorandum of Understanding
MSI	Minority-Serving Institution
mTBI	Mild Traumatic Brain Injury
NCIPC; Injury Center	National Center for Injury Prevention and Control
NIH	National Institutes of Health
NOFO	Notice of Funding Opportunity
OGS	Office of Grants Services
PECARN	Pediatric Emergency Care Applied Research Network
PI	Principal Investigator
PPR	Program Priorities Report
RCT	Randomized Controlled Trial
RPE	Rape Prevention and Education
SDOH	Social Determinants of Health
SEP	Special Emphasis Panel
SPO	Scientific Program Official
SRC	Secondary Review Committee
SRG	Scientific Review Group
SRO	Scientific Program Official
SUD	Substance Use Disorders
SUSI	Step Up, Step In
SV	Sexual Violence
TA	Technical Assistance
TBI	Traumatic Brain Injury
TDV	Teen Dating Violence
US	United States
YV	Youth Violence

NCIPC Board of Scientific Counselors
Open to the Public
May 4, 2023

National Center for Injury Prevention and Control
Centers for Disease Control and Prevention
Atlanta, Georgia

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Summary Proceedings

The Forty-Second meeting of the National Center for Injury Prevention and Control (NCIPC; Injury Center) Board of Scientific Counselors (BSC) was convened on Thursday, May 4, 2023 via Zoom and teleconference. The BSC met in open session in accordance with the Privacy Act and the Federal Advisory Committee Act (FACA). NCIPC BSC Co-Chair, Dr. Amy Bonomi, presided.

Call to Order, Roll Call & Meeting Process, Welcome & Introductions

Call to Order

Amy Bonomi, PhD, MPH
Co-Chair, NCIPC BSC
Founder, Social Justice Associates
Affiliate, Harborview Injury Prevention & Research Center
University of Washington

Dr. Bonomi officially called to order the Forty-Second meeting of the NCIPC BSC at 9:32 AM Eastern Time (ET) on Thursday, May 4, 2023.

Roll Call & Meeting Process

Mrs. Tonia Lindley
NCIPC Committee Management Specialist
National Center for Injury Prevention and Control
Centers for Disease Control and Prevention

Mrs. Lindley conducted a roll call of NCIPC BSC members and *Ex Officio* members, confirming that a quorum was present. Quorum was maintained throughout the meeting. No conflicts of interest (COI) were declared. An official list of BSC member attendees is appended to the end of this document as Attachment A. Mrs. Lindley introduced Stephanie Wallace, the Writer/Editor from Cambridge Communications and Training Institute (CCTI), who she explained would record the minutes of the meeting. To make it easier for her to capture the comments, Mrs. Lindley requested that everyone state their names prior to any comments for the record. She indicated that CDC Technicians would audio record the meeting for archival purposes to ensure accurate transcripts of the meeting notes. The meeting minutes will become part of the official record and will be posted on the CDC website at www.CDC.gov/injury/bsc/meetings.html. All NCIPC BSC and *Ex Officio* members were requested to send an email to Mrs. Lindley at

ncipcbsc@cdc.gov at the conclusion of the meeting stating that they participated in this meeting. In addition, Mrs. Lindley explained the public comment process.

Welcome & Introductions

Amy Bonomi, PhD, MPH
Co-Chair, NCIPC BSC
Professor, Department of Human Development and Family Studies
Michigan State University

Dr. Bonomi thanked everyone for their commitment to injury and violence prevention and expressed appreciation to them for taking time out of their busy schedules to participate in this important committee, which provides advice to the leadership of CDC and NCIPC on its injury and violence prevention research and activities. She welcomed new members Drs. Caine, Johnston, Martinez, Nation, Rowhani-Rahbar, and Shenoi and new *Ex Officio* member Dr. McAninch from the Food and Drug Administration (FDA).

She also thanked and welcomed members of the public, pointing out that there would be a Public Comment session from 3:10 PM to 3:25 PM. At that time, Mr. Victor Cabada would be providing instructions for anyone wishing to make a public comment. Dr. Bonomi referred those joining by phone without access to the slides through Zoom to www.cdc.gov/injury/BSC where the slides could be downloaded.

Approval of the August 23, 2022 NCIPC BSC Meeting Minutes

Amy Bonomi, PhD, MPH
Co-Chair, NCIPC BSC
Professor, Department of Human Development and Family Studies
Michigan State University

Dr. Bonomi referred BSC members to the copy of the minutes provided to them with their meeting materials from the August 23, 2022 NCIPC BSC meeting. With no questions or edits noted, Dr. Bonomi called for an official vote.

Motion / Vote

Dr. Pacula made a motion, which **Dr. Lumba-Brown** seconded, to approve the August 23, 2022 NCIPC BSC meeting minutes. The motion carried unanimously with no abstentions.

Discussion Points

Dr. Greenspan reminded everyone that when discussing Notice of Funding Opportunities (NOFOs), the specifics of any closed secondary review, including what was discussed in the closed meeting the previous day, is confidential.

Opening Remarks

Debra Houry, MD, MPH
Chief Medical Officer and Deputy Director for Program and Science
Centers for Disease Control and Prevention

Dr. Houry began by acknowledging the tragic loss to the CDC family of Amy St. Pierre, who was killed in the previous day's Midtown Atlanta shooting. She had been working on the Maternal Mortality Review Committees (MMRCs) program since its outset and was a treasured team member to the many staff and Health Officers who worked with her. Dr. Houry spoke with Amy's Division Director and many staff the previous evening, who are all devastated along with everyone at CDC. There was a division meeting underway for them to process their grief and Dr. Houry called for a moment of silence for Amy and for all of the others who have died from firearm homicides and suicides. Following the moment of silence, Dr. Houry stressed that this unacceptable loss further emphasizes the importance of the work done at CDC to prevent firearm violence.

Dr. Houry thanked the BSC members for the ongoing support they provide to the NCIPC, emphasizing that their expertise is critical to the Injury Center, all of CDC, and the public. Over the past year, the NCIPC BSC members have provided invaluable feedback and perspectives on injury science and practice. She took a moment to recognize the successes of the NCIPC BSC over the past year. As CDC continues to integrate the principles of the CORE Health Equity strategy into all programs and activities, the BSC provided feedback to division staff on new opportunities to integrate health equity and incorporate health equity language and principles into programs across all topics, including violence, overdose, and injury; creating a workforce for injury prevention and control that prioritizes health equity; and considering new ideas for increasing the diversity of applicants and reviewers for extramural research. The BSC also provided valuable input and aided in the release of the opioid guidelines[1] in 2022. This information will help empower clinicians and patients to make informed decisions about pain care. The BSC also has provided important feedback on existing research priorities, including preventing older adult falls, transportation safety, and the new drowning research priorities. In addition, the BSC has conducted secondary reviews of multiple funding opportunities to drive and inform the field moving forward.

The work of the BSC continues to be critical to CDC's Moving Forward initiative that is prioritizing improving public health infrastructure for the long-term. Key areas include building a strong and diverse public health workforce, modernizing public health data systems, building up the nation's first epidemic forecasting center, and getting science out faster. CDC appreciates the input of the NCIPC BSC, particularly in helping programs and staff think innovatively about new opportunities for science and prevention. CDC values the input and feedback from the NCIPC BSC and *Ex Officio* members.

Before closing, Dr. Houry shared a few comments about her new role and acknowledge Dr. Christopher Jones as the Director of the Injury Center. Since joining CDC, she has had the opportunity to work closely with many of the NCIPC BSC members on pressing injury and violence challenges facing the nation for over 7 years in that role. In her new role as Chief Medical Officer and Deputy Director for Program and Science, she is responsible for establishing, strengthening, and maintaining collaboration and coordination across CDC's national centers, including the Injury Center, which she was delighted to maintain in her

[1] https://www.cdc.gov/mmwr/volumes/71/rr/rr7103a1.htm

portfolio. She also provides overall direction to, and coordination of, the scientific and medical programs. She expressed appreciation for Dr. Jones serving as the former Deputy Director and now the Director of the Injury Center. She has the utmost confidence in his leadership in this role and values his thoughtful perspectives. She thanked each of the NCIPC BSC members for giving CDC their time and sharing their insights, stressing that their expertise and experience are invaluable. The agency is grateful for the NCIPC BSC's ongoing commitment to advancing the public's health. Dr. Houry invited BSC members to reach out to her if there is anything she can do for them. CDC truly values the NCIPC BSC's partnership and participation in the BSC meetings.

Director's Update

Christopher Jones, PharmD, DrPH, MPH
CAPT, US Public Health Service
Director, National Center for Injury Prevention and Control
Centers for Disease Control and Prevention

CAPT Jones acknowledged the difficulty in opening the BSC meeting with the tragic news of Amy St. Pierre's death the previous day. While every shooting is a tragedy, as a colleague and friend, Amy's loss is particularly gut-wrenching for everyone across CDC. In the Injury Center, the previous day's shooting brought to the forefront so many of NCIPC's topics—firearm violence, substance use, trauma, mental health. This marked a hard day for the CDC community, with staff still in shock dealing with this news to which they awoke that morning. He acknowledged that it was hard for them all to work while mourning the loss of one of their colleagues and expressed gratitude for Dr. Houry's comments and moment of silence for that loss.

CAPT Jones expressed appreciation for Dr. Houry's prior leadership in the Injury Center and now working with her in this new role. He also conveyed his gratitude to the NCIPC BSC for all of their support, advice, and guidance at this crucial point for CDC and the Injury Center. The BSC's feedback is tremendously helpful as consideration is given to how to move the agency and the Injury Center forward. He welcomed new members and thanked them for their willingness to serve on the BSC. CDC is undergoing significant changes as part of the CDC Moving Forward initiative. Since becoming the new Director of NCIPC, CAPT Jones has been considering ways to continue to enhance NCIPC's work and build on its successes. They have begun an internal process of gathering ideas from leaders and staff in the Injury Center and appreciate and value the BSC's feedback as they shape NCIPC's future.

In terms of the broader CDC Moving Forward activities occurring across the agency, a few structural changes have occurred since last the NCIPC BSC met in August 2022. As mentioned earlier, Dr. Houry is in the new position of Chief Medical Officer and Deputy Director for Program and Science. That position coincides with a series of structural changes in which CDC's historic Communities of Practice (CoPs) that have been in place for the last several years were eliminated as part of the restructuring and new Deputy Director positions were created. In addition to Dr. Houry's Deputy Director position that oversees the national centers and the program and science piece, there is a new Deputy Director for Strategy who oversees policiy and communications, a new Deputy Director for Global Health, and a new Principal Deputy Director. In addition to these new leadership positions that fall within the Immediate Office of the Director (IOD) there also are new organizational units that focus on crosscutting aspects of CDC's work. These include the Office of Laboratory Science and Safety (OLSS), Office of Public Health Data, Surveillance, and Technology (OPHDST), the Office of Readiness

and Response (ORR), Office of Health Equity (OHE). As a national center, NCIPC will be working closely with these new offices to advance work that is at the intersection of their mandates and the Injury Center's work in advancing injury and violence prevention.

The Injury Center does not anticipate structural changes as a result of Moving Forward, but it is an opportunity to reflect on the overarching themes of the Moving Forward initiative and think about how NCIPC can continue to shift its work to meet the moment that is being asked of CDC and public health and optimize impact. Some of the themes that the Injury Center has been coalescing around fall into 4 large categories. The first theme is that there is an increasing desire and need to move data faster to drive public health action. Rather than simply collecting, analyzing, and disseminating data for the sake of having it, the idea is to connect data to public health action to help communities understand who is at risk, how risk is changing, and where NCIPC needs to be focusing its injury and violence efforts. The second theme is prioritizing health equity in all of NCIPC's work. The Injury Center released its first strategy around Diversity, Equity, Belonging, Inclusion, and Accessibility (DEBIA) in 2022, which focused on NCIPC's internal workforce and workplace and how the Injury Center embeds equity in the program and scientific work of the agency. In recent NOFO's that have been published, equity is a core theme as a central component rather than an add-on. The Injury Center is specifically and intentionally focusing on equity in its research, surveillance, programmatic, communications, and policy work.

The third theme is thinking through how NCIPC is answering the most pressing scientific questions with its research and surveillance and supporting programmatic efforts through its expertise and capacity for research and surveillance to more intentionally align with the Injury Center's partners in the field and funded jurisdictions to determine gaps for which knowledge is needed to advance the work; how the impact of the work in the field can be documented; and how NCIPC can help others to scale-up and adopt practices, policies, and programs based on the best available evidence. The fourth theme is emerging around more intentionally connecting NCIPC's programmatic and scientific work and its partnership work to acquire feedback from partners in the field and funded jurisdictions about where the Injury Center needs to make shifts to help meet the needs of communities and help drive collective public health action to reduce injury and violence outcomes in communities—making sure that communication is bi-directional and multi-directional rather than CDC simply talking at communities or jurisdictions and instead hearing from them and building new partnerships to ensure that the Injury Center is getting the feedback it needs to optimize its work.

In future BSC meetings, there will be more meat to these 4 thematic areas. It is an exciting time for the Injury Center and the agency overall. Certainly, it is a time when there is a lot of scrutiny of CDC and its activities. Therefore, it is very important to help individuals, policymakers, and others understand the value that injury and violence prevention at CDC adds to the field and the impact that it makes in communities. He invited the BSC's thoughts and ideas on those themes and ideas and to reflect on the themes during the presentations they would hear throughout the day.

Another exciting development in the Injury Center pertains to mental health and taking a more formal leadership role in CDC's mental health work overall. This certainly is an area for which there was concern, particularly among young people, before the COVID-19 pandemic, but there have been exacerbations and mental health challenges and the evolving and more open conversation about mental health during the COVID-19 pandemic underscores that there is a great opportunity for public health and CDC to advance mental health and wellbeing in communities across the country. This is evident in the most recent Youth Risk Behavior Survey

(YRBS) data that found that young people are really struggling with mental health, with 42% reporting feeling persistently sad or hopeless, over 20% reporting suicidal thoughts in the past year, and 1 in 10 attempting suicide in the past year. This is a reflection of some of the challenges that society is facing around mental health. Historically at CDC, there has been no organizing framework or connection across the agency about how to approach addressing mental health. None of CDC's centers, including the Injury Center, are specifically funded for mental health work. However, they know that their work in adverse childhood experiences (ACEs) prevention, substance use, suicide, violence prevention, schools, and occupations all touch on mental health and stand to improve mental health and wellbeing. Against that backdrop, in addition to the direction the Injury Center received from Congress in the last 2 appropriation bills for developing a coordination program at CDC with a particular focus on youth mental health, NCIPC is establishing a Behavioral Health Coordinating Unit (BHCU) in the Injury Center that will serve as a CDC-wide resource to coordinate and amplify mental health- and wellbeing-related activities. This builds on the Overdose Response Coordination Unit (ORCU) that has been in place since 2018 to help coordinate substance use- and overdose-related work across CDC. The BHCU will expand on CDC's substance use and overdose coordination role and also will be charged with establishing an agency-wide strategy for mental health, coordinating activities, and fostering collaboration across centers, institutes, and offices (CIOs) at CDC and with external partners and agencies and helping to land on an organizing framework for how CDC and public health add value to mental health and having one CDC message related to CDC's role in addressing mental health and wellbeing.

CAPT Jones also provided a few updates on NCIPC's appropriations for FY23 and highlights of what was captured in the President's Budget for FY24. In FY23, NCIPC's appropriation increased by about $46 million, with a total budget of slightly more than $760 million. This is a continued upward trajectory in the Injury Center's growth and underscores the importance of NCIPC's work in injury and violence prevention. The Injury Center received increases across almost all of its funding lines. He highlighted some of these increases around NCIPC's 3 strategic priority areas of overdose, suicide, and ACEs prevention. The FY23 appropriation increased $15 million for overdose prevention work for a total of $505 million, which is the bulk of appropriations for the Injury Center. With that increase, NCIPC is actively working to implement a new 5-year cooperative agreement that will advance the Overdose Data-to-Action (OD2A) work. A NOFO has been published for 2 new 5-year cooperative agreements, 1 OD2A: STATE 1 OD2A: LOCAL, that build on NCIPC's experiences over the last 4 years working with state and local jurisdictions around overdose prevention that is designed to meet the evolving overdose crisis in the US.

The Injury Center felt that it was appropriate to have 2 separate NOFOs, recognizing that they want to bring the best of what state public health can bring to the overdose issue, but that local public health has different levers that can be brought to bear to address the overdose crisis. For the state NOFO, the plan is to fund all 50 states and Washington, DC. For the local NOFO, NCIPC anticipates funding up to 40 jurisdictions. The focus is on key surveillance systems and surveillance capacity to help drive public health action in communities and leaning in on areas around harm reduction, supporting health systems, innovative public health and public safety partnerships, and incorporating equity and lived experience in both the state and local NOFOs. The Injury Center is very excited to get this new work underway based on the lessons learned from the last 4 years of OD2A. NCIPC also is supporting continued investments in its Tribal overdose work through separate funding announcements and mechanisms. While these allocations are from the OD2A state and local funds, recognizing the tremendous burden among Tribal populations, they felt it was very important to continue investments in overdose prevention among Tribal communities.

NCIPC launched its Comprehensive Suicide Prevention Program (CSP) a couple of years ago, which has steadily grown each year. This past year, the Injury Center received an increase of $10 million for its suicide prevention work, bringing the total to $30 million. NCIPC is currently funding activities in 17 states. With the increase for FY23, the plan is to fund up to 7 additional jurisdictions to engage in CSP work. This is incredibly important public health work that complements the work of CDC's sister agencies like the Substance Abuse and Mental Health Services Administration (SAMHSA), Health Resources and Services Administration (HRSA), Centers for Medicare and Medicaid Services (CMS), and others that are doing work in the suicide prevention space as well. Finally, NCIPC's ACEs prevention work continues to grow each year. The Preventing Adverse Childhood Experiences (PACE) through Data-to-Action program is now winding down. This program was launched a couple of years ago and was NCIPC's first program specifically focused on ACEs prevention. At the same time, the Essentials for Childhood (EfC) program that focuses on child maltreatment (CM) or child abuse and neglect (CAN), a key set of ACEs also is winding down. Recognizing the opportunity with those 2 programs, NCIPC has merged the work from these 2 programs into a new NOFO that has been published, Essentials for Childhood (EfC): Preventing Childhood Experiences through Data-to-Action, which will allow the Injury Center to fund up to 12 to 14 jurisdictions to engage in comprehensive ACEs prevention work through a data-to-action framework. Given the strong connections between ACEs, suicide, and overdose and their connections to the mental health challenges the country is facing, these are very important public health investments in communities.

To highlight a few items from the FY24 President's Budget request, this is an interesting time with Congress. It is very unclear how budgets will play out this year in the Appropriations Bill. The President's Budget released in March 2023 proposed increases across almost all of NCIPC's funding lines, which underscores the continued interest and support from the Administration for the Injury Center's work at CDC. CAPT Jones highlighted 4 areas that are particularly large investments. For the overdose line, there is a call for an increase of $207 million, which NCIPC would use to continue to support additional local investments and overdose prevention work. For the suicide prevention line, there is a call for a scale-up of $50 million to reach a national program for CSP. There is a $250 million request for youth and community violence prevention to focus on the concerns around rising violence in communities, and a large investment in local activity to prevent community violence. There is an increase of about $23 million for NCIPC's firearm injury and mortality prevention research work. It is completely unclear whether these increases actually will occur this year, but NCIPC certainly appreciates the continued support from the Administration and HHS for its work in these areas.

In closing, CAPT Jones thanked the BSC members for their time. It has been a while since the NCIPC BSC has met and it was great to see new members. He emphasized that the tragic events of the previous day and in communities all too often underscore the importance of the Injury Center's work and the importance of working with communities that are experiencing the loss that everyone was feeling at CDC.

Discussion Points

Dr. Bonomi expressed deepest condolences to CDC colleagues for the loss of Amy St. Pierre, and congratulated CAPT Jones on his appointment as the new NCIPC Director.

Dr. Pacula said it seemed to her that given the enormous pressure communities are feeling right now, it is likely that many more jurisdictions will apply for the CSP program funding than the 7 NCIPC anticipates funding. This seems like a wonderful opportunity to carefully design a study of the effects of the CSP program-funded jurisdictions by randomizing who receives funding. It might not be ideal clinically, but it would be so informative to better understand the effects of the CSP strategy.

CAPT Jones pointed out that one of the challenges NCIPC faces with the current budget environment is that they often receive budgets very late, so they are under tremendous pressure to execute and allocate funds to the field before it evaporates or must be returned to the Treasury. With the CSP program, a new funding announcement went out in FY22 that funded the first round. They are now funding programs that were approved last year, but for which the Injury Center did not have the resources to fund. In terms of the randomized approach, he agreed that NCIPC absolutely needs to document the impact of its programmatic investments. For the purposes of the 7 new jurisdictions, the process is already underway. In terms of the strategic vision and shift of how NCIPC thinks about its work, there has been discussion lately about how the Injury Center can better sync its intramural and extramural research enterprise with programmatic funding. Oftentimes for the extramural research that is funded, they are asking people to evaluate a policy or program that was implemented. While that is helpful and very important for building the evidence base, there also is something very important about rigorously evaluating something that happened in the real-world. This involves considering how to leverage extramural enterprise or intramural work to do that rigorous design and build better bridges with academic organizations and programmatic partners in health departments to do that work. He thought Dr. Pacula was conceptually on the right track of where they want to go, because he feels very strongly as do others from the leadership team that the scrutiny under which CDC is operating at the moment, they have to be able to document and tell the story of the impact of their work—particularly with respect to the millions of dollars they are allocating externally each year. With prevention, that is hard. Thoughtful ideas and approaches are needed in order to be able to document the impacts.

Dr. Nation said he was encouraged by the budget for violence prevention and the appropriation for CDC. However, he knew that for the past and coming years, much of the efforts around community violence prevention have been directed toward the Department of Justice (DOJ) with more of a community safety orientation. He asked how NCIPC is thinking about the potential for the additional investment and how it might differentiate from the ways in which DOJ might be approaching this issue.

CAPT Jones indicated that NCIPC has had many conversations on this important question internally and with its DOJ partners. Over the last couple of years, there have been various pieces of legislation that have proposed community violence prevention funding for CDC and DOJ. At one point, $2.5 billion each was being floated around for CDC and DOJ. There have been discussions about how the 2 agencies could fund complementary and not duplicative work. NCIPC has put a lot of thought into what its focus would be and is ready to execute on it. There is clearly a need for more acute interventions like hospital-based interventions and street outreach workers, but they also think that public health's "sweet spot" is getting upstream to think about what root causes and root drivers are contributing to community violence. That is a

key area that distinguishes CDC from what DOJ might be funding. NCIPC also recognizes that in some communities, DOJ might not be the right group to be funding something and that public health might be more welcome in communities. That is another point that NCIPC has tried to underscore of why those investments are not duplicative and could be complementary. Again, there is tremendous uncertainty about whether there would be any investment at all. The general sense is that there is likely to be a Continuing Resolution (CR) or flat budgets. NCIPC's goal is to at least keep what they have. This is why partnerships with others who are impacted by these issues are so important, and it is important to underscore that the Injury Center and public health have a unique role to play in violence prevention. This is not solely a justice issue. In order to get ahead of the trends NCIPC is observing across all of its topics, a public health approach is the roadmap for doing that. Having a choir singing that verse is very important right now, because there is a lot of skepticism about CDC's role across many non-infectious disease topics—including injury and violence prevention.

Dr. Caine noted that the divisions within CDC are, in large part, defined by downstream mortality (e.g., drug overdose, suicide, injury, homicide, et cetera). Moving upstream will allow for looking at distressed youth or adults who are having difficulty and are demoralized, or who are perhaps drinking or using drugs but are not suicidal at that point and may or may not be at risk for overdose. There is a series of undifferentiated groups among youth who may die from suicide, overdose, or homicide, and among adults who may die from overdose, suicide, or natural causes related to the same adverse health risk behaviors. He asked how the existing division structure is able to deal with these rather undifferentiated or less distinct groups for whom the outcomes are not yet known, but who likely will have premature mortality. He wondered what discussion was occurring about where these efforts could be integrated to focus on populations at risk—even if their causes and manners of death have not been defined.
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CAPT Jones acknowledged that this was a great point that reflected how NCIPC is thinking through collaboration across divisions. Naturally, NCIPC is divided into the Division of Violence Prevention (DVP), Division of Overdose Prevention (DOP), and a Division of Injury Prevention (DIP) where the suicide prevention work sits. However, they do think about root causes, ACEs, adversity, and positive childhood experiences as foundational. Over the last couple of years, the Injury Center has been putting forth a framework around the inter-relatedness of overdose, substance use, ACEs, and suicide and trying to have a more collective approach as they think about upstream prevention activities. They are non-specific and they have a payoff for public health even broader than injury and violence prevention, especially for ACEs that are known to be associated with at least 5 leading causes of death (COD). Ample research has been done to demonstrate that if ACEs could be prevented, there could be substantial public health payout for health risk behaviors, injury and violence outcomes, and other outcomes as well. Part of that has to do with how NCIPC thinks about its NOFOs in terms of how to collaborate in the field if jurisdictions are funded for multiple programs. They also have an Office of Strategy and Innovation (OSI) that was put in place under NCIPC's reorganization in 2018-2019 to serve as the hub for connectedness. For example, that office has a cross-center group that meets regularly to talk about how NCIPC's ACEs work fits with work in the CSP program or Drug-Free Communities (DFC) work at a youth substance use prevention level. As they think about other topics, inter-relatedness, and NCIPC's role, their programs are not specific to mental health, but they certainly know that they can impact prevention and promotion. This is one way that the Injury Center is working to organize, share information, look for opportunities to collaborate, and think about how to bring funded jurisdictions together to share the work they are doing. While there is probably more they can do in that space, they have a strong foundation in terms of

recognizing the need to break silos that exist structurally within the Injury Center because they are looking at a shared set of risk and protective factors that its prevention work is targeting.

Dr. Baldwin added that they have positions in some of the divisions as well to complement the OSI. For example, he has a Senior Advisor for Strategic Planning and Cross-Cutting Initiatives in the DOP.

Dr. Michael acknowledged the extraordinarily wide range of issues with which the Injury Center is dealing presently but wondered about motor vehicle (MV) injury prevention among those issues. CDC has made important contributions to MV injury prevention over the past decades. This is a critical time in that MV deaths and fatality rates are both at a 20-year high and CDC's leadership is a critical component of plans to move forward.

CAPT Jones indicated that NCIPC certainly has been concerned about the last several years of data showing that MV traffic fatalities in particular are not going in the desired direction, which is a reversal of the trend seen several years ago. There has been disinvestment from Congress for NCIPC's work in the MV space. In relation to the strategic themes he discussed earlier, even though MV is a very small funded component of NCIPC's work, they should still be asking themselves how to advance the field; what questions need to be answered the most that the Injury Center can answer; how they can help influence others who have levers that can influence evidence-based policies, programs, or practices; and what data they have that can be linked to drive public health action—to tell the story. To him that is the shift in thinking about NCIPC's work. Just because they have strategic priorities in place like overdose, suicide, and ACEs, that does not mean the other topics are not important and that they should not be paying attention to them. His hope is that from an internal perspective, everybody sees their work as equally important and looks at their work through that lens. Even though they may not have $500 million, they have influence, thought leadership, data that can drive action, and understanding of what works. They have to think strategically about how to spend their time, how to spend the resources that they have, and how to influence others who have levers and resources that can advance public health. He often reflects on his early days in unintentional injury prevention and the overdose space in 2011 when he came to CDC to help with that work for which there was no money. There was a scrappiness to it, but they found that they had influence in that their recommendations were being taken up by state Health Officers, Medicaid programs, and others in HHS. Even in a resource-constrained environment for the foreseeable future, it is possible to maximize their input—especially when indicators are going in the wrong direction. CAPT Jones expressed appreciation to Dr. Michael for continuing to raise the issue of MV injury prevention.

Dr. Shenoi asked what CDC is doing or planning to do with other federal agencies in terms of climate change.

CAPT Jones indicated that HHS established the Office of Climate Change and Health Equity (OCCHE) that has been in place about a year as a way to organize HHS agencies. In the past year, CDC's National Center for Environment Health (NCEH) released a strategy about how the agency is thinking about this. There are collateral consequences related to NCIPC's topical areas as a result of climate change. While this is an area for which resources have not been brought to bear at CDC, the new framework around mental health and the BHCU is a layer that can be explored across CDC in terms of the various impacts and what they need to be thinking about in the future for how their work might be impacted by climate change. This is an evolving conversation and while the Injury Center is not the lead on that, it certainly has a role to play.

Dr. Nation asked what consideration the Injury Center is giving to how artificial intelligence (AI) could be levered in ways that help advance public health.

CAPT Jones responded that this is part of ongoing conversations across the agency under the Data Modernization Initiative (DMI) and the development of the new cross-cutting OPHDST that is part of the CDC Moving Forward reorganization. The Injury Center released a data science strategy a couple of years ago and was the first center at CDC to do that. The strategy focused on a variety of tools and techniques in the data science space. NCIPC has been applying that strategy to its work in terms of using machine learning (ML), natural language processing (NLP), and other new tools coming online that can be applied to identify emerging threat. The Injury Center has published a number of papers using data science approaches. While the overall coordination for data science sits in NCIPC's OSI, the DIP also has a Data Science Team that has been applying some of those concepts more broadly across the Injury Center. Each division also is considering the ways in which advances in technology and data science can make NCIPC's work easier. Some of that is very much behind the scenes in their surveillance systems, which often have unstructured disparate data that historically they had to manually go through in order to identify things that were not structured variables. They are now applying NLP, ML, and text analyses to get that information through automation. This is an exciting area, though there is still a lot of uncertainty about how to apply all of these tools, how to do it in an ethically responsible way, et cetera. They are looking at a variety of social media platforms to try to understand and detect emerging issues, but there are ethical issues and challenges in that space. NCIPC has an internal report that is almost finalized that documents their successes over the last couple of years in data science. Once that is finished, they are happy to have someone present on it or send it out. They have fairly rapidly adopted some cutting-edge technology, which for governmental public agencies is not always the case. They want to be a part of that important conversation. While they recognize that it can make NCIPC's work a lot easier, they also want to be responsible in how they are using it.

Dr. Rowhani-Rahbar provided an example of a cross-cutting theme that he has found extremely powerful, which was the emphasis CDC has had for the past few years on multiple forms of violence and funding for multiple forms of violence that may be affected by a particular policy, for example. He has benefitted from that vision in his research program for the past 6 or 7 years. He has found that type of approach and lens to be very powerful, and wondered if NCIPC is thinking of interconnectedness in terms of different forms of violence and injury and how that type of approach provides an opportunity for people to think about upstream factors, cross-cutting themes, and the populations who might be at risk for a variety of different injury and violence and injury outcomes. He has personally found that type of approach to be very powerful in terms of prevention.

CAPT Jones responded that this is generally the direction in which NCIPC is headed and is making connections between things like intimate partner violence (IPV) and traumatic brain injury (TBI), MV crashes and substance use, et cetera that sit in different divisions but are clearly connected. That layer of mental health fits in there as well. Mental health conditions do not simply come about. An incident may occur in someone's life that substantially increases risk. Much of the conversation around mental health has focused on service delivery, the need for more therapists and psychologists, better access to insurance, et cetera. While those things are all true, they do not solve the issue on the front end in terms of what is driving the trends being observed. That is where the Injury Center's role is nicely situated to help be a part of the solutions. They published *Morbidity and Mortality Weekly Reports* (*MMWRs*) coming out of COVID-19 about the connection between ACEs and poor mental health among young people. The dose-response relationship is so strong it is striking, but there is an opportunity to get

ahead of this. The same is true for substance use and suicide risk. He talks about that a lot and it is perplexing to him that many people do not think in those terms. Even people working in substance use or mental health do not think about it in that way. There also is an opportunity to raise awareness about how these things are connected—not just multiple forms of violence, but then how they play in other areas of health, wellbeing, and mental health.

Dr. Caine expressed appreciation for the discussion about cross-cutting themes, and populations defined by their distresses rather than their final outcome. He looks forward to learning more in the future about how the Injury Center is addressing these issues across the life course.

Improving the Quality & Reach of Extramural Research Notice of Funding Opportunities

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Dr. Amanda Garcia-Williams
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Dr. Greenspan began by acknowledging the horrific shooting the previous day as just one of many that have occurred all too often. This also underscores the importance of the work at NCIPC in preventing violence, firearm injuries, et cetera and the interconnectedness of their work as highlighted by CAPT Jones. With that, she presented the topic of NCIPC's extramural research that is so important to moving their topics forward. Many times, the BSC has challenged NCIPC in ways to extend and think about how the Injury Center is structuring its NOFOs, the reach of the NOFOs, trying to increase availability, improving health equity, ensuring that equity is a part of the NOFOs, ensuring that the scientists who apply for funding are more diverse, and ensuring that the reviewers who are reviewing the NOFOs are more diverse.

NCIPC has made steps to improve the structure of its NOFOs, including health equity and finding ways to increase diversity, and wanted to reach out to the BSC to acquire more input on things that the Injury Center can do better. In discussing improvements, they structure this session in 3 broad categories: Improving the Quality of NCIPC NOFOs, Reducing Barriers for Applying to NCIPC NOFOs, and Improving NCIPC's Reach. The BSC has pointed out many times that NCIPC has repeat applicants and does not often have new applicants. Therefore, the Injury Center is embarking on an effort to think about how to improve its reach. Extramural research is an integral part of CDC's work. NCIPC desires to improve in terms of integrating its research and programs and ensuring that its NOFOs will move the field forward.

Dr. Garcia-Williams posted and reviewed questions within the broad 3 topic areas for which NCIPC was requesting the BSC's input. Discussion points are documented within the topic under which they were raised. The topic areas and questions posed within each included the following:

Topic 1: Improving the Quality of NCIPC NOFOs

How would you recommend NCIPC improve how our NOFOs are written based on the NOFOs you reviewed and prior knowledge of our NOFOs:

- ❑ What are the strengths of NCIPC's NOFOs?
- ❑ What are the weaknesses of NCIPC's NOFOs?
- ❑ Are NOFOs too complex? Are there ways to simplify our NOFOs?
- ❑ Are NOFOs too narrow or specific?
- ❑ Is the language in our NOFOs redundant?
- ❑ How can NCIPC's NOFOs be improved with regard to:
  - Objectives
  - Approach
  - Peer Review criteria
  - Responsiveness Criteria
  - Health Equity
  - Partnerships

Topic 2: Reducing Barriers for Applying to NCIPC NOFOs

Potential awardees may see our NOFOs and decide not to apply. Based on the 3 NOFOs you reviewed or your general knowledge of NCIPC NOFOs:

- ❑ What do you think are the main barriers applicants face when applying for our grants?
- ❑ Could these barriers lead to fewer applicants?
- ❑ What could we do to overcome these barriers?
- ❑ Does NCIPC provide sufficient time for awardees to complete their research?
- ❑ NCIPC funds a mix of mechanisms, including K01s, R01s, U01s and R49s. Are there other mechanisms we should consider?

Topic 3: Improving NCIPCs Reach

We often see the same investigators applying for our grants. How do we increase our reach. Things we are currently doing: established newsletter, partnership announcements from sponsoring divisions, partnership with the American Public Health Association (APHA) to reach more diverse researchers. To improve NICPC's reach:

- ❑ How can we increase the diversity of applicants to our NOFOs?
- ❑ How can we increase awareness of NCIPC NOFOs to Minority Serving Institutions (MSIs), early career investigators, and other groups?
- ❑ What are some ways we can promote grant opportunities?
- ❑ How do you as investigators find out about grant opportunities?
- ❑ Are there other things we can do to increase the number of people applying for our NOFOs?

Discussion Points

Topic 1: Improving the Quality of NCIPC NOFOs

Dr. Lumba-Brown expressed her appreciation for NCIPC's interest in improving the quality of its NOFOs and submissions. She emphasized the importance of ensuring that the values related to DEBIA are specifically reflected in all calls for applications. She also recommended considering the lead time for the release of NOFOs. Historically, there may be up to 3 months before a NOFO is released. That limits the breadth of applications that could be submitted. Perhaps a 6-month lead time or longer likely would reach more people and allow more time for applicants to develop more quality proposals.

Dr. Nation supported what Dr. Lumba-Brown recommended. One of the nice things about CDC NOFOs is that they do encourage partnerships and seeking engagement with communities. To do that effectively, not be rushed, and avoid damaging partnerships, takes time. Many times, people pass on applying to NOFOs because it is difficult to establish and build the types of partnerships that will be compelling in the amount of time that is allotted after the release of a NOFO. He emphasized that he appreciates the fact that NCIPC is asking for partnerships and is trying to get more involvement from people with lived experience of the phenomenon being addressed. He did not want his comments to diminish that critical element of the NOFOs.

To drill down further, **Dr. Garcia-Williams** asked whether the BSC thought that the focus of the NOFOs is too specific, if the NOFOs are too complex, and/or if there are topics or areas missing in their portfolio of NOFOs that could help the Injury Center in thinking through improvements.

Dr. Lumba-Brown said she does not think the focus of the NOFOs is too narrow, specific, or complex. Having specific calls for action is very important to ensure that they are achieving their goals. Therefore, her recommendation was not to broaden or widen the topic base, but instead to continue being very specific about what NCIPC is looking for in an application and to advance the science. The reason NCIPC has review bodies and advisors is to be aware of current climates in healthcare and what the research shows and to guide focused calls for applications. In addition to the existing advisory committees, there may be opportunities for researchers in specific areas to make suggestions about where to consider highlighting applications in the future. Through public comments that is available to some degree, but she would not recommend moving away from a narrow or specific focus in NOFOs.

Dr. Rowhani-Rahbar echoed all of Dr. Lumba-Brown's points. He has found the NCIPC NOFOs to be very informative and effective. They are quite dense and detailed. There is no doubt that the NOFOs include a rich set of text, so there may be a learning curve for people who are applying for the first time. However, there is a lot of great information so making the NOFOs shorter or less informative would not be prudent. Having said that, because there is so much information in the NOFOs and because they are encouraging new investigators to apply who have not had the opportunity to respond to some of the more elaborate calls for funding, for them to enter the field, it would be helpful to think about providing information to help them in their decision-making. For example, perhaps some of the questions colleagues typically ask about NOFOs could be incorporated in the NOFOs moving forward from the outset. Some of the questions are valuable and represent exactly the points of confusion that people have within the community. He wondered what the implications of the Multiple Principal Investigator (MPI) structure would be for Early-Stage Investigators (ESIs). It is an important decision to make to partner with or not partner with an investigator because of the tactical decision in terms of the

likelihood of funding. That is just one example of the types of clarifications that would save applicants some time.

Dr. Caine underscored the comment about timing, given that 3 months is especially not sufficient for ESI or people who have never applied to CDC before. CDC does not function in many ways the way that the National Institutes of Health (NIH) does in that they have somewhat different cultures with different expectations. While he understands that funding availability may play a major role in this, NIH grant programs are often continued for several years and therefore applicants can look ahead to consider what they need to do to organize themselves. For those who are not already organized, a 3-month window is particularly difficult and favors those who have applied previously. It is not always clear when people are conducting community-based participatory research (CBPR) and have to build a coalition how much time and money, if any, are in the NOFO itself to support the building of coalitions. There is somewhat of a Catch-22. No one is going to get very far in the review process if they have not laid the foundation for the work before they submit their application. Conversely, they may not be able to build the coalition in the way needed to implement a project until they have gotten funded. He asked whether budgeting do or can include funding for coalition reinforcement, partnership enhancement, or something of that nature that is fundamental to the infrastructure of CBPR.

Dr. Greenspan acknowledged Dr. Caine's point about the difficulty in developing applications when NOFOs ask for partnerships. She recognized that partnerships are hard—even when an investigator receives funding. She asked whether CDC is allowing enough time in terms of the years of funding to successfully develop partnerships and carry out the research and if this is something NCIPC needs to consider further. For those who have received funding previously and developed partnerships already, a 3-year funding cycle may be sufficient. However, that may not be adequate for relatively new applicants.

Dr. Caine said that his experience going back to the 1980s was that building effective partnerships in general takes about 24 to 36 months in terms of confidence-building, listening, identifying people in communities who will be stalwart leaders, and helping academics learn how to work with community partners. (Academics are sometimes marginally trainable because they have "grown up" in such a particular atmosphere.) Clearly, it is important to get started beforehand, however, to bring this into effectiveness is challenging and where and how to get needed resources can pose additional challenges. In terms of the grant review: What is enough to have confidence that an application will develop into something productive? NCIPC wants a productive program that will return new knowledge, new action, and an impact on people's lives. Hopefully, program staff become catalysts in helping those who are funding take it forward. It is a balance that takes a lot of sweat equity

Topic 2: Reducing Barriers for Applying to NCIPC NOFOs

In addition to the timeframe of the funding cycle, **Dr. Garcia-Williams** invited feedback on the amount of funding included in the NOFOs.

In terms of the CSP program, **Dr. Caine** pointed out that the true cost was probably 3 to 4 times as much as what was available through that NOFO depending on the size of the state to build the coalitions necessary. Most US states have urban and rural areas, with higher rates but less dense populations in the rural areas and higher burden and more diversity in the urban areas. In essence, there have to be parallel processes within these areas to reach the populations of interest. He wondered what drove the decision behind having more centers versus grants that

increase the probability of success for learning new things and having an impact on people's lives by investing more.

Dr. Nation agreed with Dr. Caine and added that part of the answer to Dr. Garcia-Williams' question had to do with the capacity of the community. This is one of the places in which the proverbial rich get richer because they are in a position to be able to leverage the amounts that are available. He could think of at least 2 occasions in the past 4 to 5 years of working with colleagues at MSIs who were interested in and resonated with CDC's NOFOs, but were dealing with a capacity issue to be able to establish partnerships in the timeframe allotted and with community partners who had not traditionally collaborated with higher education institutions. Without the history and capacity, it makes it much more difficult to pull off the same type of project. He does think the amount of funding makes a difference and interacts with the capacity of the applicant and the community.

Dr. Greenspan indicated that NCIPC often is faced with limited resources and a decision either to fund at a higher rate but fewer applications or at a lower rate and more applications. NCIPC has received feedback that if they are only going to fund 1 or 2 applications, people will be less likely to apply because they perceive their chances ofbeing successful as smaller.

Dr. Nation said he had heard conversations in the case of the intent to fund only 1 or 2 applications in which people believed CDC already had pre-conceived notions about who would be funded. While he did not know a way around that, having more awards makes NOFOs more interesting to those who have not applied before to consider it. He appreciated the Catch-22 that NCIPC is struggling with around this issue.

Dr. Ondersma said his sense has been that CDC makes less use of R21 and other types of developmental mechanisms than NIH. While that may not be the case, it has been his impression. His thought was that developmental mechanisms might be a way to allocate a number of smaller grants that would allow new applicants to build that capacity.

Dr. Caine noted that NIMH had a capacity-building mechanism, the R24, that colleagues used for setting the foundation for important CBPR initiatives. ([R24] NIMH RESEARCH INFRASTRUCTURE SUPPORT PROGRAM) It had to generate research, but capacity development was a central element.

Dr. Greenspan said that while NCIPC does not make use of R21s, they have used the K01 mechanism instead as ESI awards. The Injury Center is trying to figure out what the right mix of mechanisms is in order to attract ESIs.

Dr. Bonomi commented that in terms of NCIPC's lens of DEBIA or equity and the simultaneous goal to increase the diversity of applications, one thing that is known from an equity standpoint is that there is bias that goes into who considers applying and how applicants are evaluated. The literature and evidence base show that minoritized faculty members/applicants are tasked at much higher levels within their organizations in terms of being asked to engage in unpaid service work and being asked to serve on committees. In terms of the lead time to develop an application and establishing partnerships, individuals with minoritized backgrounds face an added layer of challenge in being able to meet a tight application window of 3 months and once funded, having time to build community-based partnerships, and having sufficient funding to do that well. From a K01 versus an R21 standpoint, providing the applicant with the funding that allows them to build not only relationships with the community but also relationships across

campus is very important. Having that time carved out is critical. When she was a Department Chair at Michigan State University, she constantly heard applicants say they were not going to apply because it seemed that only repeat applicants get funded and that they do not have time to be able to develop an application within a 2- to 3-month window.

In terms of the mix and K01s versus R21s, **Dr. Ondersma** said he feels strongly that both are needed. There is a need to develop young investigators and give them that time. R21s also enable people at all levels to come in with new ideas and do something exploratory with the key piece being that pilot work is not necessarily required. This can fund formative work to get oneself in a position to do important and creative work in a new area, in a related area, in order to pivot, in an area that one's community is facing, et cetera. R34s for clinical trial development have become increasingly important and serve an important need. These mechanisms are for 3 years at $150,000 per year.

Dr. Rowhani-Rahbar acknowledged and echoed all of the points that had been raised. The issue of timing resonates with him exactly as Dr. Nation mentioned, especially when working with MSI and institutions that may not have had the capacity historically to apply—particularly with an application that is due in early February. This means spending most of the time putting together an application around the holidays. This adds another layer of complexity, especially in terms of equity. Therefore, having a longer lead time definitely would help. He also agreed that having a mixture of types of funding opportunities would be very helpful, and he thought it would be beneficial to consider making funding cycles longer in terms of the duration of support. As he recalled, CDC K01s are for 2 years. That seems like a short period of time for career development.

Dr. Pacula added that it is not just the timing of the CDC K01, which clearly is designed because of the CDC's need to put the research into action. However, when a researcher is considering alternatives and NIH has a longer K01 with more development time and more mentoring time, it is natural for the researcher who has to put considerable effort into writing and submitting an application to choose a grant with longer lead time and a longer period of funding. For CDC's purposes, focusing on some of the shorter term R03 or R21 mechanisms can still allow for mentoring and development of new investigators. She often encourages her investigators to apply for the R03 and R21 first with mentoring because these set them up well for an R01. Those might be more pragmatic approaches that encourage young investigators to take a much more narrow and specific path that meets the CDC's initial timeframe and is a win for both sides.

Dr. Greenspan recalled that earlier there was a comment by Dr. Lumba-Brown that she likes more specific NOFOs and wondered if she felt the same about a K01 or R21 in a situation that involves mentorship, or if broader NOFOs would increase the number of people applying and still give NCIPC some of the answers that they seek. She received feedback from a young investigator who could go to one of the NIH institutes that had a much broader NOFO than NCIPC, and that particular year the Injury Center did not receive a single application. She said she was probing on this to think about the right balance.

Dr. Pacula said she thinks that more specific funding mechanisms are valuable for young investigators because they need guidance to build a specific plan of action and it helps them in their growth process in terms of how to execute the research. She also thinks that this does not prevent innovation at all. What she has always valued from young investigators is their innovative approaches to accomplishing tasks. She does not think they are limiting opportunities by being specific to the needs of CDC. While she thought it was good to think about balance,

NCIPC's goal is not to compete with NIH. NCIPC's goal should be to complement NIH and serve CDC's needs, which are much more data-to-action that require a different type of approach to the research.

Dr. Lumba-Brown agreed with Dr. Pacula's comment that specifics are needed for junior investigators.

Dr. Ondersma said he thought it depended upon the type of specifics (e.g., population, public health concern, approach, design, type of intervention). That could thwart some of the fantastic innovation that young folks come in with. He thought something more like an investigator-initiated model would be best. Even if it is focused on a specific area, leaving it open and agnostic regarding how to achieve those goals is a great way to let creative young investigators be free to do some exciting new work.

Topic 3: Improving NCIPCs Reach

Dr. Nation noted that he participated in some of the discussions with APHA around this topic and he thinks that there are 2 issues. Many investigators of color are finding out about CDC's NOFOs, so the information is getting out. However, the barriers they have been discussing are real. When one is trying to decide between the responsibilities that are immediate within the institution and putting quite a lot of effort into an application that may seem like a longshot, it is understandable that many of these investigators choose not to apply. He tries to mentor and encourage those who show an interest to apply, but even that does not remove all of the structural barriers. He has noticed in his own network that there are formal and informal networks for scholars of color, and he tries to identify people who are part of the informal networks. He and many of his colleagues send NOFOs to their colleagues who they are aware of or are mentoring.

Dr. Pacula noted that she spent 21 years at the RAND Corporation in an environment that responded more quickly to the CDC NOFOs because they were set up to do rapid research in terms of the time of the research, not just developing and submitting the proposal. Academic environments are not always as well-prepared to respond to those types of NOFOs. Perhaps NCIPC could do some specific targeting of the more traditional academic types of awards (R01, R03, U01) to university grantee offices instead of every CDC NOFO so that the ones that the grantee offices receive resonate. In addition, they might consider reaching out to a broader range of organizations that are not necessarily specific to public health but have big tracks in public health. She does not often encourage her junior researchers to go to APHA because it is so large and varied. They have limited travel funds, so it can be more effective for them to connect with a network in some of the smaller conferences or even AcademyHealth that has very specific pre-conference mentoring opportunities. She is constantly surprised by the number of colleagues who tell her they did not realize CDC funds research.

Dr. Lumba-Brown said she is aware of the webinars NIH hosts and wondered if CDC hosts similar webinars for NOFOs and topics of interest. This would be an area to consider to broaden the reach, inform potential applicants, and increase the diversity of applicants. Webinars allow for anyone to join from anywhere essentially, without traveling.

Dr. Garcia-Williams responded that they tend to hold pre-application calls and do necessarily have similar content available like the broader "how to" webinars that NIH has.

Dr. Rowhani-Rahbar commented that it also has been his experience that investigators, including ECIs, are aware of CDC NOFOs but there are barriers to applying.

CAPT Jones expressed appreciation for all of the helpful feedback on NCIPC's NOFOs. Of course, everyone can do better about promoting awareness. He agreed that consideration should be given to opportunities for the BSC members to promote opportunities and for CDC to provide opportunities to increase awareness, such as through webinars as Dr. Lumba-Brown suggested. Even when people are aware of NOFOs, there are still structural barriers that may discourage some people from applying and the number of applications for these NOFOs may not be very large. These are longer proposals than for other funders, which itself is a task and highlights the importance of having shorter proposals. Another reason some people may not apply is that they consider a NOFO to be a one-time opportunity. In terms of the discussion earlier about perhaps having more awards, that would provide a positive notion as opposed to just funding 2 or 3 applications. He recalled that a few years ago when CDC announced the firearm-related research, either 16 or 19 applications were funded. While this varies each year, he just wanted to use this as an example of a situation that was very diverse. This really created a splash in the sense that many people in the nation were talking about it. Providing more awards may encourage people to apply, even if it is just for one time.

Dr. Garcia-Williams asked how BSC members hear about funding opportunities and the strategies that they use to share the NOFOs with their mentees and/or through formal or informal networks.

Dr. Lumba-Brown said she hears about NOFOs in a variety of ways. She thinks she is on a CDC listserv through which she hears directly from the CDC about announcements. Her university has a service in which they compile calls for funding from a wide variety of sources and emails that go out on a monthly basis. Specific to her area of interest, she actively searches for calls for funding on a regular basis. Colleagues also make her aware of relevant opportunities.

Dr. Pacula indicated that she hears about NOFOs similar to Dr. Lumba-Brown. They have a centralized university grant source. When she was at the RAND Corporation, they disseminated the information. A number of centers are funded either by NIH or foundations that provide information on their platforms. She finds that to be an effective tool that she tells her junior researchers about.

Dr. Shenoi emphasized the importance of having a good mentor who looks for opportunities on a regular basis.

Dr. Martinez echoed what others were saying about hearing about NOFOs through their local university research office, as well as through some of the associations to which they belong such as the America Society of Criminology (ASC) and the Division of People of Color and Crime (DPCC) that send emails out on a regular basis about funding opportunities and potential publishing opportunities. Some of the more specialized research associations are very useful, such as the American Sociological Association which has several divisions that would be interested in what the CDC is doing. They have a broader way of reaching populations that are harder to find through some of the mechanisms that are traditionally used.

Ms. Castillo noted that she is in the process of moving from her role as a NIOSH Division Director to become the Director of NIOSH's Office of Extramural Programs in July and that she found these to be valuable thoughts, ideas, and food for thought.

Dr. Nation thanked NCIPC for having this conversation. While the discussion was focused on how to attract more diverse applicants, there also is a parallel conversation about the review process and how applications from scholars of color are received. There was mention of institutional infrastructure and support, which is one of the criteria review panels consider. Even if an applicant gets to the point of submitting, they may be disadvantaged because they come from an institution that does not have that tradition and history. It is important for NCIPC to think all the way through the process about how to make it more open to those applying from MSIs.

Dr. Garcia-Williams added her gratitude for the great feedback, candor, and thoughtfulness.

Dr. Greenspan emphasized how helpful this rich discussion had been for NCIPC, which they will discuss moving forward with their work on NOFOs. Based on Dr. Shenoi's comments about the importance of mentorship and as Dr. Garcia-Williams mentioned, NCIPC is partnering with APHA to try to increase representation from MSIs and a more diverse group of researchers. One of the comments they received is that there are some institutions that are powerhouses for research and provide their researchers with information, while some of the smaller institutions may not have that same kind of infrastructure. Reaching researchers who may not have that infrastructure is important, so NCIPC is trying to find out about mentorship programs across the country that may be interested in mentoring young researchers who are not necessarily part of their institution. She invited anyone with information about specialized groups or mentorship programs to email them to her to assist the Injury Center as they try to make connections for collaborations. She agreed that the institution also plays a role in all of this. One of the potential opportunities they are looking into with APHA is the possibility of partnering institutions that are resource-intense with smaller institutions that do not have the same infrastructure. APHA has indicated that they have done this successfully in the past, so that is a goal for the Injury Center this year.

Updated & Expanded CDC Guidance for Identification & Response of Suicide Clusters

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Dr. Ballesteros provided some background on suicide clusters, described the process used for the development of the *Updated and Expanded CDC Guidance for the Identification and Response of Suicide Clusters*, briefly discussed the contents of papers they have developed, and provided an update on the next steps. NCIPC defines a suicide cluster as, "A group of suicides or suicide attempts that occur closer together in time and/or space than would normally be expected in a given community." In general, suicide clusters are rare and only a small proportion of overall deaths are by suicide. But when clusters occur, they are often highly publicized and can have considerable negative effects on communities, including prolonged grief and elevated fear and anxiety.

There are several methodological challenges to better understanding suicide cluster risks. These include selection bias in clusters that are reported, limited opportunities for comparison groups to show the differences in cluster- and non-cluster-related suicides, a relatively small number of deaths that occur in a diverse population, and the absence of standard definitions

and analytic approaches and time and space parameters. These challenges make it difficult to compare and combine reports and published papers on clusters. Because of these challenges, the causes of suicide clusters are not well-understood. Available reports on clusters tend to characterize only decedents and often are not designed to rigorously assess risk. Nevertheless, NCIPC's stance is that risk factors for clusters are similar to overall suicide risks (e.g., being male and being younger and having a history of substance use, self-harm, and poor mental health). Suicide clusters have been reported in diverse populations and settings, including psychiatric hospital patients, young adults, American Indian/Native American communities, prison inmates, and schools.

It has been suggested that suicide clusters, especially mass clusters that are spread out more geographically, may occur through a process called "contagion." Contagion occurs when the exposure to the suicide or suicide behavior of one or more persons influences others who attempt suicide. This exposure can be direct by having a personal connection to the individual who dies by suicide or indirect through media reporting or social posts about an individual who is not a personal connection. Media influence can be both a risk and protective factor, depending on its duration, prominence of source, content and messaging, and the extent of coverage. Some have suggested that media-reported suicide may unintentionally result in increases in suicide, particularly in reporting that mentions suicide method and headlines impacts or includes a statement that suicide is inevitable. This may occur due to copycat behavior. Conversely, it also has been proposed that responsible media reporting of suicides can be a protective factor and make a positive contribution to prevention efforts by educating the public about coping strategies and treatment. This is called the Papageno Effect, which is named after a main character in the opera "The Magic Flute" who loses his love and in response makes plans for suicide but before he can act on it, 3 characters show him other ways to solve his problem.

Recommended best practices for reporting on suicide include reporting suicide as a public health problem, including resources such as hotline information and treatment options, using appropriate language, emphasizing health and hope, and mentioning the 988 Suicide & Crisis Lifeline. To address this public health problem, CDC published "CDC Recommendations for a Community Plan for the Prevention and Containment of Suicide Clusters." This report[2] was developed to assist community leaders developing a community response plan for suicide clusters and for situations that might develop into clusters. This report was published in 1988 when "CDC" only stood for "Centers for Disease Control" without "and Prevention" in the agency's name.

While most of the information in this publication is still largely relevant, numerous new papers and reports have been published on suicide clusters events and investigations and more is known about cluster risk factor identification and response. Therefore, Injury Center leadership thought that as its suicide prevention activities continue to grow, this document should be updated to have a more recent resource to help communities. To perform this update, staff from DIP began gathering information that included a literature review, an environmental scan, a media review, and input from subject matter experts (SMEs) in the field. The team conducted a literature review of suicide cluster research to review the latest science on suicide cluster identification and reporting, risk and protective factors, opportunities to utilize social media as a tool for prevention and response, and best practices and challenges for responding to suspected clusters. The literature was searched from PubMed, GoogleScholar, ProQuest, and JSTOR. References also were included from the NCIPC's cluster website, and articles

[2] O'Carroll, P. W., Mercy, J. A., & Steward, J. A. (1988). Morbidity and Mortality Weekly Report: Supplement, 37(S6), 1-12

suggested by SMEs. This process resulted in the identification of 166 articles as follows, with some articles addressing more than one of these topics:

- ❑ Identification of clusters (N=33)
- ❑ Risk and protective factors (N=67)
- ❑ Social Media (N=33)
- ❑ Response (N=71)

The environmental scan included a review of 8 internal Epidemiologic Assistance (Epi-Aid) reports from 2004-2018. These reports documented CDC support to local health jurisdictions to assess and investigate suspected suicide clusters in various states and communities. Media reports were reviewed from 2017-2022 to gather additional contextual information from recent clusters. Media reports were identified through a Google News search using the terms “suicide”, “clusters”, and “United States”. A total of 166 relevant news articles were identified about clusters at the city, county, and university levels. Qualitative input was collected through outreach to researchers and public health practitioners with suicide experience. To do this, they joined standing meetings with grantees of NCIPC-funded programs, including Emergency Department Surveillance of Nonfatal Suicide-Related Outcomes (ED-SNSRO), Comprehensive Suicide Prevention (CSP), and Injury Control Research Centers (ICRCs). Additionally, staff spoke with CDC’s Center of Surveillance, Epidemiology, and Laboratory Services (CSELS) that runs the National Syndromic Surveillance Program (NSSP) to hear how syndromic surveillance systems can be utilized for cluster detection and responses by community. They also reached out to health departments that had requested Epi-Aids to better understand key lessons from these investigations. Additionally, the team conducted a topical focus group and had individual discussions with SMEs on social media and suicide to discuss its role in clustering. The discussions included topics such as involvement with suicide cluster identification, specifically understanding the initial alert, and how syndromic surveillance data were used or not used. SMEs also were asked about challenges investigating or researching clusters; experiences with community responses, including use of partnerships and other lessons learned; and opportunities and issues with regard to the use of social media and the internet for cluster identification, prevention, and response. These discussions did not seek consensus on guidance. Instead, the aim was to gather feedback to inform the development of the new resource.

After there were good drafts of the papers, they were sent to several external SMEs for high-level feedback. As the team started to plan and gather information, they talked about how to release the final product. Options were considered, such as a self-published NCIPC report online on the website or articles in peer-reviewed public health journals. Ultimately, the decision was made to release the final product as an *MMWR Supplement*—the same platform as used for the 1988 document. Two key[3] references from the *MMWR* helped with critical thinking on critical content to include in the overall structure, the addition of assessing and investigating suicide clusters; and updated guidance on responding by community. Ultimately, the *MMWR Supplement* will contain 3 papers: 1) Background and Rationale: Suicide Clusters and CDC Guidance on Investigating and Responding; 2) Assessment and Investigation of Suspected Suicide Clusters; and 3) Community Response to a Suicide Cluster. The background and rationale paper will be an introduction to the supplement and will include an overview of suicide clusters, high-level information about the papers in the supplement, and the process used for

[3] Centers for Disease Control. (1990). *Guidelines for investigating clusters of health events. MMWR Recomm Rep*, 39, 1-23; and Abrams B, et al. (2013). Investigating suspected cancer clusters and responding to community concerns: guidelines from CDC and the Council of State and Territorial Epidemiologists. MMWR: Recomm Rep, 62(8), 1-24

development. The second paper focuses on assessing and investigating suspected suicide clusters. It is structured on being notified of a suspected cluster, assessing the notification in 2 steps (i.e., preliminary and formal), and investigating the cluster.

In terms of the proposed steps outlined in the second paper, the initial notification of a suspected notification can come from a variety of sources. External sources can include local community partners, schools, hospitals, Medical Examiner (ME) or Coroner's offices, news media, and suicide prevention practitioners. Internal sources may include normal health department surveillance activities, or other public health tracking and monitoring systems specific to suicide, suicide attempts, or other suicide-related outcomes. Typically, the state or local health department will receive these notifications. A specific Suicide Cluster Liaison should be assigned in this initial phase to serve as a point-of-contact between the individual providing the notification and the lead agency. Additionally, the community should have a Suicide Cluster Coordinating Committee that includes representatives from state and local agencies and critical community partners and stakeholders. Many states already have a Governor's Suicide Prevention Commission, Suicide Prevention Office, and/or a Suicide Prevention Coordinator. Therefore, it is not always necessary to create new roles and committees.

Upon receiving a notification of a suspected cluster. A lead agency should answer the question, "Do we need to look into this more?" This involves beginning to understand if this is a true cluster. Initial information about the suspected cluster will be needed. At this point, collecting the information does not have to be done with a rigorous or systematic approach. It can simply come from the initial person or group providing the initial notification. The information to collect would include the source of information for this notification, the suspected number of cases, the perceived time period and geographic scope, and other initial information that may be concerning such as known relationships among cases and common precipitating circumstances or events. The Coordinating Committee should review the information to decide if a more extensive formal assessment is needed. This can be decided by asking whether this is a true increase in cases and a true cluster rather than just an unexpected increase in cases. Is there evidence that the cases may be connected in either time, manner, space, specific risk factors, and/or common demographic factors?

A formal assessment would answer whether this is a true increase in cases and a true cluster. This differs from the preliminary assessment by being more systematic and deliberate in its steps. A formal assessment ultimately is about rigorously counting cases. Note that at this point or at any other time, the lead agency can always contact CDC or DIP to request assistance. This could be an Epi-Aid, which would be a partnership between the health department and NCIPC that involves Epidemic Intelligence Service (EIS) Officers or Epidemiology Training Fellows. CDC also could provide ongoing remote technical assistance to discuss ideas and plans. Or CDC support could simply involve a one-time call or exchange of emails to share resources and point the lead agency in the right direction.

Regardless, the formal assessment should begin with establishing a case definition and time frame and identifying data sources, which could include death certificates, the state Violent Death Reporting System (VDRS), Coroner/ME reports, ED/syndromic/hospitalization data, and state and local crises lifeline data (e.g., 988). Analytic methods may be used to test if the increase is real, which is often challenging to do if the number of cases is small. However, there are analytic methods that take into account small numbers depending upon the spatiotemporal nature of the data. The report briefly outlines several statistical methods and provides references for additional information. Based on this testing and discussion about the situation, ultimately the Coordinating Center should decide if a more extensive investigation is needed.

The purpose of a suicide cluster investigation is to understand potential commonalities or precipitating circumstance among the cases that can inform a community response. This starts with developing and implementing an investigation plan that includes establishing objectives and hypotheses, determining a study design, deciding on data sources that may include the same sources as before or potentially new sources, the need for data collection, a comparison group when feasible, critical variables such as demographics and risk factors at several levels (e.g., individual, relationship, community), and developing an analysis plan. This plan would be unique to the situation, resources, and capacity of the lead agency and what support the Coordinating Committee individuals and organizations can provide. The recommendations from the investigation should be outlined in a formal report that should be disseminated to stakeholders and serve as future documentation for the lead agency. Most importantly, the findings should be used to inform the community response plan.

The third paper in the *MMWR Supplement* regards the community response to a suicide cluster. This paper is essentially an update to the 1988 CDC recommendation document. Community responses are important to prevent additional suicides among those still at risk, minimize contagion, and address anxiety among community members. It is important to note that sometimes communities will start a response during the assessment and investigation steps and the community may want a response even if it is not a statistically significant cluster. That is okay, because the community needs to decide what is best for them. These papers are only supposed to provide guidance and suggestions to aid in their thinking and planning. This paper is divided into 3 sections: Preparation, Direct Response, and Action for Prevention.

In terms of preparation, pre-planning is always helpful and ideally the lead agency will have reviewed the *MMWR Supplement* before the onset of a suicide cluster and will have a standing community-specific response plan ready to go. Action steps for consideration as part of preparation including reviewing guidance and developing a standing community-specific response plan; engaging partners early on the Coordinating Committee; identifying relevant community resources; and determining when a response plan should be implemented. The goal of the direct response step is to support those still at risk and support others affected by the current cluster. Community actions for consideration include notifying and preparing the identified groups; identifying, screening, and referring those at high-risk; avoiding glorifying and minimize sensationalism; providing timely, accurate, and appropriate information to the media; and considering the relevance and impact of social media. Local media and social media can be used to call public attention to the availability of counselors and the Crisis Lifeline number at 988. Glorifying suicide decedents and sensationalism should be minimized, which can happen inadvertently if communities want to celebrate and honor the decedents. This needs to be done thoughtfully with a delicate balance between acknowledging the need for people to grieve without unintentionally increasing risk to vulnerable others.

The last component of the response paper includes suggestions to help communities prevent the next suicide cluster. Specifically, communities should consider changing elements in the environment. This could include addressing access to lethal means, intervening at suicide hotspots or locations where people are known to die by suicide, implementing policies in workplaces and schools that promote health-seeing, raising awareness of risk, and supporting those who need immediate care. Many of these strategies are outlined in CDC's *Suicide Prevention Resource for Action* document that was updated and released last year.[4] Communities also should consider ways to address long-term issues. The cluster investigation may have identified community issues related to relationships, finance, substance use, or

[4] https://www.cdc.gov/suicide/resources/prevention.html

stigma surrounding suicide that potentially could be addressed. Lastly, the guidance suggests conducting an evaluation of the response to identify best practices to support future responses in this community and broadly elsewhere.

Moving forward, DIP recently received feedback on its papers from external SMEs that has been incorporated. The papers will be submitted for CDC clearance in the next couple of weeks or so, with a goal of submitting them to the *MMWR* by summer for publication a few months later in the fall. To begin the BSC conversation, Dr. Ballesteros posed the following discussion questions for the BSC's consideration and input:

- ❑ How should we best engage with partners and disseminate this supplement?
- ❑ What materials related to this supplement would be useful to develop for communities?
- ❑ What other resources beyond this supplement might be needed by communities and what specific populations should be targeted?
- ❑ Is there feedback or experiences on the use of social media as a tool for suicide or other topic areas?

Discussion Points

Dr. Caine said he was very pleased to see this guidance and as someone who has been involved in the field for a few years, it is clear that this type of material needs to be updated. Historically, there has been a big gap in many ways between CDC and its efforts in many states and communities despite all of the efforts of the agency to reach out. One might view this as an opportunity for CDC to engage in community-based participatory dissemination in which they identify a series of communities, depending upon how each state is organized. This effort is national in scope, but local in action in that these are local clusters. The Injury Center obviously needs to talk to the designate state suicide prevention representatives and the departments of public health, but it also is going to be critical to figure out through them how to get down to the ground as it were. That is not an easy task because it is not a clear path in many states. A tremendous investment has been made in developing these materials, and a similar kind of investment may need to be made to disseminate them. The Injury Center should be asking the local communities what will be useful, what resources will be needed beyond the supplement, and about developing an ongoing partnership with CDC, NCIPC, and DIP relative to these tasks. If one thinks about the clusters as the wedge issue that can be leveraged to develop the plan with communities, the much larger problems are the one-by-one suicides.

Dr. Ballesteros said that as they were developing this, their usual thought was that the audience would be the groups with whom NCIPC interacts for suicide clusters (e.g., state and local health departments). But this is a good point about getting more granular and they need to talk about how to make that happen. Perhaps that is a conversation they can have with their health department partners to help figure that out.

Dr. Caine added that his experience with states is that a lot is done at the county level or the metropolitan level. While there are supposed to be robust relationships, it does not always work out that way. Moreover, in some states it is not clear who the champions are for suicide prevention. He lives in New York State (NYS) where it is the Office of Mental Health rather than the Department of Health. There is overlap with data and all of the injury data are collected through the Department of Health, and there certainly is some integration with the Office of Mental Health, but also some separation. This is just one example of the types of local idiosyncrasies. There are 62 counties in NYS state, while New York City (NYC) operates almost

as a whole separate universe and the other 57 counties often are variable in how they implement such programs.

Dr. Nation said one of the places that might be worth considering is college counseling centers. Their directors tend to have a tight network and often are concerned about this issue. This could be a way to get the guidelines out to people who are on the frontlines of one of the spaces that may be relatively high-risk for clustering. Especially during the pandemic and now post-pandemic, a lot of universities have had increased discussion about mental health and support for college students. Most universities probably have dealt with suicides over the course of the past couple of years. It seems like directors of college counseling centers would be a receptive group for this information and a good resource for how to think about early intervention and prevention.

Dr. Ballesteros indicated that they do not have direct experience working with universities, but many of the articles they found during the review in the news media were based in universities.

Dr. Johnston asked whether in the past the Injury Center has worked with organizations that exist specifically because of suicide, such as the National Action Alliance for Suicide Prevention (Action Alliance) and other advocacy organizations. These could be good places to distribute the guidelines and materials.

Dr. Stone, DIP, responded that they routinely connect and interact with the Action Alliance, which is the public-private partnership that is driving the *National Strategy for Suicide Prevention* (*National Strategy*). They will reach out to them as part of the dissemination efforts.

Regarding the third discussion question about additional resources, **Dr. Shenoi** pointed out that the issue on the clinical side is going to be that as more people are identified who are at risk, there may not be sufficient capacity to assist them because community mental health resources are woefully inadequate.

Developing a Cascade of Care Framework and Surveillance Indicators to Measure Linkage and Retention to Care for Substance Use Disorder

LCDR Emily Ussery, PhD, MPH
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LCDR Ussery provided an overview of the process to develop a cascade of care framework and surveillance indicators to measure linkage and retention to care for substance use disorder (SUD). She provided a brief background on the need for improved surveillance of linkage to care (LTC), described the surveillance indicators development process, discussed the cascade of care for SUDs, explained the cascade of care framework that has been guiding this work, and explained the associated linkage to and retention in care surveillance indicators.

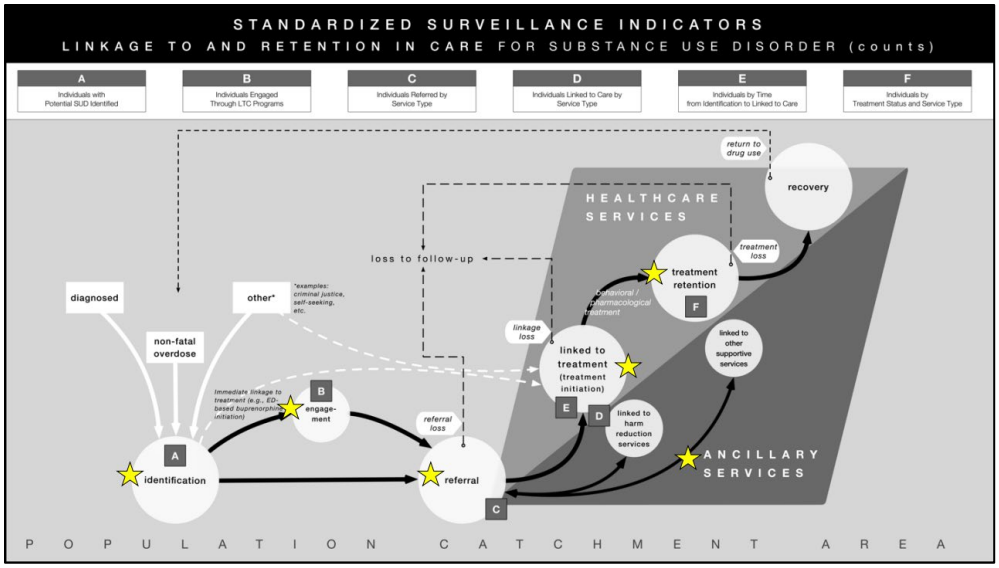
In terms of background, ensuring persons with SUDs are linked to evidence-based treatment is a key strategy for preventing drug overdoses. There are a range of settings or entry points where individuals with SUDs can be identified and connected to care and treatment. These include clinical settings (e.g., EDs, hospitals, outpatient clinics, primary care), criminal justice settings (e.g., jails, prisons, correctional facilities, drug courts), harm reduction programs, and

other community-based organizations (CBOs). Currently, there is limited availability of standardized surveillance data in the US to understand whether individuals with a SUD or who are at risk of overdose are being linked to and retained in treatment. Expanding these surveillance activities will complement prevention activities that are focused on LTC and also will support public health agencies' efforts to assess how well their LTC programs are working. Over the past year or so, CDC has been working toward the goal of developing resources and guidance to support health departments' efforts to: 1) improve and standardize their surveillance of linkage to and retention in care; and 2) fill a gap by collecting data to inform LTC prevention activities.

Through the Overdose Data-to-Action (OD2A) cooperative agreement, CDC currently provides funding to 66 state, local, and territorial health departments to implement overdose surveillance and prevention activities. As part of OD2A, recipients are required to implement at least one innovative surveillance project that aligns with several priority areas, one of which is LTC surveillance. Unlike the other 2 surveillance strategies OD2A, the innovative surveillance strategy does not require the use of standard indicators or protocols. Recipients were given flexibility to design their own projects and indicators as long as the findings could be used to support their prevention efforts. Jurisdictions also are required to develop and share at least one data product per year with CDC using data from their innovative surveillance projects. About 20 of the OD2A recipients proposed innovative surveillance projects with a LTC component under this strategy. During discussions with recipients about their projects, the DOP has learned a lot about the indicators that are most important to their recipients, data entry points of care where they have programs in place and are collecting data, and challenges that they have encountered with these projects. This information has been very valuable to inform the next phase of this work and to work toward more standardization in this area.

In terms of the process of developing surveillance indicators related to LTC, in Fall 2021, DOP began a contract with a team from Kahuina Consulting, LLC. The goals of that contract were to: 1) identify a feasible set of standardized surveillance indicators to monitor linkage to and retention in care; and 2) develop guidance for health departments to implement the indicators in the form of a toolkit. A team from CDC's DOP staff met frequently with the Kahuina project team. They also provided relevant background materials from OD2A recipients to inform this project, including information on the jurisdictions that were working on LTC surveillance projects under OD2A. Kahuina then conducted an extensive review of the published literature and government reports to identify existing cascades care and relevant LTC measures. They also reviewed data products and dashboards that were created by OD2A-funded jurisdictions that included relevant indicators, and they held discussions with several recipients who are actively working on LTC surveillance to learn more about their data collection priorities, and their successes and challenges in this area. Next, Kahuina combined these findings into an environmental scan and used the findings to define a cascade of care for SUD and identify a broad list of potential indicators. That broad list was then narrowed into a smaller more feasible set of indicators that aligned with recipient data collection priorities and a first draft of the toolkit was developed, which included more description about the indicators, as well as some descriptions of success stories.

To provide an overview of the cascade of care framework and the associated indicators, this graphic depicts cascade of care for SUD that the Kahuina team developed with input from CDC and OD2A recipients:



Broadly, this diagram shows the progression through the stages of care for individuals who have been diagnosed with a SUD or identified as having a need for treatment. The stages of the cascade begin with identification of the need for treatment on the left, which can occur in the various entry points to care mentioned earlier. This can include individuals who receive a clinical diagnosis of a SUD, who show signs and symptoms of a SUD, or are identified through other methods such as self-referral. The next stage is engagement with LTC programs or program staff, which could include peer navigators, peer recovery specialists, or post-overdose outreach programs. The next stage is referral to treatment and other ancillary support services, followed by successful linkage to treatment or treatment initiation. Next is retention in treatment and then ultimately, recovery. There was a desire for the model to focus not only on linkage to treatment, but also linkage to support services like harm reduction, which can play an important role in ultimately connecting individuals to care and reducing overdoses. At the top of the figure is the list of indicators that correspond to the different stages of the cascade, which correspond to this table of indicators:

Linkage to and Retention in Care Surveillance Indicators

	A. Individuals with Potential Substance Use Disorder (SUD) Identified, by Entry Point	B. Individuals Engaged through Linkage to Care (LTC) Programs	C. Individuals Referred, by Service Type	D. Individuals Linked to Care, by Service Type	E. Time from Identification to Linked to Care, by Service Type*	F. Individuals by Treatment Status and Service Type*
Description	The number of persons with potential SUD identified at each entry point to care.	Among those identified, the number of persons who engage with LTC program staff.	Among those identified, the number of persons who are referred to MOUD, behavioral treatment, and harm reduction services.	Among those identified, the number of persons who initiate MOUD, behavioral treatment, and harm reduction services.	Among those who initiated treatment, the number of persons linked categorized by the number of days since identification.	Among those who initiated treatment, the number who are retained, completed, lost to follow-up, incarcerated, or deceased 6 months after initiation.
Example Measure	Number of persons treated for a nonfatal overdose in the emergency department.	$\frac{\#\ Engaged}{\#\ Identified}$ Percent of persons treated for a nonfatal overdose who are engaged by LTC program navigators/ linkage coordinators.	$\frac{\#\ Referred}{\#\ Identified}$ Percent of persons treated for a nonfatal overdose who are referred to MOUD.	$\frac{\#\ Linked}{\#\ Identified}$ Percent of persons treated for a nonfatal overdose who initiate MOUD.	$\frac{\#\ Linked\ by\ Time\ Category}{\#\ Linked}$ Percent of persons who initiated MOUD within 14 days, 14-60 days, or >60 days following a nonfatal overdose.	$\frac{\#\ Linked\ by\ Treatment\ Status}{\#\ Linked}$ Percent of persons who initiated MOUD who are retained 6 months after linked to care.

* Service type is restricted to MOUD and behavioral treatment for this indicator

The first indicator (A) is the count of individuals with a SUD identified at various entry points to care and treatment. Entry points include individuals treated for nonfatal overdose in an ED or by EMS; those diagnosed with or treated for a substance use-related condition, populations involved with the criminal justice system, harm reduction programs, and other community-based programs. It also can include self-referrals. This first indicator can be used to define various cohorts in need of treatment and it is meant to serve as the denominator for later calculated measures. The next indicator (B) captures the number of individuals who are engaged by LTC program staff, such as peer navigators, peer recovery specialists, or linkage coordinators. Next (C) is the number of individuals referred to evidence-based treatment or support services, which is stratified by the type of service to which individuals are referred. The service type includes medications for opioid use disorder (MOUD), behavioral treatment (e.g., cognitive behavioral therapy, motivational interviewing (MI), contingency management, other counseling support), and/or harm reduction services, such as syringe service programs (SSPs), overdose education and naloxone distribution. The model and indicators are designed to be flexible to jurisdictions' data collection needs. Jurisdictions may be interested in collecting referrals to other types of services beyond these 3, but these are the 3 priority services.

Next (D) is the number of individuals who are successfully linked to care or who initiate treatment, also stratified by service type. The next indicator (E) captures the time between identification and treatment initiation, categorized as the number of days since identification. There are 3 categories included in this indicator, including initiating treatment 14 days, 14-60 days, or >60 days following a nonfatal overdose. Using the non-fatal overdose entry point as an example and MOUD as the service type, this measure would allow jurisdictions to calculate the percent of persons who initiated MOUD within 14 days following a non-fatal overdose. The last indicator (F) captures treatment status at 6 months following initiation. This also is a categorical variable with treatment status options, including retained, completed, lost to follow-up, incarcerated, or deceased. The indicator table will include suggested characteristics that each of the indicators could be stratified by, pending availability of these data which are not always available. These include sociodemographic characteristics (e.g., Race/ethnicity, Sex, Age, Homelessness, Sexual Orientation, Gender Identification) and substance type (e.g., Opioids, Stimulants).

In terms of some of the challenges with this work and considerations for implementing the indicators, there are varying levels of capacity within local and state health departments to collect data to measure each of these proposed measures. Indicator measurement relies on data from multiple sources that can be housed within different agencies or organizations. Availability of and a health department's ability to access these data sources also varies across jurisdictions. Linking data on identification (e.g., nonfatal overdose, SUD diagnosis) with the first indicator of treatment received is difficult for many health departments. One of the important barriers that has been observed in work with current recipients is that due to federal and state regulations such as 42 CFR Part 2 and state regulations that play an important role in protecting confidentiality, but they also limit access to treatment data for surveillance purposes. Movement through the stages of the cascade is not always linear. The framework makes it look like a linear process, but is not necessarily that way in practice. Individuals can be identified through multiple entry points to care or they may enter the cascade at different points. They also may be lost to follow-up and re-engage at later time points, so defining aggregate indicators that are able to capture this non-linear movement has been challenging.

Moving to planned next steps, the DOP recently renewed its contract with the Kahuina team and is working with them to plan an interactive series of workshops with a few of the current OD2A recipients. DOP will use that input along with any input they receive from the BSC to continue to refine indicators and finalize the toolkit. DOP also is working on a commentary for publication that will describe the indicator development process. CDC recently released a new NOFO called Overdose Data-to-Action: Limiting Overdose through Collaborative Actions in Localities (OD2A: LOCAL). Through this cooperative agreement, the hope is to fund up to 20 local health departments to establish a surveillance system to collect data on the indicators. This NOFO was announced on 3/7/2023. It will be a 5-year cooperative agreement that begins in September 2023. City, county, and territorial health departments are eligible to apply for this NOFO. Funding will be provided for prevention and surveillance activities. One of the surveillance components is Component C: Linkage to and Retention in Care Surveillance.

Component C will include 4 requirements for recipients, which are to: 1) by September 2024, begin collecting data to measure standardized linkage to and retention in care surveillance indicators; 2) beginning in December 2024, submit aggregate data to CDC every 6 months; 3) analyze and disseminate linkage to and retention in care surveillance data to inform prevention efforts; and 4) designate at least one representative to participate in CDC workgroup meetings. The requirements are more specifically described as follows.

For the first requirement to collect standardized indicators, recipients will have a 12-month planning period before data collection begins. They also will be required to focus data collection on populations identified via at least 2 priority entry points to care (e.g., treated for a nonfatal overdose (REQUIRED), diagnosed with or treated for a substance-use related condition in a clinical setting, criminal-justice involved, harm reduction programs, other community-based programs, self-referrals). All recipients will collect data on persons treated for a nonfatal overdose and they can choose a second entry point upon which to focus their collection. The standardized indicators will assess stages across a cascade of care for SUD, which include:

1. Persons identified as at-risk via priority entry points
2. Persons engaged with linkage to care program staff
3. Persons referred to evidence-based treatment (e.g., MOUD, behavioral health treatment) and other support services (e.g., harm reduction services)
4. Persons linked to care/initiated treatment
5. Treatment status 6 months after initiation (MOUD and behavioral health treatment only)

Indicators may be stratified by key characteristics, such as substance type, age, sex, race, ethnicity, and county of residence and recipients will be encouraged to collect individual-level data that can be linked across indicators.

For the second requirement to submit aggregate data to CDC, the first required data submission will be in December 2024. Recipients will be required to submit aggregate data to CDC every 6 months thereafter. CDC will provide recipients with detailed data submission guidance, a data submission timeline, and templates that must be used to submit data. CDC will work closely with recipients to ensure any publicly reported data meets minimum data quality standards.

For the third requirement to disseminate data to partners, recipients will be required to disseminate data products using linkage to and retention in care surveillance data to key local partners and/or the public. At least one data product per year will be required beginning in Year

2. This may include web pages, reports, presentations, or peer-reviewed manuscripts. Recipients will submit an annual bibliography of relevant data products to CDC.

For the fourth requirement, recipients will participate in regular workgroup meetings with CDC staff. Recipients will designate at least one representative to participate in required CDC workgroup meetings, which will be held on at least a quarterly basis. This will provide a venue for recipients and CDC support staff to discuss issues related to data collection and data dissemination, identify additional indicators for reporting in later years, and collaborate on updating guidance and data submission requirements.

In closing, LCDR Ussery posed the following questions for the BSC's consideration and discussion:

- ❑ Do you have any feedback on the proposed indicators?
- ❑ Do you have advice on how we might develop or adapt guidance to accommodate varying levels of surveillance capacity within health departments, and ultimately support their data collection?
- ❑ Do you have suggested areas of focus for the interactive workshops with state and local health departments? (e.g., scenarios or entry points, specific indicators, implementation considerations).
- ❑ Do you have suggestions for stratifying indicators by substance type?
  - Opioid use disorder (OUD)
  - Stimulant use disorder (StUD)
  - Co-occurring OUD and StUD

Discussion Points

Dr. Johnston asked how the revolving door situation will be resolved with clients who come in and out of care and the likelihood of duplicating counts.

LCDR Ussery responded that this will depend upon the capacity with health departments. Some health departments are able to de-duplicate their data and look at individual-level data. That is a challenge in terms of defining aggregate counts, given that individuals might enter the cascade at different time periods. This is a challenge and any suggestions or recommendations on how that might be addressed would be helpful.

Dr. Baldwin underscored that part of the necessity of this is that in an illicit landscape rife with fentanyl, it is critical to have an awareness of the linkage and retention that is occurring to document progress.

Dr. Shenoi requested additional information about why the 6-month outcome was selected for retention. He recently read a study about only 22% being retained at 180 days.

LCDR Ussery there were many discussions about how to define retention in care. Treatment can be a lifelong journey and some people may be on MOUD for an extended period of time. For the purposes of data collection and having some indicator or retention, they used the National Quality Forum (NQF) measure for identifying the 6-month outcome, so that is what they are using to define retention. Some of the recipients are using that in their own work as they are analyzing their Prescription Drug Monitoring Program (PDMP) data using the 180-day measure.

Dr. Nation asked whether there will be any effort to perform a policy scan around the collection of these data. Many of the grantees likely will be operating in different political and policy contexts, which may also affect the results even if they are doing the same thing. Documentation of that context might be important.

LCDR Ussery agreed that this would be helpful. There are federal regulations and varying regulations at the state-level that have a bearing on the types of treatment data in particular health departments have access to.

Dr. Caine asked whether this type of system will lend itself to a more frontline service management tool, such that local agencies could do themselves and then feed upward, or if this only would be at the larger public health level.

LCDR Ussery responded that the primary audience for this NOFO and the work that DOP is doing is health departments to collect these data. That relies on strong partnerships with partners in different settings. It could be treatment providers, harm reduction programs if they are collecting data in that setting, and a variety of other partners to coordinate the data collection.

As an analogy, **Dr. Caine** noted that running a grocery store in the modern world requires tremendous control of inventory management, inflow and outflow, what sells and what does not sell, et cetera. There are software systems that are built in order to do that. He asked whether CDC is envisioning that the states are going to be devolving down to local providers and others information management systems so the providers can look at what is happening in near real-time with who enters and falls out of care. Real-time technology is available and has been used for decades. He asked if that is something CDC is moving toward, or they are just leaving it to the states to figure out. They might wind up with 50 or 100 variations of how this gets played out.

LCDR Ussery responded that some states and local health departments are using something similar to what Dr. Caine mentioned, especially for their treatment providers so that they are all reporting into the same software tool. The health department is able to see those data and understand where referrals are occurring, capacity, treatment, et cetera in different settings and to standardize some of that information across treatment providers. At the outset of this project, CDC will not be making the use of a specific IT system a requirement. It will be the data that are available in different states. In working with the recipients, they are hoping to be able to support that if additional resources become available.

Dr. Baldwin said it will be interesting to see what comes in through the OD2A: LOCAL competitive supplement. That will showcase local variability.

Dr. Johnston observed that most local health departments do not have the capacity for this type of surveillance and data collection. If this type of activity was directed at the state-level, the states would be able to develop systems where there is an IT infrastructure for doing that kind of data collection. She thinks it is a lot to ask of local health departments to pull together surveillance capacity without state support. She is from NYS where they had a Medicaid re-design and provider organizations built the platform where there was access to a records systems that Regional Health Information Organizations (RHIOs) put in that were central repositories of data that they could pull from the RHIOs. There also was capacity for CBOs to have input into the electronic record, so there was 2-way communication between providers. It seemed to her that without a system like that, it will be very difficult to the question about how to develop or adapt guidance to accommodate varying levels of surveillance capacity within health departments, and ultimately support their data collection. Her suggestion would be not to put this at the local health department level, but instead to incentivize states to create data collection systems that provide the platform for local health departments to be able to do this kind of work. It often is the areas that are most affected that do not have the resources and capacity to respond.

Dr. Baldwin noted that OD2A: LOCAL is open to all local health departments. There is going to be some prioritization associated with jurisdictions that have a high burden, so it is likely that at least a good number of the funded jurisdictions will fall under the mid- to large-size health departments. Having spent the previous day at an overdose response strategy meeting, part of which focused on overdose fatality reviews, making the connection between the data they are going to get from OD2A: LOCAL at an aggregate level and what typically comes out from overdose fatality reviews and the centrality of failure of linage and retention in care that ultimately leads to a negative outcome for a decedent—there is a connection between what they are trying to do at the aggregate population-level and on an individual-level. Even smaller counties are standing up overdose fatality reviews.

Dr. Rowhani-Rahbar pointed out that because CDC already has a wealth of experience for collecting data or being involved in surveillance at the state-level for other outcomes, disease, injuries, et cetera having some direct conversations with states based on lessons learned might be helpful. State-level colleagues work very closely with the local-level to collect data for surveillance. Perhaps there can be some synergies on lessons learned for developing guidelines and supporting data collection at various levels based on other activities at CDC.

LCDR Ussery pointed out that for the current OD2A, they are funding local and state health departments. Some recipients are working on LTC surveillance. There have been successes at the local- and state-levels. Local health departments seem to be more closely connected with the programs on the ground that are connecting people to care, so they are able to get more granular data from the program-level. The guidance, especially in the form of the toolkit, will be used by local and state health departments. For the OD2A: LOCAL, the decision was made to focus on local health departments primarily because of having better access to program-level data and the ability to use the data to implement to the programs on the ground. This is a competitive piece of the upcoming NOFO, so they will fund a subset of recipients to do this. They anticipate that that will include some of the higher capacity local health departments. She appreciated the comments that this might not be implementable in all health departments.

Dr. Garnett observed that the question regarding guidance would benefit from input from the state and local health departments themselves. In future iterations of the BSC, it might benefit them to have a member or 2 from that group as a BSC member.

Dr. Johnston indicated that she has worked in the local health department for more than 20 years and with the state. What has worked successfully is having funded programs at the state level with the state having the ability to identify counties that have the capacity to work together with them to develop these types of programs, and then they are able to roll it out to the rest of the state. That has been a successful model during her tenure, so that might be something to consider.

Dr. Baldwin indicated that NCIPC has worked with the National Association of County and City Health Officials (NACCHO), Big Cities, the Association of State and Territorial Health Officials (ASTHO), and the Council of State and Territorial Epidemiologists (CSTE) as they were beginning to think about this work, how to stand it up, et cetera and have been very intentional at a macro level of trying to bridge in associations that represent those constituents and stakeholders. They have seen the value of that time and again.

In terms of the question regarding the interactive workshops, **Dr. Johnston** noted that there is some work that has been done on the strength of partnerships and how to grow partnerships. The NOFO has an expectation that people grow their partnerships, but there may be only so many organizations within an area that use that kind of work. CDC needs to be clear about what they are seeking in terms of how they want partners to work together.

LCDR Ussery emphasized that data sharing partnership are especially important and a lot of the data will be coming from different organizations, so a topic they can include would be how to grow those partnerships.

Dr. Nation agreed that the model that Dr. Johnston described is ideal to him in terms of having the state serve as the essential resource for helping local jurisdictions be able to collect the data that they need. At the same time, he and many of his colleagues are in states where the state department of health is perhaps unwilling to engage in some of this type of surveillance while also being a place of critical need. He would hate to completely lose the ability to understand what is happening and perhaps intervene in those particular situations. He highlighted the importance of finding a way to balance those two things.

Regarding scenarios and entry points and as an Emergency Medicine Physician, **Dr. Lumba-Brown** suggested that perhaps an area of data capture and a group to include in the workshops would be pre-hospital care providers across the country. Increasingly, pre-hospital care organizations are developing their electronic health record systems and capturing robust data that allows for research and might contribute to further information in an effort such as this.

Dr. Johnston suggested asking the funded groups themselves what they need, given that they are the ones who are going to be doing the work. They should be able to identify the areas where they need help.

Moving Science and Data to Violence Prevention Action

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Dr. Simon pointed out that he and Dr. Ottley are long-term colleagues in the Division of Violence Prevention (DVP) who are both in new roles. Dr. Ottley is the new Associate Director for Programs and he is the new Senior Director for Scientific Programs. In this role, he facilitates and supports scientific work across DVP and Dr. Ottley is doing the same for programmatic activities across violence topics. He and Dr. Ottley are committed to working closely together to ensure that DVP's science, data, and programmatic activities are coordinated and have maximum benefits. During this session, they provided an update about a project the DVP is conducting to develop a Science- and Data-to-Action (SD2A) to guide how DVP does its work.

The DVP has 4 very active branches dedicated to surveillance, research, programs, and field epidemiology. They are continually expanding their work in each of these areas and recognized the need to develop a framework that helps ensure that they are fully promoting connections between science, data, and action in violence prevention. The framework is very much a work in progress. During this session, Drs. Simon and Ottley explained the purpose of DVP's SD2A framework, reviewed the framework development approach, presented findings from the gap and opportunity analysis, and shared current SD2A examples. The purpose of the SD2A Framework is to: 1) enhance cohesion between DVP's research, surveillance, and programmatic pursuits; 2) ensure the relevance, quality, and timeliness of DVP's scientific products to inform programmatic strategies; and 3) expand how DVP's program and policy efforts are informing research and surveillance strategies.

In terms of the timeline for the SD2A Framework development process, the goal is to finish the entire process relatively quickly in 6 months. They began working with an external contractor in January 2023 and anticipate rolling out the framework in June 2023. A gap and opportunity analyses already has been completed. Now they are focused on staff engagement and framework development. The first step was an analysis of gaps and opportunities. They conducted 3 activities with their contractor as part of this assessment. The first activity was a literature review of external publications on data-to-action frameworks and models to assess current theories and practices. The second activity was a review of relevant internal documents, including NOFOs and existing prevention resources and tools. The third activity was qualitative interviews that the contractor conducted with DVP staff to collect their initial perspectives on current SD2A efforts and opportunities for the future.

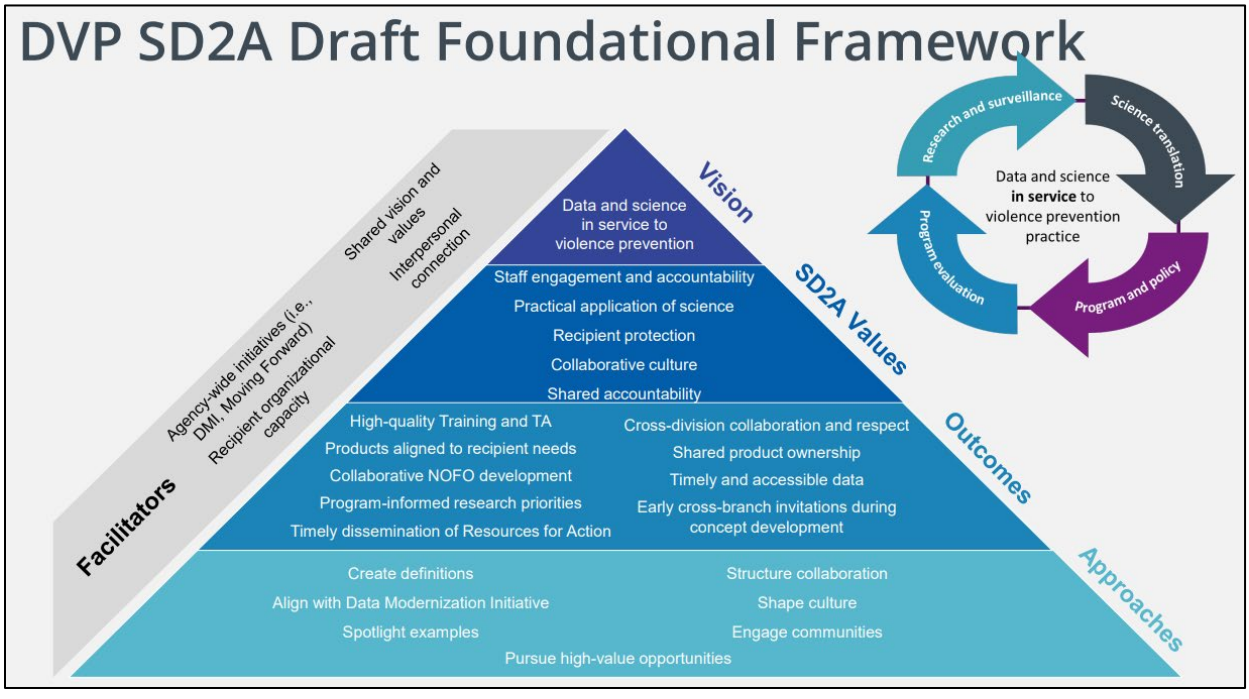
Quite a few themes came out of this analysis. In terms of key takeaways, there is a significant focus on the importance of early collaboration when input is truly welcome versus waiting until products are ready for release. DVP also sees the importance of a shared value that its research and surveillance activities are completed in service to prevention, and that this is the catalyst to all of the divisions SD2A Framework activities. There also is a reflection on how DVP can leverage and enhance its organizational culture to encourage shared accountability

between science and program. There also is an emphasis on engaging grantees, including programmatic grantees, to inform DVP's science and data activities.

The contractor developed a report summarizing the results from the gap analysis and now DVP is conducting a range of activities to broaden staff engagement and develop a framework. For example, a deep dive is being conducted with staff who are involved in writing a recent NOFO that was a collaboration between DVP's surveillance and program branches. This NOFO was just released, so it is a great opportunity for DVP to reflect on what worked well in terms of the collaboration, what was more challenging that it needed to be, and how they will collaborate going forward. The next step in the process is a retreat with staff representing each branch at multiple levels. The retreat will be an opportunity to reflect on the summary report and the current state of SD2A activities to create a vision for the future that they want to work toward together. The retreat will result in the creation of a roadmap to achieve that vision. The roadmap will be combined with implementation tools and will be shared with additional staff for their input. This then will be developed into a working framework that supports the operationalization of DVP's SD2A work.

As they started to establish a framework, they discussed how data-to-action is often conceptualized in a linear way with data driving action. However, it is important to think of data-to-action as a loop that also ensures that DVP's programmatic work and lessons being learned are informing the division's activities and products. When people think of data, they tend to think of surveillance. They want to be very clear that they also are including etiologic and evaluation research. Therefore, they are intentionally referring to science and data-to-action in this framework.

Dr. Ottley shared a graphic to illustrate the high-level findings and key takeaways of the gap and opportunity analysis that Dr. Simon described:



This graphic serves as a starting point for the development of a Science- and Data-to-Action (SD2A) for DVP. The approach is that at the bottom of the pyramid are the ways they worked to develop this framework. The outcomes are what they expect to achieve. The values are the core principles to help guide this work. Together with the vision of data and science that are in service to prevention practice, these serve as inputs to help DVP develop the final framework concept. This is just the first step in establishing the feedback loop that prioritizes research, surveillance, and other forms of data to be in service of programs and action. Many of the approaches reflect some potential changes in DVP's internal processes and operations. Their hope is that this process will allow DVP's scientists to inform program implementation and evaluation, and also consider program findings that may inform their research questions and hypotheses. The evidence that is generated by these research questions can then directly inform the strategies and approaches of DVP's program recipients.

During the gap and opportunity analysis phase, staff were asked to envision a future state of SD2A and to brainstorm some potential improvements that would support that vision. DVP staff identified many approaches, many of which are internal, that would advance DVP's SD2A efforts. They began with creating definitions and protocols. DVP's staff suggested having a clear and concise definition of what constitutes "actionable data." They also suggested creating and sharing some protocols of when to share data, what type of data to share, and with whom. There are a lot of opportunities already to leverage agency-wide initiatives, such as CDC's Data DMI or DEBIA that could support the facilitation of SD2A work. Staff identified current agency culture support and landscape as a potential catalyst for SD2A. The staff mentioned that SD2A efforts are currently happening in the division, but they are not widely shared or even considered as SD2A in some instances. Therefore, DVP should do a better job of spotlighting some of these examples. Finally, staff recommended that the SD2A Framework should prioritize some high-value opportunities. To do this, staff suggested that together with leadership, they could identify some quick wins or priorities, build momentum, and provide strong high-impact examples. For example, DVP could modernize some of its surveillance data so that its funded program recipients can have access to more timely data.

Next, DVP focused on establishing a structure within which to do this work and shaping the culture in the division so that the work becomes more of a standard operating procedure (SOP) for staff in the division. In terms of collaboration, DVP staff identified a need to establish a space and expectations for how they can better foster cross-collaboration to advance SD2A work. The intent is to introduce some additional shared accountability across the branches as a first step of breaking down some of the organizational silos. With respect to culture, the staff recommended that DVP explore different ways to motivate and engage staff, with the hope that this will positively impact DVP's internal culture and then facilitate linkages between the branches. Staff thought that a key piece of that cultural shift may be to elevate some of DVP's program evaluation, qualitative, and administrative data to better understand violence prevention practice. The staff also suggested that DVP examine CBPR models to build recipient or grantee engagement with community members and then involve them in the data collection and standardization process, which can showcase a greater commitment to program improvement based on community findings. Many staff called for a greater internal emphasis on implementation science and highlighted existing resources that could support a model that updates DVP's internal process and improves the quality and relevance of the division's training and technical assistance (TTA) efforts. It is also important to engage DVP scientists in program improvement discussions to determine ways in which evidence and data may better server recipients and grantees.

The hope is that by implementing these approaches, DVP anticipates improving outcomes in 4 key areas. With respect to recipient impact, the expectation is that a renewed collaborative culture will resolve in more expert TA and translation efforts. By engaging recipients more and having a better understanding of their work on the ground, DVP's scientific products and resources will better reflect and address their needs, as well as those in the violence prevention field. In terms of culture, the division expects this collaborative framework to foster greater cross-division understanding, respect, and relationships that will shape the culture. They would like to think about this in terms of how to "grow the pie" for the entire division rather than just negotiating a larger slice for each group. DVP hopes to improve its data capabilities by having more timely data collection, analysis, information sharing, and decision-making to directly inform the efforts of its recipients and then generate additional evidence that also informs the field. This framework also will allow DVP to challenge organizational siloes and provide guidance for cross-branch collaboration. To do this, DVP's programmatic and scientific SMEs need to be involved early and often during the development of a new NOFO concept. The expectation is that DVP program staff will play a key role in developing research priorities and concepts and then conversely, research and surveillance staff will play a key role in developing and determining program implementation and evaluation concepts.

DVP recently published a new data-to-action NOFO that can serve as an important example through which the division can establish a clear path forward to advance its SD2A work. This NOFO combines 2 current NOFOs, the EfC and PACE D2A. The new NOFO will build off of the 2 current NOFOs by establishing clear guidance for conducting D2A activities, particularly with the expectation that funded recipients will enhance their surveillance capacity to be able to collect these surveillance data. It also will inform the ACEs primary prevention strategies and approaches. This new NOFO reflects a cross-divisional collaboration between the program and surveillance branches and sets the stage for putting into practice the SD2A Framework and feedback loop. This work serves as a great example of how DVP might be able to structure and scale-up other projects similar to this in the division.

Dr. Simon shared another example of a product that reflects the work of moving science to action is DVP prevention resources. To help communities make use of the best available evidence in violence prevention, DVP has created and released a series of preventions resources. These used to be called "technical packages," but they heard that this label can be off-putting to some people. Therefore, they changed the name to refer to them now as "prevention resources," which they feel is more accurate. DVP is currently updating and expanding what was the *Youth Violence Technical Package* to now address community violence more broadly in the *Community Violence Prevention Resource for Action*. Staff have been engaged throughout the division, including colleagues with both research and programmatic expertise and experience.

Some of the changes that are being made with this update is that communities are intentionally centered, including their youth, young people, and people with lived experience at the center of this document. That is critical for decision-makers in communities to make informed choices about what prevention opportunities are going to resonate the most, have the most impact, and be most likely to be sustained. Throughout the document, the social and structural inequities that drive risk for violence are emphasized, particularly racial inequities. New guidance is included about correcting harmful narratives and avoiding stigmatizing language. The major change is that the latest evidence was reviewed on examples that already were in the 2016 *Youth Violence Technical Package* to determine whether to update the summaries or evidence, what to keep, and what to drop.

Ultimately, 18 new examples were added and the emphasis was expanded on the potential to advance equity. Some of the new content focuses on opportunities to have immediate effects through street outreach programs and programs like the Chicago Public Schools Safe Passage program to provide safe routes to and from school. Others are focused more upstream like job training and summer employment programs, restorative justice programs in schools to reduce the school-to-prison pipeline, content on firearm storage practices (not in the last version), and policy approaches that enhance economic security like Earned Income Tax Credits (EITC). There is a complete draft that is nearly finished, which DVP anticipates sending out for partner review to folks who have community violence prevention expertise in the next month or so and releasing it later this year. DVP's hope is that by focusing internally on its working processes and how they coordinate within the division, they can have a significant impact externally.

In closing, Drs. Simon and Ottley posed the following questions for the BSC's consideration and discussion:

- ❑ What suggestions do you have for informing or supporting this work?
- ❑ What strategies have you used to ensure that program experience is informing research?
- ❑ Are there examples of SD2A activities that you have found to be particularly helpful?

Discussion Points

Dr. Rowhani-Rahbar applauded Dr. Simon and his entire team for the new prevention resources formerly known as "technical packages." The health community often refers to these and uses them for a variety of purposes (e.g., promoting awareness, teaching, research, and more). He found the new *Community Violence Prevention Resource for Action* to be very exciting. He expressed gratitude to DVP for doing this, which he thinks will go a long way.

Dr. Simon noted that these were heavy lifts in terms of time and internal resources, so he was happy to hear how useful they are. DVP has heard this from other partners as well, which is very motivating to the division. They are excited about the changes being made in the *Community Violence Prevention Resource*, which should be even more impactful.

Dr. Lumba-Brown congratulated DVP on the foundation that has been built and continues to be expanded upon. What spoke to her was part of the discussion on culture and building a culture with these initiatives. This is a step toward ensuring that implementation occurs for the science moving forward. Science implementation does not happen only at the health systems level. It happens from the conception of an effort that they want to push forward. Bringing implementation into the culture of the leaders who are crafting these initiatives with a focus on implementation from the very beginning is critical to ensuring that the science that is supported does not just end there but goes forward with a plan to effectively integrated into healthcare systems and models.

Dr. Ottley responded that this is one of the reasons that they emphasized the feedback loop.

Dr. Johnston emphasized how useful this is and how much communities depend on the documents that the DVP produces. She also appreciates the idea of evidence-based practice, but also practice-based evidence that is in the framework because there is much to be drawn from the knowledge of actually having done it and feeding it back into what was learned. She also appreciated the emphasis on implementation science.

Dr. Ondermsa asked to what extent discussion of technology has arisen in DVP's work thus far as a way to standardize data collection, training, intervention development, reinforcement of feedback loops, speeding everything up, tools with standardized measures available in the same format, et cetera. There are a lot of opportunities, especially for standardization of tools and the methods by which those tools are administered for training staff across sites.

Dr. Simon indicated that one of the things DVP is doing is trying to leverage CDC's existing syndromic surveillance system, which was established to be able to more quickly detect disease outbreaks and bioterrorist attacks. Now through the Firearm Injury Surveillance Through Emergency Rooms (FASTER) initiative, DVP is leveraging that system to be able to provide near real-time data to localities about ED visits for firearm injuries in addition to multiple types of violence-related events. They are now expanding that initiative through AVERT that is going to move beyond firearm injuries to include IPV, and youth violence more broadly. In terms of leveraging technologies, a lot of DVP's grantees are creating very innovative dashboards that are very interesting to see because DVP has their ideas about what they would do with dashboards on multiple topics, but it is interesting to see how states will use their FASTER data to reflect on the local needs of the residents in their state in terms of what is the most critical and how they choose to report that out. *Violence Prevention in Practice* is a resource on CDC's VetoViolence® website that includes content that is specific to each of the examples in the Prevention Resources.

Dr. Ottley added that on the program side, they are trying to identify more innovative approaches for program evaluation, because that is where a lot of the data would come from with respect to implementation activities. There are opportunities for their recipients to share the work that they are doing as well.

Dr. Nation agreed that it is great to see all of this coming together. He congratulated DVP on their excellent work and expressed his particular excitement about the *Community Violence Prevention Resource* that is forthcoming. It is important to start thinking about implementation and for DVP to prompt others to be thinking that way.

Dr. Simon said that they have been hearing from communities that want to know about examples of programs, policies, and practices that they can implement now that will have immediate benefits. In the context of the social determinants of health (SDOH), they also want to know about larger policy and environmental opportunities to change the social and structural conditions that contribute to violence and what their role is in addressing those also. DVP is trying to provide a range of examples in the Prevention Resources.

Dr. Greenspan congratulated Drs. Simon and Ottley and emphasized how enthusiastic she is for this move toward more implementation and the connection between research and program. She asked whether they have given thought about the extramural work that is being done that NCIPC funds in violence prevention and firearms and how they could roll that into the framework, so that they can bring some of that work to bear on programmatic efforts more quickly.

Dr. Simon responded that DVP funded 20 projects in 2020 and are starting to see results from that work. All of that content in terms of the publications will be added to the DVP website and is part of what they will be creating webinars around and will be disseminating more broadly. As they engage in updating their research priorities and prevention resources and thinking the NOFOs that Dr. Ottley just shared, they routinely engage staff from throughout the division, including staff who have worked with the extramural grantees so that they can reflect on what

has been published and what they are learning from the work that is currently happening in the field that has not yet been published.

Dr. Ottley added that as they are learning more from that research, they also are making inroads into what they might want to update for *Violence Prevention in Practice* and work with their program recipients to figure out how to do that so if they want to implement any of the strategies that are deemed to be effective.

Dr. Caine stressed that it would be good to hear regularly about progress with this initiative. He asked how DVP would assess whether the SD2A Framework has really made a difference in the next 2 or 3 years. In a way, DVP is arguing for a change in work methods, and this is applicable across NCIPC and perhaps across other centers. They need to know if it really works, if is generalizable, whether it should be generalized, how it can be used in a broader sense to enhance CDC's products, and so forth.

Dr. Simon replied that they have been talking about this process as well. They are moving quickly, but as part of the roadmap, they are calling it a "future state map" in terms of what they anticipate the future state will look like. He thinks they will have a much better sense after the retreat on what opportunities will exist for them to evaluate their progress.

Dr. Ottley added that one way to look back to determine whether this is working will be to see whether DVA is providing more improved TA to its recipients and meeting their needs.

Dr. Rowhani-Rahbar commented that the SD2A and programs and resources might be an opportunity to address the interconnectedness of different types of violence and injury that they are all working to prevent. He is very excited about the *Community Violence Prevention Resource*, he cannot help but think about some other prevention resources that DVP already has like on suicide for example and the increase in suicide that are being seen among communities of color. There may be opportunities to highlight interconnectedness in a future prevention resource. For instance, a program that is implemented for reducing community violence may have spillover effects in suicide prevention.

Dr. Simon indicated that one example of that that they have released is in the area of ACEs. This is essentially a compilation that pulls from the existing prevention resources on CAN, sexual violence (SV), and IPV to reflect more broadly on the best available evidence for ACEs prevention. The point is well-taken and they can think about other opportunities to do that, because communities are not siloed in terms of their approach to these issues. Meeting them where they are in terms of providing that kind of guidance and support is critical.

Dr. Ottley noted that *Violence Prevention in Practice* has strategies and approaches that cut across the different technical practices and resources for action.

Public Comment Session

Victor Cabada, MPH
Office of Science
National Center for Injury Prevention and Control
Centers for Disease Control and Prevention

Mr. Cabada thanked everyone for their participation in the BSC meeting and indicated that all public comments would be included in the official record and would be posted on the CDC website with the official meeting minutes at CDC.gov/injury/bsc/meetings.html. He also pointed out that while they would not address questions during this public comment period, all questions posed by members of the public would be considered by the BSC and CDC in the same manner as all other comments. He invited those who did not have an opportunity to speak in person to submit their comments in writing to ncipcbsc@cdc.gov. No public comments were offered during this session.

Announcements, Closing Comments, & Adjournment

CAPT Jones, PharmD, DrPH, MPH
Amy Bonomi, PhD, MPH, Co-Chair, NCIPC BSC
Arlene Greenspan, DrPH, MPH, DFO NCIPC BSC

CAPT Jones announced that this would be the last official BSC meeting for Dr. Arlene Greenspan before she retires in the summer. He thanked Dr. Greenspan for her many years of service to the Injury Center and her dedicated career to advancing injury and violence prevention. He has come and gone from CDC multiple times and Dr. Greenspan has been a steadfast person in the Injury Center every time he has returned. She is always advocating for scientific quality, rigor, and thinking through a broad lens of how NCIPC approaches its work. Her leadership in this space has been particularly important in the last couple of years as CDC has been assessing how to shift its work to make sure that the agency is focusing on the most pressing science, applying new methods to its work, and always having the strongest approaches and rigor. He expressed his gratitude to Dr. Greenspan and stressed that she would be greatly missed, including her presence in the BSC in particular.

Dr. Bonomi thanked Dr. Greenspan for her leadership, mentorship, and being such a fabulous colleague for everyone in this work and wished her well in her retirement. She thanked everyone for participating in this meeting, recognizing that their time and input are extremely valuable. She reminded all BSC members and *Ex Officios* to send an email to Mrs. Tonia Lindley at ncipcvsc@cdc.gov stating that they participated in this meeting.

NCIPC BSC members expressed heartfelt congratulations to Dr. Greenspan on her retirement from CDC, thanked her for all that she has done for NCIPC and the field, emphasized what an inspiration and strong leader she has been over the years, and stressed how much she would be missed.

Dr. Greenspan expressed her appreciation for all of the well-wishes, noting that she is still in a bit of denial herself but will continue to find ways to engage in these topics that are so near and dear to her. She thanked the NCIPC BSC members for their participation and input; everyone working behind the scenes to make this meeting possible, including the CDC Audio Technician, CCTI; and the CDC staff, including Mrs. Tonia Lindley, Dr. Arlene Greenspan, Dr. Chris Harper, Ms. Donna Polite, and Mr. Victor Cabada.

With no announcements made, further business raised, or questions/comments posed, **Dr. Bonomi** officially adjourned the Forty-Second meeting of the NCIPC BSC at 3:18 PM ET.

Certification

I hereby certify that to the best of my knowledge, the foregoing minutes of the May 4, 2023 NCIPC BSC meeting are accurate and complete:

Sept. 1, 2023
Date

Amy Bonomi, PhD, MPH
Co-Chair, NCIPC BSC

Sept. 1, 2023
Date

Elizabeth Miller, M.D., PhD, FSAHM
Co-Chair, NCIPC BSC

Attachment A: BSC Members/Ex Officio Attendance

NCIPC BSC Members

Amy Bonomi, PhD, MPH
NCIPC BSC Co-Chair
Founder, Social Justice Associates
Affiliate, Harborview Injury Prevention & Research Center
University of Washington

Eric Caine, MD
Professor of Psychiatry, Emeritus
Department of Psychiatry
University of Rochester Medical Center

Elizabeth Habermann, PhD
Professor, Department of Health Services Research
Mayo Clinic College of Medicine and Science

Yvonne Johnston, DrPH, MPH,MS,RN, FNP
Associate Professor & Founding Director
Master of Public Health Programs
Division Of Public Health
Decker College of Nursing and Health Sciences
Binghamton University

Angela Lumba-Brown, MD
Clinical Associate Professor, Emergency Medicine and Pediatrics
Co-Director, Stanford Brain Performance Center, Director of Research

Ramiro Martinez, Jr., PhD
Professor
School of Criminology and Criminal Justice
Northeastern University

Jeffrey P. Michael, EdD
Leon S. Robertson Faculty Development Chair in Injury Prevention
Visiting Scholar in the Johns Hopkins Center for Injury Research and Policy

Elizabeth Miller, MD, PhD
NCIPC BSC Co-Chair
Professor and Chief
Children's Hospital of Pittsburgh
University of Pittsburgh Medical Center

Maury Nation, PhD
Professor of Human and Organizational Development
Peabody College
Vanderbilt University

Steve Ondersma, PhD
Clinical Psychologist and Professor
Division of Public Health and Department of Obstetrics, Gynecology, and Reproductive Biology
Michigan State University

Rosalie Pacula, PhD
Elizabeth Garrett Chair in Health Policy, Economics & Law
Professor of Health Policy and Management
Price School of Public Policy
University of Southern California

John A. Rich, MD
Professor, Department of Health Management and Policy
Director, Center for Nonviolence and Social Justice
Rich Drexel University

Ali Rowhani-Rahbar, MD
Professor, Department of Epidemiology
University of Washington

Rohit P. Shenoi, MD
Professor of Pediatrics
Department of Pediatrics
Section of Emergency Medicine
Baylor College of Medicine

NCIPC BSC Ex Officio Members

Melissa Lim Brodowski, PhD, MSW
Acting Director, Office of Early Childhood Development
Administration for Children and Families

Dawn Castillo, MPH
Director, Division of Safety Research
Centers for Disease Control and Prevention
National Institute for Occupational Safety and Health

Mindy Chai, JD, PhD
Health Science Policy Analyst
Science Policy and Evaluation Branch
National Institutes of Health
National Institute of Mental Health

CAPT Jennifer Fan, PhD
Acting Deputy Director
Office of the Director
Center for Substance Abuse Prevention
Substance Abuse and Mental Health Services Administration

Lyndon Joseph, PhD
Program Officer, Division of Geriatrics and Clinical Gerontology
National Institute on Aging
National Institutes of Health

Valerie Maholmes, PhD, CAS
Chief, Pediatric Trauma and Critical Illness Branch
National Institutes of Health
Eunice Kennedy Shiver National Institute of Child Health and Human Development

Bethany D. Miller, LSCW-C, MEd
Supervisory Public Health Advisor
Division of Child, Adolescent and Family Health
Health Resources & Services Administration

Jane K. McAinch, MD, MPH, MS
Senior Medical Epidemiologist
United States Food and Drug Administration
Regulatory Science and Applied Research (RSAR) Program
Regulatory Science Staff (RSS)
Office of Surveillance and Epidemiology (OSE)
Center for Drug Evaluation and Research (CDER)

CDC NCIPC Attendees

Kathleen Basile, Ph.D
Matthew Breiding, Ph.D
Victor Cabada, M.P.H.
Joyce Dieterly, MPH
LCDR Carlisha Gentles, PharmD, BCPS, CDCES
Derrick Gervin, Ph.D, MSW
Arlene Greenspan, DrPH, MPH, PT
Christopher Harper, Ph.D.
Candis M. Hunter, PhD, MSPH, REHS/RS
Tonia Lindley
Karin Mack, Ph.D.
Donna Polite
Celeste Sanders, PhD
Thomas Simon, Ph.D.
Mikel Walters, Ph.D.
Aisha Wilkes, M.P.H.
Amanda Garcia-Williams, Ph.D., M.P.H.

Attachment B: Acronyms Used in This Document

Acronym	Expansion
ACEs	Adverse Childhood Experiences
ADS	Associate Director for Science
AI/AN	American Indian/Alaskan Native
APHA	American Public Health Association
ASC	America Society of Criminology
ASTHO	Association of State and Territorial Health Officials
BHCU	Behavioral Health Coordinating Unit
BSC	Board of Scientific Counselors
CAN	Child Abuse and Neglect
CBO	Community-Based Organization
CBPR	Community-Based Participatory Research
CSELS	Center of Surveillance, Epidemiology, and Laboratory Services
CCTI	Cambridge Communications and Training Institute
CDC	Centers for Disease Control and Prevention
CIOs	Centers, Institutes, and Offices
CM	Child Maltreatment
CMS	Centers for Medicare & Medicaid Services
COD	Cause of Death
COI	Conflict of Interest
CoP	Communities of Practice
CSP	Comprehensive Suicide Prevention Program
CSTE	Council of State and Territorial Epidemiologists
DEBIA	Diversity, Equity, Belonging, Inclusion, and Accessibility
DFC	Drug-Free Communities
DFO	Designated Federal Official
DIP	Division of Injury Prevention
DMI	Data Modernization Initiative
DOJ	Department of Justice
DOP	Division of Overdose Prevention
DPCC	Division of People of Color and Crime
DVP	Division of Violence Prevention
ED	Emergency Department
ED-SNSRO	Emergency Department Surveillance of Nonfatal Suicide-Related Outcomes
EfC	Essentials for Childhood
EIS	Epidemic Intelligence Service
EITC	Earned Income Tax Credits
EMR	Electronic Medical Record
Epi-Aid	Epidemiologic Assistance
ERPO	Extramural Research Program Office
ESI	Early-Stage Investigator
ET	Eastern Time
FACA	Federal Advisory Committee Act
FASTER	Firearm Injury Surveillance Through Emergency Rooms
FDA	Food and Drug Administration
FY	Fiscal Year

Acronym	Expansion
HHS	(Department) Health and Human Services
HRSA	Health Resources and Services Administration
ICRC	Injury Control Research Centers
IPV	Intimate Partner Violence
IOD	Immediate Office of the Director
mTBI	Mild Traumatic Brain Injury
IPV	Intimate Partner Violence
LTC	Linkage to Care
MI	Motivational Interviewing
MMRCs	Maternal Mortality Review Committees
MMWR	*Morbidity and Mortality Weekly Report*
MOUD	Medications for Opioid Use Disorder
MSIs	Minority Serving Institutions
MV	Motor Vehicle
NACCHO	National Association of County and City Health Officials
Action Alliance	National Action Alliance for Suicide Prevention
National Strategy	*National Strategy for Suicide Prevention*
Action Alliance	National Action Alliance for Suicide Prevention
NCEH	National Center for Environment Health
NCIPC / Injury Center	National Center for Injury Prevention and Control
NIH	National Institutes of Health
NLP	Natural Language Processing
NOFO	Notice of Funding Opportunity
NQF	National Quality Forum
NSSP	National Syndromic Surveillance Program
NYC	New York City
NYS	New York State
OCCHE	The Office of Climate Change and Health Equity
OD2A	Overdose Data to Action
OD2A: LOCAL	Overdose Data to Action: Limiting Overdose through Collaborative Actions in Localities
OHE	Office of Health Equity
OLSS	Office of Laboratory Science and Safety
OPHDST	Office of Public Health Data, Surveillance, and Technology
ORCU	Overdose Response Coordination Unit
OSI	Office of Strategy and Innovation
OUD	Opioid Use Disorder
PACE	Preventing Adverse Childhood Experiences
PDMP	Prescription Drug Monitoring Program
PI	Principal Investigator
SAMHSA	Substance Abuse and Mental Health Services Administration
SD2A	Science- and Data-to-Action
SDOH	Social Determinants of Health
SME	Subject Matter Expert
SOP	Standard Operating Procedure
SSP	Syringe Service Programs
StUD	Stimulant Use Disorder

Acronym	Expansion
SUD	Substance Use Disorder
SV	Sexual Violence
TA	Technical Assistance
TBI	Traumatic Brain Injury
US	United States