Board of Scientific Counselors NCIPC
Closed Session
June 5, 2024

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

Table of Contents

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-Seventh Meeting
June 5, 2024

Virtual / Zoom Meeting
Closed to the Public

Summary Proceedings

The Forty-Seventh meeting of the National Center for Injury Prevention and Control (NCIPC; Injury Center) Board of Scientific Counselors (BSC) was convened on Wednesday, June 5, 2024 via teleconference and Zoom. The BSC met in closed session in accordance with the Privacy Act and the Federal Advisory Committee Act (FACA). Drs. Elizabeth Miller and Amy Bonomi served as Co-Chairs.

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-22-003: Rigorously Evaluating Programs and Policies to Prevent Child Sexual Abuse (CSA)

2. RFA-CE-24-012: Rigorous Evaluation of Policy-Level Interventions to Prevent Overdose (R01)

3. RFA-CE-24-030: Research Grants for Preventing Violence and Violence Related Injury (R01)

Certification

I hereby certify that to the best of my knowledge, the foregoing minutes of the June 5, 2024 BSC NCIPC meeting are accurate and complete:

Date

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

Date

Elizabeth Miller, MD, PhD
BSC NCIPC, Co-Chair

Attachment A: BSC Member/Ex Officio Attendance

BSC NCIPC Co-Chairs

Amy Bonomi, PhD, MPH
BSC NCIPC, Co-Chair
Dean and Professor of Public Health
College of Health and Human Services
San Diego State University

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

Designated Federal Officer (DFO)

Corrine Ferdon, PhD
Office of Science, Director
National Center for Injury Prevention and Control
Centers for Disease Control and Prevention

BSC NCIPC Members

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

Wendy Ellis, DrPH
Assistant Professor and Center Director
Center for Community Resilience
Milken Institute School of Public Health
George Washington University

Mohammad Jalali (MJ), PhD, MSc
Assistant Professor
Harvard Medical School

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

Hillary V. Kunins, MD, MPH
Director of Behavioral Health
San Francisco Department of Public Health

Kaleem Malik MD, MS, FAAEM
Trauma Emergency Medicine Physician, Chicagoland Area
Director of Medical Disaster Response
United Nations, Humanity First Organization

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

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

Keshia Pollack Porter, PhD, MPH
Chair, Department of Health Policy and Management
Bloomberg School of Public Health
Johns Hopkins 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

Alexander Walley, MD, MSc
Associate Professor of Medicine, Boston University School of Medicine
Director, Boston Medical Center Addiction Medicine Fellowship Program

NCIPC BSC *Ex Officio* Members

CAPT Carmen (Skip) Clelland, PharmD, MPA, MPH, MS
Chief of Staff
Indian Health Service (IHS)

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 Institute of Mental Health
National Institutes of Health

Wilson Compton, MD, MPE
Deputy Director
National Institute on Drug Abuse
National Institutes of Health

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

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

Constantinos Miskis, JD
Bi-Regional Director, Regions III & IV
Administration for Community Living, Office of Regional Operations
Administration on Aging

CDC NCIPC Attendees
Kathleen Basile, PhD
Victor Cabada, MPH
Lace DePadilla, PhD
Joyce Dieterly, MPH
Corinne Ferdon, PhD
Carlisha Gentles, PharmD, BCPS, CDCES
CDR Candis M. Hunter, PhD, MSPH, REHS/RS
Ruth Leemis, MPH
Mrs. Tonia Lindley
Emiko Petrosky, MD, MPH
Alana Vivolo-Kantor, PhD, MPH
Mikel Walters, PhD

Other Attendees
Shelby Hofer, MS
Stephanie Wallace, PhD

Attachment B: Acronyms Used in this Document

Acronym	Expansion
ABU	Approved But Unfunded
AC	Attention Control
ACEs	Adverse Childhood Experiences
ACTC	Additional Child Tax Credit
ATSDR	Agency for Toxic Substances and Disease Registry
BGC	Boys and Girls Club
BSC	Board of Scientific Counselors
CA	California
CAB	Community Advisory Board
CAN	Child Abuse and Neglect
CBO	Community-Based Organization
CBPAR	Community-Based Participatory Action Research
CDC	Centers for Disease Control and Prevention
COI	Conflict of Interest
CR	Continuing Resolution
CRT	Cluster Randomized Trial
CSA	Child Sexual Abuse
CSEC	Commercial Sexual Exploitation of Children
DFO	Designated Federal Official
DIP	Division of Injury Prevention
DOP	Division of Overdose Prevention
DSA	Data Sharing Agreement
DVP	Division of Violence Prevention
ED	Emergency Department
EITC	Earned Income Tax Credit
ERPO	Extramural Research Program Office
ESI	Early-Stage Investigator
ET	Eastern Time
FACA	Federal Advisory Committee Act
FFCWS	Future of Families and Child Wellbeing Study
FY	Fiscal Year
HHS	(Department) Health and Human Services
ICD	International Classification of Diseases
IRB	Institutional Review Board
LOS	Letter of Support
MOU	Memorandum of Understanding
MOUD	Medications for Opioid Use Disorder
MSI	Minority-Serving Institution
NAN	Not a Number
NCANDS	National Child Abuse and Neglect Data System
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

Acronym	Expansion
OUD	Opioid Use Disorder
PI	Principal Investigator
PPR	Program Priorities Report
PWLE	People With Lived Experience
RTS©	READY to Stand©
RCT	Randomized Controlled Trial
SEP	Special Emphasis Panel
SPO	Scientific Program Official
SRC	Secondary Review Committee
SRO	Scientific Review Official
SUD	Substance Use Disorder
SV	Sexual Violence
TDV	Teen Dating Violence
US	United States
USAF	USA Football

Board of Scientific Counselors, NCIPC
Open to the Public
June 6, 2024

National Center for Injury Prevention and Control
Centers for Disease Control and Prevention
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Summary Proceedings

The Forty-Seventh meeting of the National Center for Injury Prevention and Control (NCIPC; Injury Center) Board of Scientific Counselors (BSC) was convened on Thursday, June 6, 2024, via Hybrid / Zoom meeting. The BSC met in open session in accordance with the Privacy Act and the Federal Advisory Committee Act (FACA). BSC NCIPC Co-Chair, Dr. Amy Bonomi, presided.

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

Call to Order

Amy Bonomi, PhD, MPH
Co-Chair, BSC NCIPC
Dean and Professor of Public Health
College of Health and Human Services
San Diego State University

Dr. Bonomi officially called to order the Forty-Seventh meeting of the NCIPC BSC at 10:07 AM Eastern Time (ET) on Thursday, June 6, 2024.

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 and Shelby Hofer, the Writer/Editors from Cambridge Communications and Training Institute (CCTI), who she explained would record the minutes of the meeting. To make it easier for them to capture the comments, Mrs. Lindley requested that everyone state their names prior to any comments for the record. She indicated that Mr. Victor Cabada 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 the following URL:

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, BSC NCIPC
Dean and Professor of Public Health
College of Health and Human Services
San Diego 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 also thanked and welcomed members of the public for their interest and attendance, 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 in order to more easily follow the presentations.

Approval of the January 11, 2024, BSC NCIPC Meeting Minutes

Amy Bonomi, PhD, MPH
Co-Chair, NCIPC BSC
Dean and Professor of Public Health
College of Health and Human Services
San Diego State University

Dr. Bonomi referred BSC members to the copy of the minutes provided to them with their meeting materials from the January 11, 2024, NCIPC BSC meeting. With no questions or edits noted, Dr. Bonomi called for an official vote.

Motion / Vote

Dr. Pollack Porter made a motion, which **Dr. Miller** seconded, to approve the January 11, 2024, NCIPC BSC meeting minutes. The motion carried unanimously with no abstentions.

Director's Update

Allison Arwady, MD, MPH
Director, National Center for Injury Prevention and Control
Centers for Disease Control and Prevention

Dr. Arwady noted that having begun this role in January 2024, this was her first opportunity to meet many of the NCIPC BSC members in person. She thanked the NCIPC BSC members and the members of the public for their attendance and interest in the topics of injury prevention and control. She expressed gratitude to Drs. Lianne Estefan and Megan Kearns who presented on the updated intimate partner violence (IPV) research priorities during the January 2024 NCIPC BSC meeting. Those priorities help the Injury Center prioritize its strategic science to address and prevent IPV. The Injury Center looks forward to seeing the work and implementation of those new priorities, which should be available on the updated NCIPC website in the coming weeks.

NCIPC has had some important additions to senior staffing. Fred Thomas, III has accepted the position as permanent Deputy Director for Management, Operations, Communication, and Policy. Dr. Henrietta Kuoh has accepted the senior level position of Associate Director for Program Implementation and Evaluation. Mr. Thomas and Dr. Kuoh will be working closely with Drs. Arwady and Massetti to ensure strategic and efficient performance of NCIPC's programmatic and scientific activities.

Earlier in the Spring, Congress and President Biden approved the appropriations for CDC that included level funding for the Injury Center. Those appropriations are critical for supporting the Injury Center's scientific and programmatic activities. Dr. Arwady provided a sample of recent scientific publications from the Injury Center since the last NCIPC BSC meeting. Staff from the Division of Overdose Prevention (DOP) led a *Morbidity and Mortality Weekly Report* (*MMWR*) using data from the State Unintentional Drug Overdose Reporting System (SUDORS) to assess trends in drug use across 27 states and the District of Columbia (DC).[1] This analysis found that from January–June 2020 to July–December 2022, there was a major change in the mode of drug use being reported. The smoking-related mode of drug use associated with overdose deaths increased almost 74%, while the percentage with injection-related mode of overdose deaths decreased by approximately 29% during that time period. This shift was observed across all US regions and was most pronounced in deaths that had illicitly manufactured fentanyl detected, regardless of whether stimulants were detected. This was important information for use in the field, which NCIPC shared with partners to emphasize the need to strengthen and expand harm reduction services with a focus on overdose risk related to smoking and to think about other non-injection drug routes that are critical to reducing deaths.

In April 2024, staff from the DOP published some new analytical simulation results on the impact of public health interventions to increase treatment prevalence and decrease overdose rates.[2] First looking at the 2019-2020 data, this was a model to project over 5 million non-fatal overdoses and over 145,000 fatal opioid-involved overdoses between 2021-2023 and assessed a multi-faceted public health approach and which interventions would have the largest impact in changing those outcomes. This analysis showed that making progress in interventions that are focused on reaching populations who have opioid use disorder (OUD) but are not currently on

[1] https://www.cdc.gov/mmwr/volumes/73/wr/mm7306a2.htm
[2] https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2817002

treatment with medication for OUD (MOUD) would project the largest reduction for fatal and non-fatal opioid overdose. In addition, continuing to expand harm reduction strategies (e.g., naloxone distribution, overdose education, not using alone, et cetera) are also critical to reducing fatal opioid overdoses in the short-term for those who are living with OUD. Interventions that are aimed at increasing initiation of MOUD, treatment retention, and recovery support are critical to reducing prevalence and further reductions in opioid overdoses in the long-term. This was an important study for NCIPC because it is helping the work on the ground to be informed by priorities. It is known that there are significant gaps, particularly in people being able to access medications that are informed by the best evidence for living with OUD. Increasing access to medications, decreasing risks, and investing resources in modeling to look ahead is important work.

In early May, staff from NCIPC's Division of Violence Prevention (DVP) and the Division of Injury Prevention (DIP) co-authored an *MMWR* with Tufts University's Healthy Outcomes from Positive Experiences (HOPE) project focused on the prevalence of positive childhood experiences (PCEs)[3] in 4 states in the United States (US) using data from the Behavioral Risk Factor Surveillance System (BRFSS). PCEs are experiences in a child's life that give them a foundation of safety, stability, and belonging and are a way to mitigate adverse childhood experiences (ACEs). Historically, there has been considerable data on ACEs. It is important to better understand PCEs and how to take a systems approach to balance where possible, prevent ACEs and promote PCEs, and understand the impact. The data in this retrospective study showed that about half of adults experienced at least 6 of the PCEs, but that only about 1 in 8 adults had 2 or fewer of these PCEs. Public health strategies and interventions that can increase PCEs (e.g., strengthening economic supports for families, connecting youth to caring adults and activities, and focus on early childhood work) can reduce the inequities seen in ACEs and PCEs.

In the last few weeks, CDC and leadership from the DIP released the first ever *Vitalsigns*™ on drowning prevention.[4] This *MMWR* was paired with *Vitalsigns*™ to lift this up as an issue that receives extra attention and production of promotional materials. The *Vitalsigns*™ showed that drowning deaths are on the rise in the US, following decades of decline. Some of this may be associated with the COVID-19 pandemic when more people were outdoors and potentially in water and perhaps some cuts in some of the supports that historically were in place. Regardless, the increase is certainly of concern. Over 4,500 people died due to drowning every year from 2020–2022. There were 500 more deaths per year during that time period compared to 2019. Importantly, groups who already were at higher risk historically for drowning deaths also experienced the greatest increases in drowning deaths during this timeframe. Drowning is the leading cause of death for children 1 to 4 years of age in the US, with increases seen in this age group during this time period. There also were increases in drownings among adult ≥65 years of age of all races and ethnicities, with further increases for Black Americans among whom there already are disparities. *MMWR* and *Vitalsigns*™ data also were paired with some new data related to access to water safety and swimming lessons, which showed that more than half of adults in the US have never had a swimming lesson or basic water safety lesson. There were disparities in this area as well. Heading into summer, this was a good opportunity to address this issue. Structural-level interventions (e.g., fencing, lifeguards, basic swimming and water safety lessons) and systems-level interventions (e.g., addressing barriers to basic swimming and water safety lessons) can be implemented to prevent drowning deaths.

[3] https://www.cdc.gov/mmwr/volumes/73/wr/pdfs/mm7317-h.pdf
[4] https://www.cdc.gov/mmwr/volumes/73/wr/mm7320e1.htm#suggestedcitation

Dr. Arwady noted that while she highlighted only a few projects/publications, she wanted to thank all of the staff at the Injury Center who have been part of these projects. The findings from these projects and programs help states and communities address injury, overdose, and violence. She emphasized that she highlighted these efforts in particular because NCIPC is highly interested in turning data into action and making sure that when more than 80% of the funding for the Injury Center is allocated to state and local public health departments and other organizations working on the ground, data and science inform that work as a top priority.

She then reviewed the agenda, explaining that it specifically responded to some of the requests received from the NCIPC BSC during the January 2024 meeting. In terms of the new BHCU presentation, mental health has been a key consideration for many of the Injury Center's programs and activities. CDC Director, Dr. Mandy Cohen, set improving mental health as a top priority for the agency this year, along with advancing science and health equity, ensuring readiness and response to health threats, supporting young families, and enhancing data readiness efforts. In terms of the presentation on the *2024 National Strategy for Suicide Prevention and Action Plan*,[5] this large effort has been led by CDC and the Substance Abuse and Mental Health Services Administration (SAMHSA) and touches all the federal government. This is a 10-year strategy that pertains to what will be done to work on suicide prevention, which includes a 3-year action plan. There are not only actions within the Department of Health and Human Services (HHS), but also the US Department of Agriculture (USDA), the Department of Education, and the Armed Services are all committing to about 200 new actions, about 40 of which sit at CDC across the entire agency. This is where thinking about behavioral health coordination fits in well with the suicide work. Suicide prevention has been an area of growth, interest, and major need across the country and NCIPC is leaning in.

Regarding the update on sexual violence (SV) research priorities, these priorities help inform NCIPC's intramural and extramural scientific activities for the prevention of SV. The new priorities include expanded consideration of childhood sexual abuse (CSA), which is a growing part of NCIPC's research portfolio. The last 2 presentations were based on a request from the NCIPC BSC members who wanted to know more about how the Injury Center assesses the effects of its programs and strategies. One of the presentations focuses on NCIPC's investments in high quality data on violence against children, which show some declines and is certainly an area of major interest. The other of these presentations will share findings from a portfolio review being conducted by the DOP, with a goal to help overdose subject matter experts (SMEs) determine how the previous research priorities have influenced scientific activities in advance of planning for the updated research priorities.

Discussion Points

Dr. Ellis noted that while Dr. Arwady framed PCEs as a way to mitigate ACEs, she wanted to put a finer point on PCEs as primary prevention—not just mitigation. The theme of all of the day's presentations reinforced the power of these positive experiences throughout the lifespan and the importance of a systems approach. Not only is the science focused on improving mental health, but also PCEs requires consideration of both social and economic supports that children and families need in the context of community. Other supports are needed to prevent mental health and substance abuse issues that will have impacts for children and their families. She applauded Dr. Arwady for pushing the work of PCEs, which is much more solutions-oriented

[5] 2024 National Strategy for Suicide Prevention (hhs.gov) https://www.hhs.gov/programs/prevention-and-wellness/mental-health-substance-abuse/national-strategy-suicide-prevention/index.html

and is based in much of the science of social determinants and understanding the idea of promoting human flourishing from a global perspective.

Regarding the trend of smoking-related overdoses increasing by 74% and injectable-related overdoses decreasing by 29%, **Dr. Malik** indicated that they are seeing new onset seizures due to vaping of marijuana and substances that may be laced within the vaping. He suggested a deeper dive into the smoking-related overdoses, given that smoking is such a wide medium. Vaping falls under that much of this is now legal. This newly identified trend poses an opportunity to address this fascinating new field into which they are all embarking.

Dr. Arwady emphasized that NCIPC keeps a close eye on all things related to substance use, particularly in terms of initiation. The whole team is well aware of what has been occurring with the vaping work. They agree that there is much more to do to understand the shift to smoking, particularly with respect to illicitly manufactured fentanyl seen in the materials. They have been engaged in internal conversations about how the threat continues to change and ensuring that the Injury Center is as responsive as possible.

Dr. Baldwin added that they are attributing the shift in smoking largely to be associated with the nature of drugs being used, specifically fentanyl. Using the route of administration of smoking allows people who use drugs (PWUD) to better titrate their dose and manage withdrawal symptoms over time. There also are some harm reduction benefits from prevention of infectious disease transmission and complications. That said, through the Cannabis Strategy Unit and Drug-Free Communities (DFC) Support Program, they are making an effort to lean in further to address youth initiation of use, including vaping. With the increase in cannabis use across the country and the potency of products being used, the Injury Center is greatly concerned about increases in vaping overall. As it relates specifically to this *MMWR* report, they believe the shift is associated with drug user behavior among PWUD.

Dr. Compton expressed gratitude for the wonderful review and highlights of some of the important work that is underway in the Injury Center. Building on a comment that he heard from a colleague about social determinants of health (SDOH), this is certainly an area of great importance. He wondered how they see the links of public health with other aspects of social services, economic development, and family supports that obviously play a key role in behavioral health generally and in particular in overdose prevention. Certainly, this is an area in which the National Institute on Drug Abuse (NIDA) and all of NCIPC's partners across government share important work in this area.

Dr. Arwady responded that NCIPC is always thinking about how to connect the work of the Injury Center to the underlying systemic and societal challenges that do not offer everybody in this country the same opportunities. In terms of social drivers of health or SDOH, they often are thinking about connecting that to some of the ACEs work. There have been numerous ways of thinking about how to measure this, how to link this, and which indices make the most sense in this space and NCIPC continues to work on that. She agreed that there is a need for public health to think upstream about primary prevention, while simultaneously dealing with the crisis and responding to an opioid overdose in the moment in terms of harm reduction and connection, and also investing in and studying the links to things on which they can make an impact in a more upstream and social determinants way. This is not just within the Injury Center, but also across all of CDC—especially in terms of the Injury Center's work with CDC's National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP). NCIPC and NCCDPHP are thinking together about how to measure and then offer guidance and interventions that are research-driven that can help make this connection and help make the

case for investments in those types of upstream impacts. NCIPC loves when its federal partners are continuing to lift that up and fit all of the work that is being done across the federal government into that framework.

Dr. Shenoi applauded NCIPC and the staff for the extraordinary work they have done, especially in terms of the Data-to-Action (D2A) more forward-looking approach to the most pressing problems being faced. Given that most injury work is done at the local level, he asked what approach is used to share this with the local level.

Dr. Arwady indicated all of NCIPC's areas are placing considerable attention on this. For overdose, NCIPC funds 49 states, DC, and 40 large local health departments and counties. They have a regular and ongoing touchpoint in which the Injury Center is working cooperatively with those partners to make sure that the latest research, evidence, and data are being used to drive activities on the ground. For areas in which they do not fund across the country, such as the Comprehensive Suicide Prevention Program (CSP) that funds 24 recipients and ACEs that funds about 12 recipients, they are thinking carefully about how to ensure that those who are not receiving direct funding are receiving technical assistances (TA). TA often is provided where the needs may be greatest. In the violence space, NCIPC is able to fund some research. While they are not funding work in some areas, states and locals are making other investments to ensure that TA is available. One example is that NCIPC has been working to update its" "Resource for Action Guides" to keep the science current for all of NCIPC's topics in terms of what works through conducting literature reviews, highlighting programmatic areas that are working well, making these available to those who are working on these topics across the country, and evaluating these so that the evidence base is being built for the interventions that work on NCIPC's topics. It is important to ensure that this work is getting used.

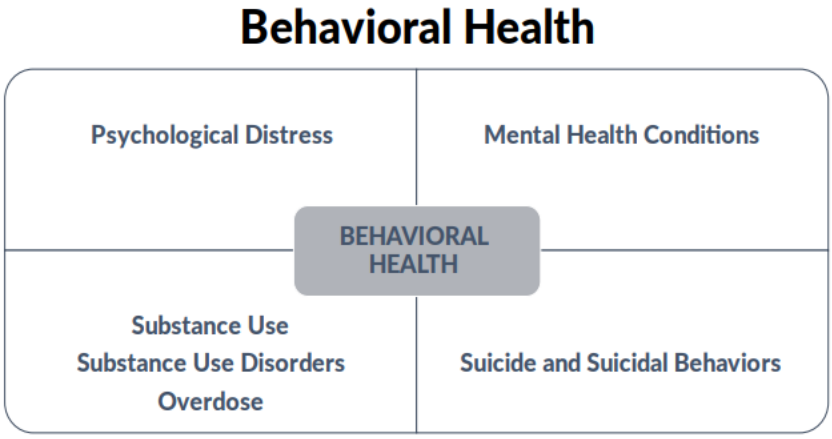
Enhancing CDC's Efforts to Promote Mental Health and Reduce Overdose and Suicide: CDC's New Behavioral Health Coordinating Unit (BHCU)

Neetu Abad, PhD
Lead, Behavioral Health Coordinating Unit (BHCU)
Office of the Director
National Center for Injury Prevention and Control
Centers for Disease Control and Prevention

Dr. Abad began by emphasizing that this is an exciting time at CDC in terms of prioritization of mental health by the CDC Director, along with preparedness/readiness and supporting young families. This reflects where the US is as a society and the importance and visibility of this topic to the agency and public health. One of the first things the new BHCU did was to determine and be consistent with terminology. Some of the key terms that have been defined from the literature include:

- ❑ Behavioral Health
- ❑ Mental Health
- ❑ Well-Being
- ❑ Mental Distress
- ❑ Mental Health Condition

An effort has been made to understand what is mean by each of these terms. The following graphic is an example to help explain the difference between behavioral health and mental health:[6]



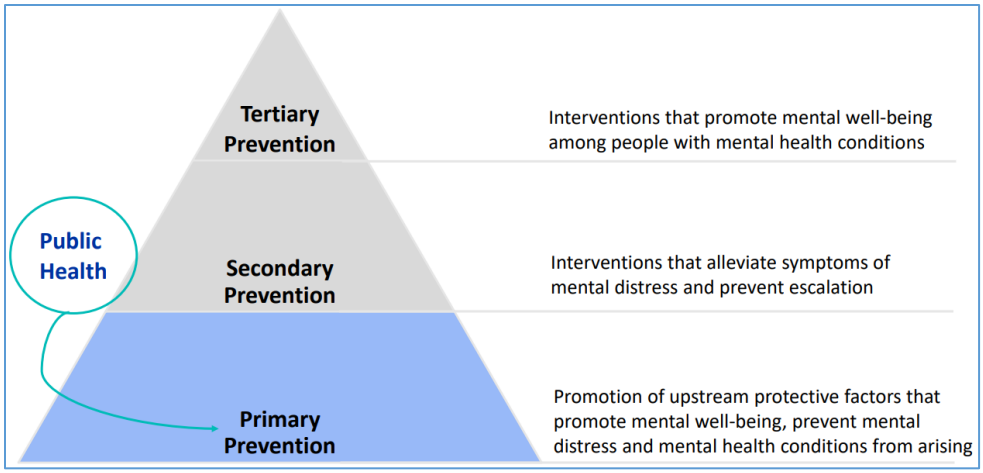
Behavioral health is an umbrella terms that encompasses things like psychological distress, mental health conditions, substance use, substance use disorders (SUDs), overdose, suicide, and suicidal behaviors. There are many topics under the umbrella of behavioral health, many of which are well-represented in the Injury Center with a large programmatic footprint and impact. However, mental health is a relatively newer area as a concentration unto itself. Well-being is very important. She loved Dr. Ellis's comment about the flourishing aspect and emphasized that they have to balance how they talk about this in terms of distressing conditions and optimal well-being.

There is a long history and tradition of talking about mental health at the individual level, but there are factors at the family, community, and societal levels that are intersectional, related to each other, and are determinants on the path to well-being or distress. An important concept to consider when thinking about determinants is the dual continuum of mental health. People do not "ping pong" between well-being and distress. In fact, one can have both simultaneously. Someone living with distress also can experience wellbeing or have resiliency. This is a misunderstood concept that is important to think about in terms of interventions and understanding and prioritizing the lived experiences of those experiencing distress and/or mental health conditions.

The public health model of mental health promotion is a macro perspective on a topic like mental health that functions somewhat differently from other topics. Public health is interested and invested in promotion of upstream factors that promote mental well-being and prevent distress from mental health conditions from arising. There also is something to say at the secondary and tertiary prevention levels, such as secondary prevention interventions that alleviate symptoms of mental distress and prevent escalation or tertiary prevention interventions that promote mental well-being among people with mental conditions. This graphic illustrates the public health model of mental health promotion that the BHCU is taking into this work:[7]

[6] Adapted from Rand Corporation. (2023). Monitoring and surveillance of behavioral health in the context of public health emergencies: A toolkit for public health officials. Retrieved fromhttps://www.rand.org/pubs/tools/TLA2363-1/tool/part-1.html on May 23, 2024.

[7] Adapted from Campion, J. et al. (2002) Public mental health: required actions to address implementation failure in the context of COVID-19, *The Lancet Psychiatry*



Beginning in 2023, CDC partnered with the Association of State and Territorial Health Officers (ASTHO), Mental Health America (MHA), and the Center for Law and Social Policy (CLASP) to develop a framework titled, "Public Health's Role in Mental Health Promotion and Suicide Prevention."[8] This framework is rooted in the understanding that mental health is key to the overall health of every person and community and helps public health practitioners communicate what their role is on promoting mental health and suicide prevention with partners and others in the public health space. This was developed in collaboration with public health authorities and people with lived experience (PWLE), with multi-sector dialogue. This work aligns with the CDC strategy for mental health.

In terms of the BHCU, this unit is relatively new to CDC and builds upon previous agency efforts to coordinate and strengthen its focus on mental health. While the unit is small, the staff are very passionate about this topic. The BHCU has considerable support from NCIPC leadership and the CDC Director's office, given that this is a priority. It is a fantastic time to be doing this work. The BHCU was launched in July 2023 in response to some Congressional language in the appropriations over the last few years (e.g., FY22, FY23, and FY24), When the BHCU was stood up, its purpose was understood to be to inform mental health priorities and goals. An environmental scan was undertaken to understand the landscape of mental health work across CDC in this space and understand the data picture. It is important to note that while the unit is new to CDC, this work has been ongoing for a long time. The idea that upstream primary prevention is important for mental health can be found in various programmatic footprints across the agency. Certain staff had a lot of interest and passion in this work. What is new is the frame, combining it all together, and having folks who do not normally see themselves as doing mental health work understand how they can touch and relate to it.

The BHCU's mission is to elevate, advance, and coordinate CDC's public health approach to promote mental well-being and prevent mental distress, substance use, overdose, and suicide. This includes a focus on behavioral health as a necessary component of well-being across the life course, particularly during early childhood and adolescence. The intent was to encompass a life course approach of acting early and promoting concepts such as PCEs. The BHCU's vision is One CDC working together to advance our shared commitment to optimal mental and behavioral health for all people. The core functions of the BHCU are to: 1) develop, coordinate, and advance an agency-wide mental and behavioral health strategy 2) champion

[8] https://www.mhanational.org/research-reports/framework-public-healths-role-mental-health-promotion-and-suicide-prevention

CDC's distinctive collective contribution to advancing the role of public health in mental health promotion; 3) foster collaboration across CDC to support current efforts, identify emerging needs, and advance CDC's work on mental health; 4) collaborate with external partners and federal agencies on cross-cutting behavioral health initiatives; 5) create and promote unified messages related to behavioral health; and 6) sponsor and support the CDC Mental ealth Workgroup and its activities.

A precursor to the development of CDC's mental health strategy was an agency-wide Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis. The analysis included 50 staff members who are knowledgeable about this area to consider the following 7 areas in terms of strengths, weaknesses, opportunities, and threats regarding CDC's engagement on mental health:

- ❑ Improve population surveillance
- ❑ Identify risk and protective factors
- ❑ Leverage surveillance, research, and evaluation data
- ❑ Promote healthy beginnings
- ❑ Promote healthy environments
- ❑ Promote healthy connections
- ❑ Address provider burnout

CDC's strengths were noted to be the diversity of partnerships, primary prevention approach, and robust data collection and evidence base the agency produces. Opportunities were identified as strengthening existing partnerships and expanding the inclusion of non-traditional new partners (e.g., mental health advocacy, providers) in this space, especially in terms of advancing the agency's identity and role partners. Weaknesses were acknowledged as being limited resources and a lack of dedicated funding for this work, lack of a defined role and the need for an identify in this space that is strong and obvious, and the need for internal coordination and collaboration. Threats identified are a perceived overlap with other agencies and limited community engagement in this space.

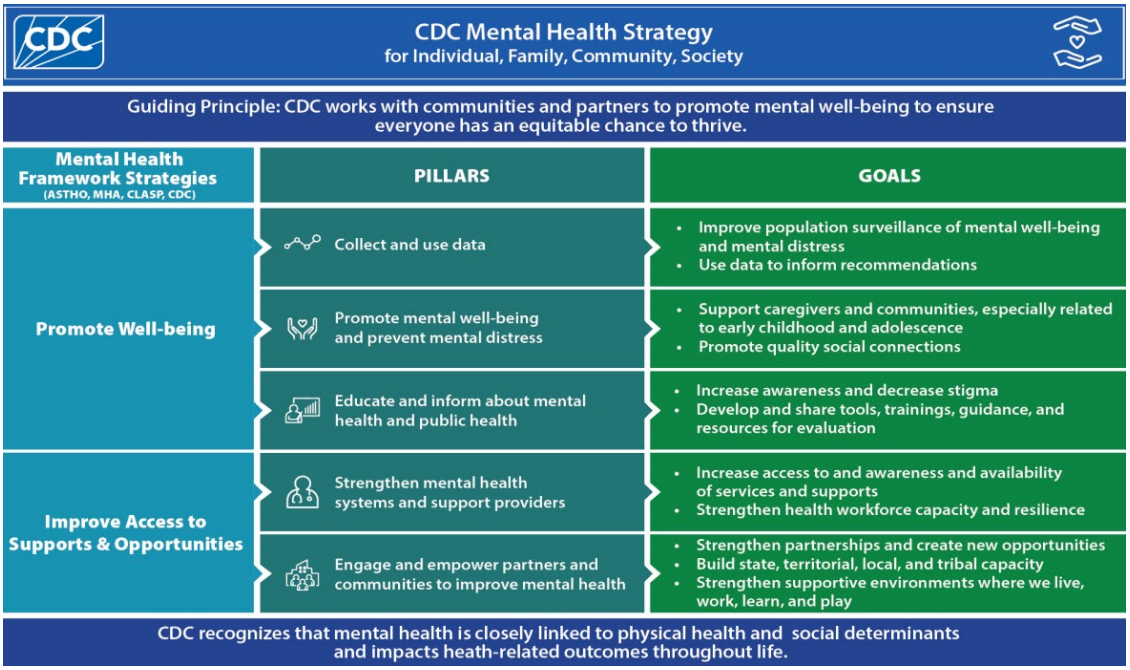
Some of the recommendations that came from this Mental Health Action Tank were to: 1) speak with one CDC voice and increase awareness of existing work; collaborate with diverse partners; 2) develop a strong mental health strategy around which people can rally; 3) make mental health data local, timely, and action-oriented; and 4) address the need for dedicated resources proactively.

In setting out to develop a CDC mental health strategy, the purpose was defined as being to:

- ❑ Promote One CDC approach to improve mental health
- ❑ Provide unified narrative to help define CDC's role
- ❑ Help identify current activities, gaps, and progress in mental health work across CDC
- ❑ Inform research, program, and policy to improve mental health

Ultimately, the hope is that all areas of CDC will utilize this strategy to inform research, program, and policy to improve mental health at the individua and community levels.

The following table depicts the CDC Mental Health Strategy for Individual, Family, Community, and Society that includes 5 pillars and 11 goals, which Dr. Abad reviewed and the BHCU anticipates being posted to the website soon:



Last Fall, the BHCU did some mapping of mental health-related activities across CDC as of September 2023 by strategic goal. It is important to recognize that this was a snapshot in time and was not exhaustive, and it is important to perform an environmental scan at a frequency to be able to understand what is occurring. While the agency has a good number of activities aligned with the systems piece and provider support, there are fewer activities related to population surveillance. For CDC, that is a gap that needs to be acted upon in order to build the data to tell the story in order to motivate action at the local level. Some examples of the range of work that is occurring at CDC related to a few of the goals include the following:

- **Goal: Use data to inform recommendations:** *National Center for Injury Prevention & Control's Adverse Childhood Experiences Prevention: Resource for Action*[9]

- **Goal: Strengthen health workforce capacity and resilience:** National Institute of Occupational Safety & Health's (NIOSH) Impact Wellbeing Guide[10]

- **Goal: Promote quality social connection:** National Center for Chronic Disease Prevention & Health Promotion's What Works in Schools[11]

[9] https://www.cdc.gov/violenceprevention/pdf/ACEs-Prevention-Resource_508.pdf
[10] https://www.cdc.gov/niosh/docs/2024-109/pdfs/2024-109.pdf?id=10.26616/NIOSHPUB2024109
[11] https://www.cdc.gov/healthyyouth/whatworks/what-works-overview.htm

This following provides a nascent look at a Draft Mental Health Research Agenda / Program Agenda in terms of data, equity, stigma and discrimination, determinants, interventions, and capacity: 1) visualize available data on mental well-being, mental distress, mental health conditions on accessible dashboard to guide action (data); 2) identify populations at increased risk for mental distress; ensure public health strategies are tailored to address their needs (equity); 3) develop and implement interventions and campaigns to reduce stigma and discrimination around mental health care-seeking (stigma and discrimination); 4) map upstream determinants of mental well-being and mental distress and identify shared opportunities for intervention (determinants); 5) support research institutions to examine and advance interventions that promote population level mental health (interventions); and 6) identify components of public health systems and workforce that can be leveraged to increase access to mental health screenings and services for priority populations (capacity).

In closing, Dr. Abad posed the following questions for the NCIPC BSC's consideration and discussion:

- ❑ What are ways that the BHCU can continue to implement CDC's mental health strategy and further define CDC's role in improving mental health from a public health perspective?
- ❑ How can the BHCU build and sustain relationships with the research community?
- ❑ What are ways to rapidly improve population level surveillance of mental well-being and mental distress?

Discussion Points

Dr. Miller expressed gratitude for the exciting and stimulating overview of the BHCU. She requested more details about the critical importance of systems integration. To take a public health approach, siloes must be broken down continuously. As a pediatrician, adolescent physician, and a school physician, she did not see the healthcare delivery system or school health integrated and lifted up. Those are just 2 small samples of systems integration, which is so critical to a public health strategy. As Dr. Ellis noted earlier, another important aspect is a life course perspective. There are incredible opportunities with public health strategies to talk about 2-generation (2Gen) and 3-generation (3Gen) approaches because children are nested within families, neighborhoods, and communities. Part of an emphasis on flourishing is to ensure that the entire environment supporting a child includes thinking about flourishing and thriving for the entire family and community.

Dr. Abad responded that the systems integration component is foundational to the BHCU's philosophy on how they are trying to work. Perhaps they need to articulate that better or make sure that they talk about the various aspects of the ecosystem and how they all play a role. In terms of healthcare systems, working with providers at all levels is very important. There is some ongoing work within the Injury Center related to trauma-informed curricula for pediatricians and ways to identify who providers are, where they live and work, and how to build their capacity to think about this. This is part of the capacity piece that is captured in the pillar of systems and providers. Consideration also must be given to better supporting the work of schools and ensuring that they also are integrated in a framework and strategy such as this. They wanted to create a strategy that was broad enough so that folks from all types of program areas would see themselves in it, and make sure to call attention to key areas. A longer narrative document will accompany the strategy that will cover these topics and will be posted on the website as well. She agreed that there are many opportunities with regard to the life course perspective. The BHCU connected with CDC's National Center on Birth Defects and Developmental Disabilities (NCBDDD), which looked at some of the co-occurrence of mental

and physical health conditions that they cover. It is important to figure out the aspects of life course and where to work in public health across the agency and identify opportunities to integrate and focus on mental health, as well as measure mental health.

In terms of ways to rapidly improve population level surveillance of mental well-being and mental distress, **Dr. Shenoi** pointed out that there are some existing methods that can be utilized. For instance, the Youth Risk Behavior Survey (YRBS) has 1 question about mental health, stress, depression, anxiety, et cetera at the school level. If done with a very large group of schools, this could probably be brought to scale. He wondered if this had been considered. Behavioral health rather than mental health would include aggression and autism spectrum disorder. An increasing number of these patients present to the emergency department (ED) now. It is difficult to manage these patients, and the diagnosis of autism is increasing.

Dr. Abad emphasized the importance of the population surveillance piece. CDC does have existing data systems, such as the BRFSS, Youth Risk Behavior Surveillance System (YRBSS), and National Health Interview Survey (NHIS). A few data systems within the agency collect data on distress and well-being. Part of it is about combining these data and making them accessible. Right now, it is necessary to access each of these systems separately, and they each have different samples, populations, tell different stories, et cetera. The desire is to pull this all together to make them accessible alongside each other, in addition to crisis-level data, such as the ED data, and encourage multisectoral dialogue around this and use of these data. This is just the beginning of a very long journey, but they would very much like to do this. They see the ED and crisis at different levels and are interested in working with their colleagues at SAMHSA and other places in terms of treatment and making sure that prevention is lifted up as being important.

Dr. Caine noted that SAMHSA came to mind because they conduct a lot of surveys, but there also are NIDA, National Institute of Mental Health (NIMH), National Institute on Alcohol Abuse and Alcoholism (NIAAA), Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD), and other institutes. While the NIH has a more disease-defined existence, they nonetheless have public health components. Prevention certainly is a major focus at the National Institutes of Health (NIH) now. SAMHSA has a very diverse set of portfolios. He asked how they envision being able to develop synergy in this as opposed to siloes. While there was mention of taking down silos, he wondered what practical steps would be developed to do this—even as they concentrate on building synergy within CDC.

Dr. Abad stressed that it is of interest to hers to look at not only silos within CDC, but also in the interagency space to ensure that there are strong collaborative relationships with people who are doing this and similar work. Public health is expansive, broad, and CDC is not the only agency that does this work, so they want to make sure that they are connecting well with the research and program agendas of CDC's sister agencies. She personally is trying to meet people and get to know what is happening. As mental health becomes a priority in the interagency space, there is going to be a lot more cross dialogue between agencies, which she welcomes. Part of this will be gaining a strong awareness of what exists and making sure that CDC's work is complementary and not duplicative and reflects back the strong work that is already occurring in other sectors. They are at the beginning of that journey and she invited NCIPC BSC members to email her or connect with the BHCU.

Dr. Ellis said she wanted to call attention to the "elephant in the room" pertaining to language. In addition to the use of the term "mental health," it also is important to talk about the use of the term "equity," particularly given that some of the communities that are most in need of these services are also in communities where equity has become a third rail word and stigma in itself. In looking at the collective vision that was written with ASTHO which is beautiful, she asked how they are thinking about language in a way that brings people to the table as opposed to pushing them away, particularly in terms of Notice of Funding Opportunities (NOFOs), strategies, resources, and tools. Rather than using jargon such as "equity," consideration must be given to unpacking and actually describing the outcomes and how equity would be measured in a way that is not just the absence of burden or the reduction of burden, but is the increase of positive supports that point toward thriving and flourishing. To think about the direction around that, she suggested using the validated HOPE Scale. There are 2 factors within the validated Hope Scale pertaining to agency and motivation, which begin to help understand the impact of interventions and fostering the term of "hope" and how that helps to improve one's sense of agency and motivation and moving toward more positive outcomes. Not just in this presentation and the BHCU, but writ large one of the biggest obstacles in public health currently regards how to continue to move the needle forward in achieving equity when that term cannot be used in some of the communities that most need this work.

Dr. Abad agreed that it is important to talk about this work in a way that is inclusive, non-alienating, and responds to the populations and where they are. She believes in community-informed programming and the importance of being participatory, inclusive, and building things in collaboration with the people they are serving. Those are principles she has long believed in and seen the value of, and she has had conversations with some health departments that are building community hubs, or meeting spaces that also can be attached to services that are of critical importance. The role of trauma must be considered expansively in terms of what it means to have experienced trauma as a community and how that impacts intersecting with services later. Public health has a lot to do there. Coming out of the COVID-19 pandemic, there was low trust in public health at all levels. These are unignorable facts, so this work has to be grounded in a true, real, non-jargony sense of what equity looks like and means—especially in the post-COVID environment. Many dynamics changed, but also many stayed the same. While Dr. Abad said she had a longer response to this, she wanted to acknowledge Dr. Ellis's observation and assure her that this unit and agency are committed to this.

Dr. Kunins emphasized how exciting it was to hear about this work and that CDC is stepping up in this way. She noticed the term "serious mental illness" was now being used, which is a term within behavioral health that defines a population and service sector that in her view could benefit from a public health perspective. She asked about CDC's perspective on using that term and that population, particularly because this population suffers from immense premature mortality, including immense racial disparities in premature mortality among folks with that set of conditions. In terms of people experiencing homeless and intersections with serious mental illness and SUDs, increasingly at the local public health level, she is aware of many instances in which the health department is being asked to step into this space in terms of delivering services, generating data about the impact of those services, and describing the health conditions of these folks. She is very excited that this will be a priority again at the CDC and thrilled for federal leadership at the agency.

Dr. Abad acknowledged that this might be an area that is more advanced in the field than CDC is at this point. People are seeing the connections, and it is coming to their doorsteps. The strategy does not have a dedicated place for this, but it fits within the public health promotion model and primary, secondary, tertiary, and PWLE in terms of mental health conditions. The

agency needs to better understand some of the unique needs for these populations and what public health responses and services entail in that space. The social determinant around housing is one piece and a number of other issues need to be understood in terms of the touch points with the public health system and how CDC can expand capacity, resources, guidance, and tools. People are innovating in this space already, so a platform is needed for cross-sharing and collaborative learning for people to talk to each other about the innovations they are championing, and then look at what kind of resources and capacity are needed at the federal level to meet them where they are. It also is important to distinguish between treatment and care and to weave in public health perspectives alongside the treatment and care approach.

The 2024 National Strategy for Suicide Prevention and Action Plan

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Dr. Stone briefed the NCIPC BSC on the background and development of the *National Strategy for Suicide Prevention* (NSSP; *National Strategy*) and *Federal Action Plan (Action Plan)*, related communication and dissemination work, and next steps. In Spring 2023, the Biden-Harris Administration requested a new *National Strategy* and *Action Plan*. The last *National Strategy* was published in 2012 and was a 10-year strategy, so a new strategy was overdue. HHS, acting through the Behavioral Health Coordinating Council's (BHCC) Suicide Prevention and Crisis Care subcommittee (SPCC), was charged with interdepartmental engagement to build a cross-government strategy. The new *National Strategy* and *Action Plan* were released a year later on April 23, 2024.[12]

Suicide death rates increased by 36% overall from 2000–2022, which was comprised of 30% males and 48% females. Since the last *National Strategy*, there has been a nearly 30% increase in suicide rates overall. Thus, urgent action is needed. A study examining suicide rates from 2018–2021[13] revealed some concerning increases in suicide across racial and ethnic groups of 26% among American Indian/Alaskan Native (AI/AN) populations, especially among persons 25-44 years of age; 19% among Black populations, especially in persons 10-24 and 25-44 years of age; and 7% among Hispanic populations, especially among persons 25-44 years of age. There was a 5% increase overall among persons 25-44 years of age across all racial and ethnic groups. In 2022, non-Hispanic AI/AN groups had the highest rate of suicides at 27% per 100,000 and the largest number of suicides at 75%, for the greatest burden among the non-Hispanic White population. As tragic as all of those deaths are, many more people plan and attempt suicide. Based on YRBSS data from 2021,[14] a total of 22% of high school students endorsed seriously considering suicide, including 30% among females and 27% among AI/AN students. The lowest rate was among Asian populations at 18%. There were very concerning rates among LGBQ+ students of 45% and students with same sex partners of 58%. All of this serves as a backdrop for the *National Strategy* and why it is so important.

[12] https://www.hhs.gov/programs/prevention-and-wellness/mental-health-substance-abuse/national-strategy-suicide-prevention/index.html
[13] https://www.cdc.gov/mmwr/volumes/72/wr/mm7206a4.htm
[14] https://www.cdc.gov/healthyyouth/data/yrbs/yrbs_data_summary_and_trends.htm

In terms of the structure that was utilized to develop the *National Strategy*, this charge came down to the HHS from the White House Domestic Policy Council (DPC). SAMHSA and CDC served as Co-Leads of the BHCC SPCC and went on to develop the process for the *National Strategy* as part of Project Management Team, working alongside the NIMH and the Assistant Secretary for Planning and Evaluation (ASPE). One of the first orders of business was to form an Interagency Workgroup (IWG). There already were a good number of individuals from the other HHS group, but it also was necessary to reach beyond HHS to bring in as many people as possible. There was a lot of support from the National Action Alliance for Suicide Prevention (Action Alliance), the Suicide Prevention Resource Center (SPRC), and CDC and SAMHSA communications.

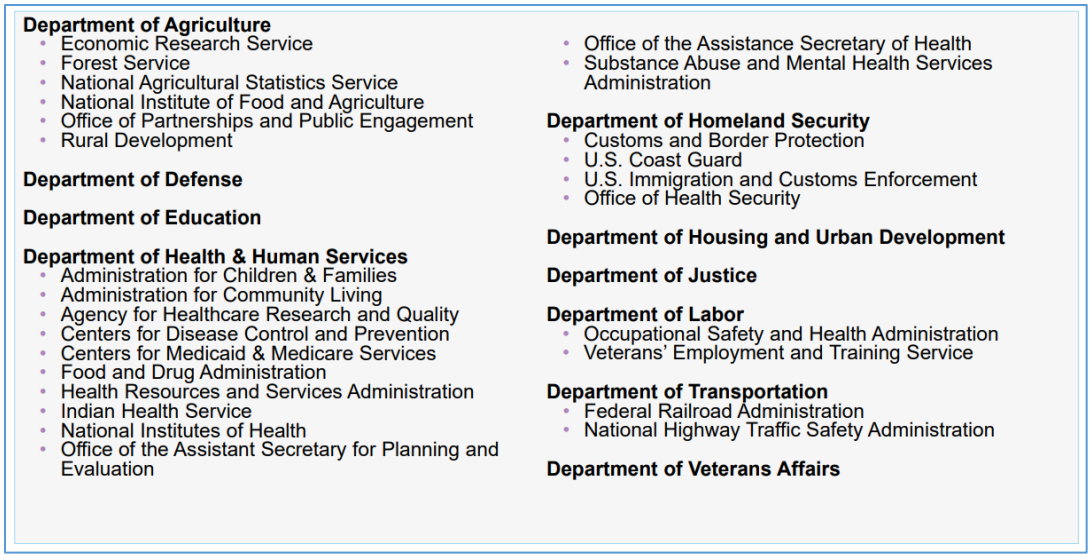
The *2024 National Strategy for Suicide Prevention*[15] is a bold new 10-year, comprehensive, whole-of-society approach to suicide prevention that provides concrete recommendations for addressing gaps in the suicide prevention field. The new 2024 *National Strategy* incorporates advancements in the field since 2012 and addresses emerging issues; is designed to guide, motivate, and promote a more coordinated and comprehensive approach to suicide prevention; and focuses on addressing the many risk and protective factors associated with suicide, with the recognition that there is no single solution to this complex challenge.

The newly formed IAW was comprised of 20+ agencies across 10 federal departments with support from the SPRC and Action Alliance and the Project Management Team that was co-led by SAMHSA, CDC, NIMH, and ASPE/HHS. Given that they did not want this to be only a federal effort, they gathered input from invested groups across the country outside the federal government. They reviewed data trends, the *2012 National Strategy* and *2017 Assessment Report, a*ssessed gaps to determine areas that needed updating, and reviewed 15 key reports and recommendations, including the following for example:

- ❑ Surgeon General's Call to Action to Implement the National Strategy (2021)
- ❑ Advisory on Social Media and Youth Mental Health (2023)
- ❑ VA National Strategy for Suicide Prevention (2018)
- ❑ Advancing Comprehensive School Mental Health Systems (2019)
- ❑ National Guidelines for Behavioral Health Crisis Care (2020)
- ❑ Preventing Suicide: A Technical Package of Policy, Programs, and Practices (2017)

The Action Alliance and SPRC developed and conducted a national needs assessment that received over 2,000 responses from people across the country who participated in a series of listening sessions that included people with suicide-centered lived experience, Tribal members, youth, suicide prevention experts, and partners in the private sector. The IAW and other federal contributors included the following:

[15] www.hhs.gov/nssp



Examples of changes from 2012 to 2024 *National Strategy* included the following:

- ❑ Creating a new strategic direction on equity in suicide prevention, with a greater focus on supporting PWLE, populations disproportionately affected by suicide and marginalized populations, and SDOH
- ❑ Strengthening the focus on upstream prevention/comprehensive approach
- ❑ Reflecting advances in surveillance, including the use of real-time data and data science
- ❑ Adding new goals, including lethal means safety; 988, the new national hotline; workplace suicide prevention; and suicide prevention infrastructure in states, tribes, local communities, and territories
- ❑ Adding new objectives related to social media/digital technology, substance use, ACEs, and youth
- ❑ Strengthening objectives related to continuity of care, care transitions, and provider training
- ❑ Elevating evaluation throughout strategy, including the addition of an objective to evaluate the *National Strategy*

The *National Strategy* includes 4 strategic direction components that include: Community-Based Suicide Prevention; Treatment and Crisis Services; Surveillance, Quality Improvement, and Research; and Health Equity in Suicide Prevention. These strategic directions and their respective goals are as follows:

Strategic Direction 1: Community-Based Suicide Prevention

Goal 1: Establish effective, broad-based, collaborative, and sustainable suicide prevention partnerships.
Goal 2: Support upstream comprehensive community-based suicide prevention.
Goal 3: Reduce access to lethal means among people at risk of suicide.
Goal 4: Conduct postvention and support people with suicide-centered lived experience.
Goal 5: Integrate suicide prevention into the culture of the workplace and into other community settings.
Goal 6: Build and sustain suicide prevention infrastructure at the state, tribal, local, and territorial levels.
Goal 7: Implement research-informed suicide prevention communication activities in diverse populations using best practices from communication science.

Strategic Direction 2: Treatment and Crisis Services
Goal 8: Implement effective suicide prevention services as a core component of health care.
Goal 9: Improve the quality and accessibility of crisis care services across all communities.

Strategic Direction 3: Surveillance, Quality Improvement, and Research
Goal 10: Improve the quality, timeliness, scope, usefulness, and accessibility of data needed for suicide-related surveillance, research, evaluation, and quality improvement.
Goal 11: Promote and support research on suicide prevention.

Strategic Direction 4: Health Equity in Suicide Prevention
Goal 12: Embed health equity into all comprehensive suicide prevention activities.
Goal 13: Implement comprehensive suicide prevention strategies for populations disproportionately affected by suicide, with a focus on historically marginalized communities, persons with suicide-centered lived experience, and youth.
Goal 14: Create an equitable and diverse suicide prevention workforce that is equipped and supported to address the needs of the communities they serve.
Goal 15: Improve and expand effective suicide prevention programs for populations disproportionately impacted by suicide across the life span through improved data, research, and evaluation.

Having a strategic direction focused on health equity is new to the *National Strategy* time and it is woven through the entire strategy and was front and center in the development process. In addition to the goals within each strategy, many objectives are identified within each goal.

The *National Strategy* is accompanied by the first-ever *Federal Action Plan* (*Action Plan*), which identifies more than 200 actions across the federal government to be taken over the next 3 years in support of those goals, 40 of which are CDC's. The *Action Plan* seeks to facilitate and strengthen the roles of the following:

- ❑ Federal departments and agencies
- ❑ State, tribal, local, and territorial agencies, and others in the public sector
- ❑ Community-based organizations
- ❑ Health care systems and providers
- ❑ Businesses and other private sector partners
- ❑ Individuals with suicide-centered lived experience
- ❑ Schools, higher education, and other educational institutions
- ❑ Workplaces

Some sample actions, all of which are resource-dependent, including the following:

- ❑ **NIH:** Encourage research on the relationship between use of social media and digital technology among youth and suicide-related outcomes, and opportunities for intervention (Goal 11)

- ❑ **VA:** Design and implement toolkits for working with specific Veteran populations at disproportionate risk (e.g., AI/AN Veterans, LGBTQ+ Veterans, women Veterans, rural Veterans) (Goal 13)

- ❑ **CDC:** Support implementation of tools and other resources for indigenous evaluation of funded tribal suicide prevention activities (Goal 15)

- **IHS:** Implement evidence-based universal suicide risk screening across health care systems at all IHS Areas and facilities (Goal 1)

- **SAMHSA:** Identify and disseminate prevention strategies to local communities on risk factors and social determinants of health related to suicide prevention, based on community needs (Goal 2)

- **USDA:** Identify strategies to support mobile crisis teams through existing rural development programs and develop and disseminate resources on how programs can support crisis care (Goal 9)

The Communication Plan seeks to: 1) create awareness of the 2024 *National Strategy* and *Action Plan*, including actionable dissemination steps for the suicide prevention community; 2) emphasize empathy, the commitment to health equity, and the comprehensive approach set forth in the 2024 *National Strategy*; and 3) activate new and continued participation and commitments from partners across diverse agencies and organizations. Materials developed for this plan include a press release, social media toolkit, conference presentations, and other materials for public and private sector.

CARE: Caring about suicide prevention requires a thoughtful strategy and the intersection of prevention, intervention, and postvention supports. • CONNECT: Connecting to community and culture are key protective factors for health and well-being, including protecting against suicide risk. Connecting with data and research helps inform efforts and improve the ability for effective suicide prevention strategies. • COLLABORATE: Carrying out a comprehensive approach relies on collaboration with public and private sector partners, people with suicide-centered lived experience, and people in populations disproportionately affected by suicide and suicide attempts. Everyone has a role to play in achieving meaningful, equitable, and measurable advancement in suicide prevention.

There is a Public Call to Action tagline, which is CARE, CONNECT, COLLABORATE that are defined as follows and are intended to help people see themselves in this and feel that they relate to the *National Strategy*:

- **CARE:** Caring about suicide prevention requires a thoughtful strategy and the intersection of prevention, intervention, and postvention supports.

- **CONNECT:** Connecting to community and culture are key protective factors for health and well-being, including protecting against suicide risk. Connecting with data and research helps inform efforts and improve the ability for effective suicide prevention strategies.

- **COLLABORATE:** Carrying out a comprehensive approach relies on collaboration with public and private sector partners, people with suicide-centered lived experience, and people in populations disproportionately affected by suicide and suicide attempts. Everyone has a role to play in achieving meaningful, equitable, and measurable advancement in suicide prevention.

The White House launch was held on April 23, 2024. The launch included remarks by federal leaders and the administration. One of the most moving aspects of the launch was a conversation between the Surgeon General and actor Ashley Judd; musician Aloe Blac; and people with suicide-centered lived experience, including suicide loss survivors. The Surgeon General has a great ability to speak with people and has done a lot of work pertaining to

loneliness. This was a heartwarming and hopeful conversation. Public and private sector partners in public health and mental health attended from the state, Tribal, community, and territorial levels.

In terms of next steps, a specific objective is to evaluate the *National Strategy*. A monitoring and evaluation plan is being developed for release at a later date that will evaluate agency actions and the *National Strategy* itself, build out of agency timelines and metrics of accountability, and develop core metrics to monitor progress and success. The Action Alliance and federal partners will take the lead on this objective.

Discussion Points

Dr. Pollack Porter asked Dr. Stone to speak to any conversations that emerged around policy, opportunities for new policies, and/or policy implementation and where there was more interest and energy in terms of suicide prevention.

Dr. Stone emphasized that policy is integral to the success of the *National Strategy*. Policies at all levels are included in the strategy. This includes upstream prevention, strengthening economic supports, affordable housings, et cetera. Policy initiatives and political will to develop policies are going to be very important. For example, it is known that increases in minimum wage are associated with decreases in suicide. Policies related to workplaces that ensure that the workforce is training their staff on suicide prevention are important. Large policies pertaining to healthcare systems and making sure that there is continuity of care within the healthcare system and across care transmission and payments are also crucial. A major element of Goal 8 regards healthcare policy. A lot of thought was given to how policies need to be integrated.

Dr. Walley observed that the coalition of federal agencies built in order to achieve buy-in for the *National Strategy* was impressive and offered hope that this would bring focus and resources to the important topic of suicide prevention. Specific to the Injury Center, it seems like there is considerable overlap between the issues the Injury Center cares about (e.g., overdose, violence, other traumatic deaths, and the antecedents to those), so he wondered how they work within the Injury Center to develop the overlap of these issues from a data strength perspective. He was thinking specifically about all of the work that has been on describing overdose and assessing the overlap between overdose and suicide, for example.

Dr. Stone responded that the work of the Injury Center is part and parcel of the work that is needed to help prevent suicide. There are 40 CDC actions within the *Action Plan* over the next 3 years, about 14 of which are actions within the Injury Center itself, many of which focus on ACEs and PCEs. The DOP also has actions within those. The Injury Center is working through the actions within the Action Plan to bring its work to bear for suicide prevention work and is working with the new BHCU. NCIPC also has data and data science that they are continually enhancing in terms of trying to forecast suicide rates. All of the work dovetails nicely with what the Injury Center is trying to do within the *National Strategy*.

In developing the new *National Strategy*, **Dr. Caine** asked whether the workgroups evaluated the previous strategies to gain insight into why they have not had the impact anticipated. There have been 2 strategies over a 20-year period and, as Dr. Stone illustrated graphically, suicide has increased dramatically. Related to that, the DIP and DOP have had 24 grants to comprehensive community programs, many of which encapsulate a lot of the “To Do” list of this particular strategy. He suspected that the suicide rate has increased in those communities because it has increased throughout the country and did not decrease the 10% that was

projected in the projects. He wondered whether specific lessons have been learned from those projects that might be informative.

Dr. Stone replied that related to the first question pertaining to the previous iterations of the *National Strategy*, the BHCC-SPCC already was working in response to the Surgeon General's Call to Action to implement the 2012 *National Strategy* to determine how the federal government could better address the goals and objectives when charged with developing a new strategy. What is different about some of the new areas of focus, including an increased footprint for comprehensive prevention, is that there is now a whole of society and whole of government approach. With the 200 actions in the *Action Plan*, she feels like they can begin to more earnestly put into place some of the actions in the 2012 *National Strategy* that were not implemented and to fill the gaps from the 2012 iteration. The Comprehensive Suicide Prevention (CSP) Program first funded 24 states, territories, and local communities in 2020, and they have until 2025 to achieve their 10% reduction. However, the COVID-19 pandemic occurred in the midst of that time, and suicide rates decreased during that timeframe except within the populations she described. The picture is complex and NCIPC feels that what they were able to contribute to the new *National Strategy* builds on what was working, seeks to fill the gaps, brings together numerous partners to help do that, and includes a monitoring and evaluation plan. Her hope is that this is what it takes to achieve progress.

Dr. Miller expressed gratitude to Dr. Stone for her passion, excitement, and enthusiasm for this work. Regarding the Communications Strategy and recognizing the importance of emphasizing equity and the commitment to health equity, she asked Dr. Miller to speak to language equity in the Communications Strategy and ensuring that there is user translation of materials across multiple languages. As a clinician in the Commonwealth of Pennsylvania, she cares for transgender and gender-diverse young people from multiple states that forbid such care, which is driving much of the suicidal ideation of the population of these young people. She did not hear anything in the presentation about the ways in which harmful policies are contributing to suicide and what will be done to tailor communication strategies to ensure that transgender and gender-diverse young people feel loved and cared for and that there is a commitment to ensuring their health and wellbeing.

Dr. Stone emphasized that this breaks her heart and that it is a true issue for transgender and gender-diverse youth and others who have gender identifies that are not either/or. While this was not reflected per se in the brief presentation, the *National Strategy* specifically calls out these groups. The *National Strategy* specially defines "disproportionately affected populations" and delineates specific objectives related to those groups. This also is integrated as part of the healthcare system and community work. Specifically related to communications, she expressed her hope that they will be able to do some translation and have more extensive messaging around the *National Strategy*. It is important to note that there is not a single group, agency, or office at the highest level within the federal government that is charged with suicide prevention, which is truly what is needed and they have suggested. These materials are not available centrally, so it is up to the NCIPC to develop them.

Updated Sexual Violence Research Priorities

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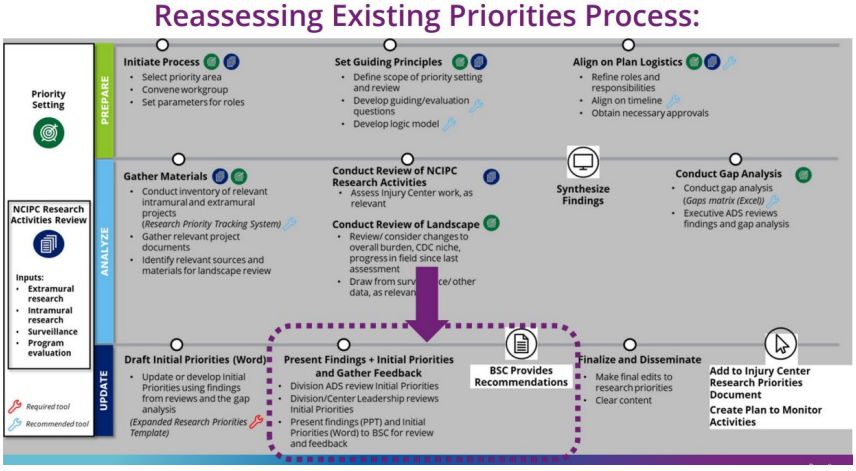
Dr. DeGue explained that the purpose of this project was to update DVP's research priorities for SV. Research priorities are important because they help set research goals, prioritize research that will have a public health impact, encourage innovative research, and focus public health expertise at CDC on the greatest needs that can be addressed. Research priorities are also intended to be updated every 3 to 5 years and are specific to what CDC can do to move the field forward. They are not meant to be all of the research priorities for the entire field, but instead are to help direct CDC's work to critical gaps over that short time period. NCIPC's last SV research priorities were published in 2015 and were focused on 3 areas, which were to: 1) identify modifiable risk and protective factors for SV perpetration by adolescents and young adults to better understand the ideal developmental points and focus for effective prevention; 2) evaluate the effectiveness and economic efficiency of approaches to prevent SV that target high-risk populations and shared risk factors with other health outcomes; and 3) evaluate the effectiveness of SV prevention approaches that have substantial uptake in practice and are evidence-informed but lack evaluation research evidence.

This round of updates has an important difference from the prior research priorities. It includes research on CSA as a form of SV. Although CSA falls under CDC's definition of SV and has for many years, as well as the definition of child abuse and neglect (CAN), it has not been explicitly considered when developing prior research priorities. This inclusion is important for a few reasons. Research on CSA often has been siloed from other SV research in the literature and distinguished by a focus on adult-to-child perpetration or child victimization by other children or adults. In addition, the evidence base for primary prevention of perpetration is more limited for CSA. This has made the addition of CSA to the SV priorities somewhat challenging in the ways in which CSA is measured differently since it is measured separately and the prevention strategies often are unique for CSA specifically. An effort has been made to incorporate the various literature that has been found into the research priorities, and the unique needs of the CSA literature into higher level priorities and places where something is known to be specific to CSA. This diagram illustrates the process that the Injury Center designed for research priority updates, with the current stage highlighted by the large arrow:



The review had 3 key components, including an internal review of NCIPC research activities; an external landscape review, including changes to overall burden, progress in the field since the last assessment, research advances, and so forth; and partner interviews to gather additional perspectives from academic researchers and partner organizations engaged in SV prevention efforts. The timeframe for the review was 2015 to the present. The guiding questions for the process included the following:

1. What research has been carried out by the Injury Center to address SV?

2. How has external research addressed gaps and priority areas that align with NCIPC's research priorities for SV?

3. How has the field or overall burden changed since priorities were last assessed?

4. What other issues or research questions have emerged from research and practice-based efforts?

Dr. Leemis described the process used for the internal and external reviews in more detail and highlighted some of the high-level findings from those reviews and the input received from the partner interviews. The internal and external landscape reviews sought to answer the guiding questions and assess the Injury Center's progress on advancing its existing priorities, identify what the field has learned about SV prevention since 2015, and denote any gaps.

Broadly speaking, the process for the NCIPC internal review was to conduct a detailed review of relevant articles and reports, including the following:

- ❑ **Research Priority Tracking System (RPTS):** Reviewed all relevant articles in RPTS output (n = 136)

- ❑ **Surveillance reports** (e.g., NISVS, YRBS, et cetera)

- ❑ **Reports and supporting documents not in RPTS** (e.g., Gender Based Violence National Plan, Report to Congress on CSA Prevention)

- ❑ **Programmatic data from relevant DVP programs** (e.g., Rape Prevention and Education (RPE), Domestic Violence Prevention Enhancement and Leadership through Alliances (DELTA), Preventing Violence Affecting Young Lives (PREVAYL), etc.): SMEs identified and reviewed programmatic documents and provided summary findings.

In terms of the external landscape review, the process included a non-systematic "review of reviews." This involved a thorough search of literature reviews and meta-analyses published from 2015–2023 related to SV prevalence and trends, risk and protective factors and etiology, efficacy and effectiveness research, and implementation science. Approximately 170 publications were identified and reviewed. This was a semi-structured process in which the articles were coded, especially looking for information related to previous research priorities and other considerations such as health equity. This was followed by SME synthesis and discussion to identify high-level themes, patterns, and gaps to inform DVP's research priorities.

Though somewhat difficult to synthesize given the number of articles reviewed, the high-level findings are summarized below by each of the guiding principles:

External SV prevention partners were interviewed to gain additional perspectives on CDC's current priorities for SV, including interviews with 6 programmatic partners and 3 academic researchers. Discussion topics focused on the following:

- ❑ Advances in SV prevention research in last decade
- ❑ Evidence of programmatic change (e.g., uptake) resulting from research advances
- ❑ Emerging strategies, technologies, methods, practices, or needs that can enhance SV research or should be focus of research
- ❑ Highest priorities for SV research in the next 3 to 5 years
- ❑ Biggest gaps with potential to inform practice

The high-level findings from the interviews with academic researchers and partner organizations are summarized below within 5 key SV priorities:

Risk and protective factors	• Understanding shared (and unique) factors remains important and helpful • Attention to *shared* factors should not be at the expense of specific focus on SV outcomes
Bystander Prevention	• Cited as a key successful outcome of the last decade of SV prevention work funded by CDC • Shows efficacy and wide uptake • Additional research needed to understand and support fidelity
Cost Analysis	• Cost of violence and cost-effectiveness estimates are useful for partners as they demonstrate and describe the need for more implemented programs and research • More work needed on cost-effectiveness
Community-Level Strategies	• More attention needed on community-level and policy strategies • Communities are asked to do community-level prevention but don't know what it "looks like"
School-based Prevention	• K-12 schools remain important, but more efforts are needed to expand prevention efforts to other contexts (e.g., bars, virtual, sports) • Continued effort needed in college settings to comply with Dept of Ed mandates; focus has shifted too much to younger ages

Key gaps and needs identified from partner interviews including the following high-level findings categorized by 2 types of research:

Perpetration research	• **Measurement development** work is needed to improve measurement of CSA perpetration and some forms of SV (e.g., tech-facilitated) for research purposes • Outcome evaluations are not consistently measuring **effects on perpetration**; this is difficult due to a lack of perpetration data • **Perpetration prevention** is an important new direction for CSA, and should be an ongoing focus for SV
Implementation Research	• Identify **essential elements** of strategy types, including component analysis of multi-component programs • **Adaptation** of programs for specific communities (as needed) • Understand effectiveness of **in-person vs. virtual** implementation • Understand how **fidelity** impacts effectiveness

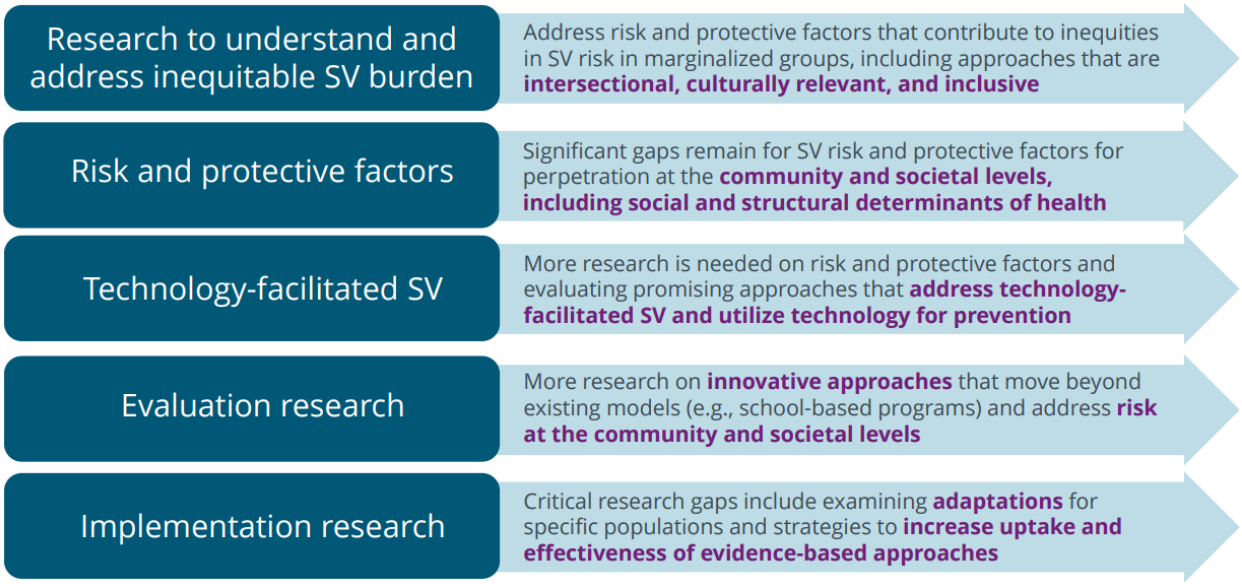
A number of areas of interest for future research were identified in the key areas of health equity, technology and virtual spaces, and CSA:

Health Equity
- ❑ Identify existing strategies that are working for subgroups
- ❑ More culturally-specific/representative data are needed
- ❑ More attention should be paid to AI/AN, transgender, immigrant, and disability populations
- ❑ Connections between racism, oppression, and economic justice and SV should be addressed

Technology and Virtual Spaces
- ❑ Online implementation is needed of prevention strategies
- ❑ Online communities should be used for prevention CSA

Child Sexual Abuse
- ❑ Addressing CSA along with other forms of SV in these priorities is helpful, but unique aspects of CSA also should be considered
- ❑ Problematic youth sexual behavior needs research attention
- ❑ Parents are an important and largely untapped focus for intervention for CSA and SV
- ❑ Comprehensive sexual education is a promising approach that needs more research for CSA/SV prevention

Dr. DeGue reviewed key gaps and draft research priorities. While there are many research gaps in the field, DVP focused on those that align with its mission and goals and on which DVP could make progress in the next 3 to 5 years. As a reminder, SV includes CSA even if that is not specified. The gap analysis for informing the updated SV research priorities identified 5 key gaps, which are categorized at a high level by topic area as follows:



Priorities were drafted based on the gap analysis and reviewed by internal DVP and NCIPC leadership. The draft priorities were reviewed externally by 15 federal and non-federal partners (e.g., academic researchers, national partners in the field of SV, and culturally-specific organizations that support SV survivors). Partners interviewed in the earlier phase were invited to review the full draft as well. Based on this process, CDC's proposed priorities for SV will focus on the following 4 areas: 1) etiological research on risk and protective factors for SV; 2) evaluation research to expand the evidence base for SV prevention; 3) implementation research that can guide prevention planning; and 4) research specifically advancing health equity and SDOH. The proposed priorities and examples of potential research questions give DVP and potential funding applicants and partners a better idea of how these priorities might be operationalized. It is important to note that these examples are not meant to be inclusive of any research that could fall within these priorities.

Priority 1: Identify and increase understanding of modifiable risk and protective factors for SV perpetration with an emphasis on community and societal factors. Example research questions that address gaps within this priority include the following:

1.1 Which modifiable physical, social, or economic characteristics of communities (e.g., physical and online environments, policies and norms that support gender equality, alcohol policies, social norms related to SV perpetration, economic supports, collective efficacy) serve to increase or decrease risk for SV perpetration at the community level?

1.2 What factors protect against SV perpetration for individuals exposed to risk at the individual, relationship, and/or community level (e.g., school or community connectedness, healthy sexuality, gender relationship norms, employment or economic stability)?

1.3 Do different forms of SV perpetration share modifiable risk and protective factors with each other and/or with other types of violence and other public health issues?

1.4 What mechanisms and processes influence how social and structural determinants of health (e.g., economic and physical conditions, social policies, systems, social norms, racism, sexism, heterosexism) operate to impact the risk for SV perpetration and contribute to disparities in SV victimization?

1.5 How do risk and protective factors interact, over time and across levels of the social ecology, to increase or buffer against risk for SV perpetration and/or victimization? Across the lifespan?

Priority 2: Evaluate the effectiveness of innovative approaches to prevent SV perpetration, prioritizing approaches that reduce or protect against risk at the community and societal levels. Example research questions that address gaps within this priority include the following:

2.1 To what extent are technology-based approaches (e.g., social media policies, SV prevention-related apps or games, web-based resources for those concerned about their or others' sexual thoughts or behavior toward children) effective at reducing risk for SV perpetration both in person and online?

2.2 Do organizational or public policies (e.g., school safety policies, workplace policies, social welfare policies, policies that promote gender or health equity) that address characteristics of the social, physical, or structural environment impact rates of SV at the population-level?

2.3 To what extent do approaches focused on reducing risk and building resilience in families prevent CSA victimization, SV perpetration, and other problematic and/or harmful sexual behaviors among youth? Examples of such approaches include building safe, stable, and nurturing parent-child relationships and providing economic and structural support for women and families.

2.4 Are approaches that create protective community environments by addressing the physical environment, economic or social incentives (or consequences) for behavior, or other characteristics of the community (e.g., alcohol outlet density, creation and enforcement of laws or policies that reinforce norms against SV perpetration, "greening" initiatives, approaches to improve community connectedness and collective efficacy) effective for reducing SV perpetration?

2.5 Do community-level or multi-level approaches that promote sexual health (e.g., policies that require comprehensive sexual education, parent training on sexual health communication combined with school-based sexual health programs) and address shared risk and protective factors prevent SV and related public health outcomes?

Priority 3: Identify factors and approaches that influence implementation quality, reach, and effectiveness for existing evidence-based SV prevention approaches. Example research questions that address gaps within this priority include the following:

3.1 Are evidence-based prevention approaches focused on the individual and relationship levels (e.g., healthy relationships programs, bystander training, approaches engaging men and boys) more effective when combined with community-level approaches (e.g., policy, built environment approaches, social norms change)?

3.2 Which elements of evidence-based prevention approaches must be retained to prevent SV as modifications to the approach (e.g., linguistic or cultural factors, accessibility) are made to increase uptake and cultural relevance for different communities?

3.3 Which implementation supports (e.g., technical assistance, implementation or adaptation guidance, practitioner and community partner networks) are effective for improving SV prevention approach quality, reach, and outcomes and achieving buy-in from communities?

3.4 How do adaptations to delivery mode (e.g., online vs. in-person, implementer type, setting) impact effectiveness for evidence-based SV prevention approaches?

3.5 What are the most significant barriers to implementing and disseminating SV prevention approaches, and how can these barriers be mitigated?

Priority 4: Advance etiologic, evaluation, and implementation research on the social and structural determinants of health that contribute to inequities in risk for SV victimization. Example research questions that address gaps within this priority include the following:

4.1 How do social and structural determinants of health (e.g., access to healthcare, built environment, economic stability, supportive social context, education) protect against risk for SV victimization and perpetration in communities experiencing inequitable risk for SV (e.g., marginalized racial/ethnic groups, sexual and gender minority individuals, or individuals with disabilities)?

4.2 How do social, economic, and political structures impact risk for SV victimization or perpetration?

4.3 Do policies or programs that address economic inequality (e.g., housing access, income supports, wage equity policies) reduce inequities in risk for SV victimization or perpetration?

4.4 Do prevention approaches that address historical, collective community, or intergenerational forms of trauma (e.g., adverse childhood experiences, community violence, structural racism, patriarchal social structures) reduce SV outcomes among historically marginalized communities?

4.5 How do characteristics of implementation (e.g., modality, facilitator type, setting, etc.) affect outcomes for SV prevention approaches implemented in communities experiencing inequitable risk for SV (e.g., marginalized racial/ethnic groups, sexual and gender minority individuals, or individuals with disabilities)?

Discussion Points

Dr. Malik was puzzled by the notion that "parents are an untapped focus" of intervention, which seemed odd because discussions and interventions might begin in the home because parents are the first ones involved when the school calls. He requested more discussion about this concept, noting that it should be made a priority to close this loop.

Dr. Leemis responded that in terms of the field, many of the rigorous evaluations that have been performed have been child-focused and about implementing programs in schools that increase knowledge and skills. SV perpetration management has been evaluated to determine whether it helps prevent recidivism, but that is not necessarily the focus of primary prevention. There have been some parental interventions that have demonstrated some evidence of being effective at reducing CSA, but that is limited. Especially in the global context, a lot of programs have been focused on engaging fathers and increasing gender-equitable norms and attitudes. There has been less focus on CSA outcomes as an evaluation outcome, but this makes a lot of conceptual sense and should be funded and rigorously evaluated.

Dr. Caine recommended using the word "families" instead of "parents" because families are highly diverse in their construction now and it is important to be as malleable as possible relative to engaging them. This is particularly important with regard to CSA because a lot of this occurs within families as broadly construed. As he listened to the presentation, he was trying to fit CSA into each of the priorities, but it did not always read that well. It read clearly to sexual abuse as the program used to be, but it does not read as easily toward looking to a future in which the work focuses on CSA as well as SV among a variety of individuals. Families are extremely important, inclusive of parents as the immediate generators of their offspring. However, this could include grandparents or other people in family constellations regardless of how they are construed. Given that CSA is the top headline, it is very important that it shows up.

Dr. DeGue acknowledged that it was challenging to incorporate CSA across the priorities because the literature for each has been separate and they have different needs. In the full written research priorities, this may become clearer based on the additional text included to explain that CSA can fit in and how these prioritize it more clearly. This continues to be a challenge with which they are grappling, so she invited suggestions on how to adjust the priorities to make it clearer.

Dr. Caine asked what happens to these children in terms of the outcomes to their health and well-being and how many adapt despite the awful trauma. ACEs are known to be risk factors, but it is important to understand what contributes to those who go on to healthier outcomes. He wondered if they thought the priorities would capture this well.

Dr. Leemis responded that the field is continuing to answer these questions. A lot more is known about the risk factors, and the Injury Center is making a concrete effort to think about the protective factors and supports that potentially can help mitigate prior trauma or violence experiences. Based on the SV literature reviewed for the last 10 years, the protective factors work related to SV has been focused primarily on individual and relationship levels. While some studies have focused on medical access, relational protective factors such as trusted adults, social support, and school belonging have been the focus of the published literature over the last several years. The Injury Center wants to prioritize protective factors more intentionally moving forward.

Dr. DeGue added that the intent of Priority 1 is to capture protective factors. In addition to what Dr. Leemis said, they want to focus on the individual and relationship level factors and to try to gain a better understanding about what it is over time about the community, neighborhood, and/or family levels that can protect individuals against risk factors that they might experience.

Dr. Caine said he was thinking about the presentation earlier in the morning about primary, secondary, and tertiary factors. One of the community factors that adds to the secondary and tertiary interventional or rehabilitative outcomes in addition to primary prevention is that so many people are deeply exposed or traumatized already. Consideration must be given to what to do with all of the individuals who have been traumatized at whatever level.

Dr. DeGue indicated that while that type of response work is not a critical part of the DVP's mission, they identify supporting survivors to lessen those harms as one of the critical strategies that is needed in the SV Resource for Action to be implemented within all communities. Those survivors will need supports in order to reduce harm to them and the community in the long-term.

Dr. Caine clarified that he was seeing this as working with those who are deeply traumatized already as a means by which to prevent the next generation of exposures. He perceived this as ultimately primary as well as secondary and tertiary.

Dr. Pollack Porter recalled that the partner interviews identified that more effort is needed to expand prevention efforts to other contexts, such as bars and sports. She did not see mention of working across sectors with entertainment, athletics, the Y, scouting, and other types of organizations that are particularly important with regard to CSA.

Dr. Leemis pointed out that this was not intentionally omitted, and that bars and sports were just examples. There is a lot of work underway in the youth-serving organization space, particularly in terms of partnering with youth and adolescents. That portfolio of work would squarely fit in this space. There is work ongoing in the entertainment and sports spaces as well. A lot of work is being done in terms of examining SV as it relates to sports teams and potentially sports as a protective factor, which also would fit here as well.

Dr. DeGue added that entertainment and sports teams might represent innovative approaches of interest under Priority 2. The interest is in moving prevention activities outside of just school-based or other contexts where this work has generally occurred. That could be in bars, businesses, sports or entertainment venues, et cetera. There are a lot of good opportunities that, along with working with parents directly, are untapped relative to other types of strategies in this field. There are many potential opportunities. The Injury Center wants to encourage its future funding to be directed toward those kinds of new approaches to determine whether they might be more effective or perhaps can work in tandem with other effective strategies.

Dr. Ellis called attention to Priorities 4.2 and 4.3 pertaining to social, economic, and political structures that impact risk and policies and programs that address economic inequality, observing that those are 2 major opportunities to add to the literature to better understand what is already known from the ACEs science about the reduction and role of household stressors and ACEs, with CSA being one of those. This also provides an opportunity to begin to look at this from a multigenerational perspective. Practices that provide more stability to households and support parents also offer opportunities to understand more, such as childcare support, earned income tax credits (EITCs), baby bonds, affordable childcare, and economic mobility. While parents as a point of contact are important, parents need support as well. This would be a highly important area of research to continue to support. It also is important and would be very helpful to work across multiple sectors in addition to public health by thinking about investments in housing, education, and justice that provide more support and stability to households and communities writ large.

Dr. DeGue indicated that there is some recent research support by DVP that has examined EITCs, for example, in terms of other violence outcomes that has have been effective. These types of policies have not yet been examined in terms of SV. That is exactly the kind of information they want to find out. Perhaps identifying something that is already being done that is having an impact would help to justify the investments that are needed for those types of strategies.

Leveraging High-Quality Violence Against Children and Youth Survey (VACS) Data to Demonstrate Reductions in Population Prevalence of Violence against Children

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National Center for Injury Prevention and Control
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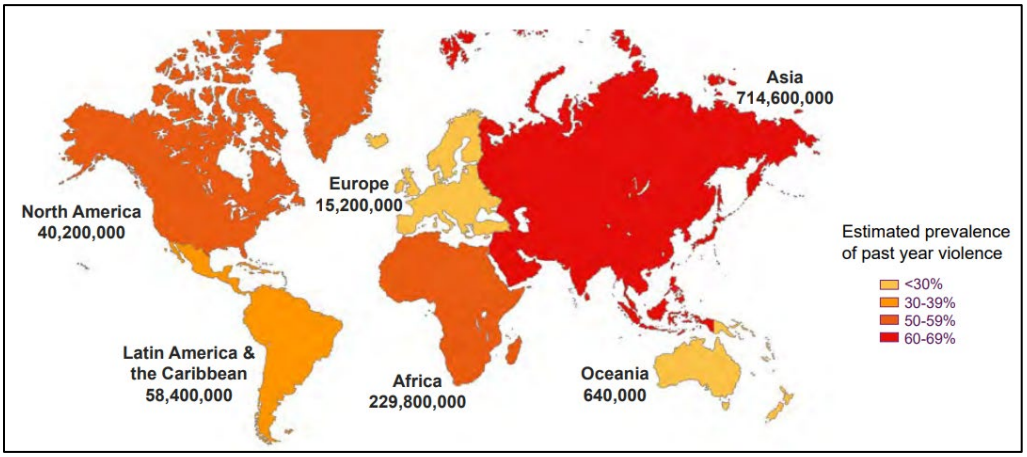
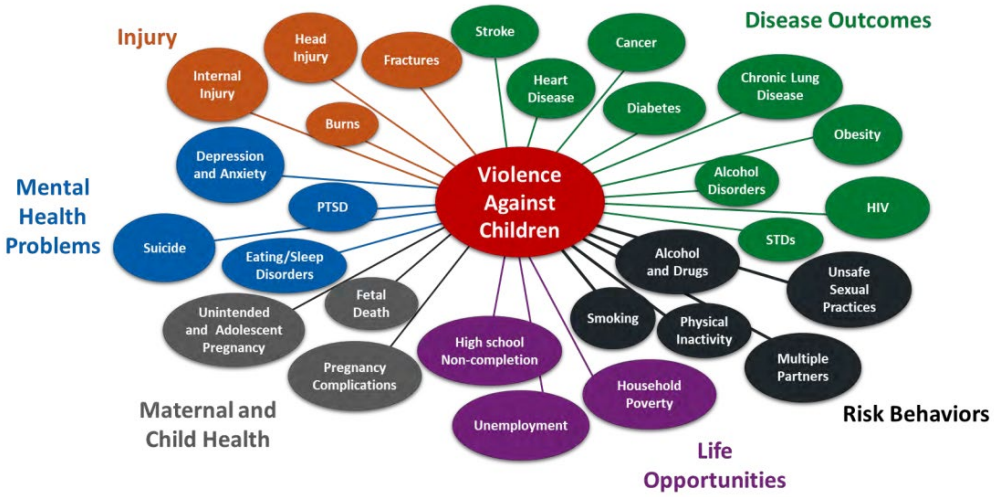
Ms. Chiang first noted that the findings and conclusions in this presentation are those of the presenter and do not necessarily represent the official position of the CDC. She also recognized that many of those attending this meeting have experienced violence or know someone who has been impacted by violence. She cautioned that this presentation would discuss violence and some of the content could be retraumatizing or trigger difficult emotions and emphasized that participants should take care of themselves and should feel free to step away at any time. She then presented on leveraging the VACS data to demonstrate reductions in population prevalence of violence against children.

In terms of background, it has only been since the 1980s that violence has been understood as a public health issue. Since that time, a huge body of literature has been amassed that demonstrates that violence is common among children. An article published in 2016 estimated the burden of annual sexual, severe physical, or emotional violence against children to exceed 1 billion per year.[16] That represents about half of the children in the world experiencing violence annually. This map illustrates what that burden looks like across the regions of the world:



Understanding violence as a public health issue is relatively new and hinges on the fact that violence is associated with a host of poor health outcomes in the short- and long-term. Many people think of injuries to be the key issue associated with violence against children and certainly, injuries occur at the time of incidents. In addition, many other outcomes are linked to violence against children in the primary categories of mental health problems, disease outcomes, maternal and child health, risk behaviors, and life opportunities. Potential consequences in each of these categories are depicted in the following graphic:



[16] Hillis S, Mercy J, Amobi A, Kress H. Global Prevalence of Past-year Violence Against Children: A Systematic Review and Minimum Estimates. Pediatrics. 2016 Mar;137(3):e20154079

To specifically highlight the association between violence against children and human immunodeficiency viruses (HIV), there is a direct risk of transmission at the time of a SV incident. There also are a number of indirect associations, such as children who experience violence in childhood being more likely to live on the streets, placing them at higher risk of HIV, or the association of experiencing violence in childhood and risk-taking behaviors that might expose them to HIV later in life.

Before talking about the VACS more broadly, Ms. Chiang described the origin story. In 2006, the DVP was approached by the United Nations Children's Fund (UNICEF) Country Representative at the time who had seen a number of newspaper articles highlighting that teachers were coercing or forcing their students to have sex in exchange for good grades. He was concerned because Swaziland, as it was known at the time and known as Eswatini as of 2018, had the highest prevalence of HIV in the world. Eswatini remains the country with the highest prevalence of HIV. He reached out to understand whether it would be possible to conduct a household survey to try to better understand the association between violence and HIV. In fact, a survey was implemented in 2007 through a partnership between the DVP, the UNICEF Country Office in Eswatini, and the Government of Eswatini, which marked the first of its kind.

In terms of key findings, the 2007 Eswatini VACS found very high rates of violence against girls and young women 13–24 years of age.[17] The survey identified that 1 in 3 (38%) girls experienced sexual violence before the age of 18; 1 in 4 (25%) girls experienced physical violence before the age of 18; nearly 1 in 3 (30%) girls experienced emotional violence before age 18; most victims of SV and physical violence never told anyone about the experience or received any services; and most perpetrators of SV were well known to the victim (intimate partners, neighbors, and other male relatives). Teachers were not identified as common perpetrators of SV and the data did not bear that out, which shows why high-quality data are much better than anecdotal evidence.

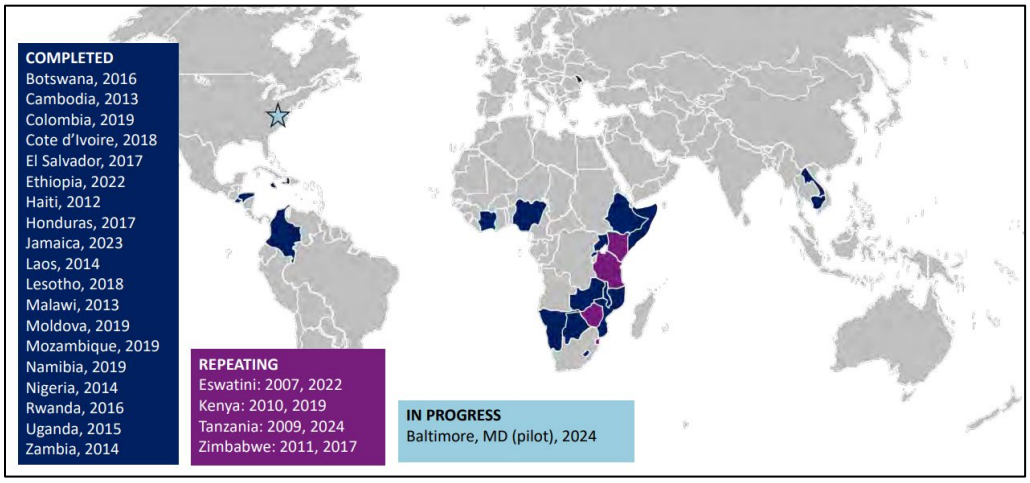
The key partners began responding to the data immediately and that response has been sustained for many years. A number of programs and policies were introduced, including establishing Domestic Violence, Child Protection, and Sexual Offences Units within police stations and creating a database within the police sector to better track cases of violence over time. In the school sector, they established mentoring programs for girls in school. The service sector scaled up post-rape services by establishing one-stop centers in specific geographic locations in the country that were going to be the most accessible for girls and women who needed them and were child-friendly. A number of child protection and welfare bills were passed, some of which had been drafted earlier and were stuck. The survey acted to move these forward and new ones also were drafted as a direct result of the survey. The survey in Eswatini was initially planned as a one-off survey. When the data came out, it was the catalyst that caught the attention of the world, and a number of other countries began asking for their own survey.

It was out of that work that the VACS were born. The VACS answer 2 key questions, which are:

1. How can we measure the scale of violence and its impact on children’s lives?
2. How can we foster political and public engagement to reduce violence against children?

[17] https://cdn.togetherforgirls.org/assets/files/Eswatini-VACS-Report-2007.pdf

Since the 2007 survey in Eswatini, there have been 24 implementations of the VACS in Africa, Asia, the Caribbean, Eastern Europe, Latin American, in the US, including 4 repeat surveys depicted in the following map:



The years between 2017 through 2019 were highly productive. After 2019, there was a pause to try to figure out how to conduct a household survey in the context of a global pandemic. Once that was determined, the effort was moved forward, and the VACS was conducted in 2022 in Ethiopia and Eswatini and Jamaica in 2023 during COVID-19. Efforts are now in progress in Tanzania and Baltimore.

It is important to recognize the robust partnerships that support the VACS, including Together for Girls,[18] which is dedicated to ending violence against children and is fabulous as connecting different actors and disciplines to address such a multifaceted problem. They bring together child protection, gender equality, women's empowerment, and violence prevention and help amplify the work to the global community.

The VACS objectives are to: 1) assess the burden of violence and its contexts (e.g., where it happened, when it happened, who did it, how many times it happened); 2) examine health consequences; 3) identify risk and protective factors; 4) assess utilization of services; and 5) help guide violence prevention and HIV programs and policies. In terms of methodology of the VACS, each country has a 100-page protocol. To highlight some of the key methods, the VACS is a household survey that is utilized to conduct face-to-face interviews with males and females 13–24 years of age. The survey is conducted by well-trained interviewers in the appropriate language, with data entered electronically at the time of the data collection. A 3-stage cluster sample survey design is used, with each country having a national frame and a set number of primary sampling units (PSUs) within that frame that are randomly selected using probability-proportion-to-size (PPS) sampling. Within the PSUs, a set number of households are selected. This is usually about 24 households per PSU and sample 1 eligible person per household. If there is more than 1 eligible person in a household, 1 of them will be randomly selected. The surveys are carried out by in-country institutions, which is highly important because they understand the logistics, security issues, and cultures and customs. Extensive training is provided to the data collectors before they go into the field to ensure that they understand how to do their job and how to keep the participants safe. In many of the countries where the

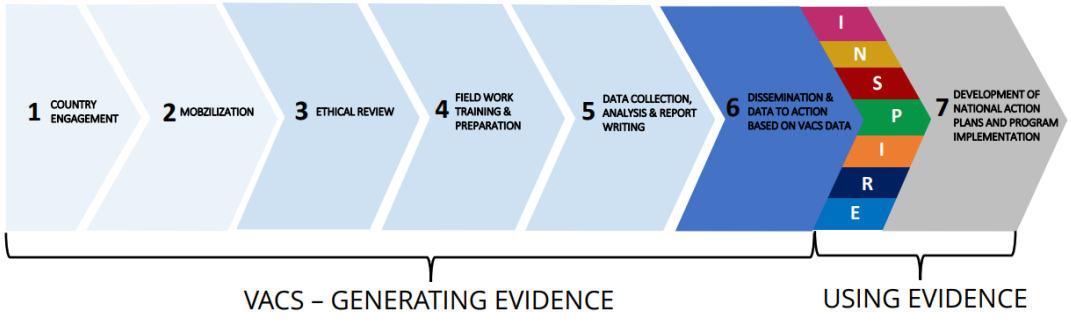
[18] https://www.togetherforgirls.org/en

President's Emergency Plan For AIDS Relief (PEPFAR) is the funder and there is a generalized HIV epidemic, HIV testing is offered to participants who are eligible and consent to that testing.

There are many VACS protections that are nuanced but are important to highlight. A split sample design is used in which males and females are sampled in separate communities. Interviews with females will be conducted by female interviewers and interviews with males will be conducted by males. There is a highly intentional community entry and household entry process that can be summarized as low-profile to ensure that participants are protected. Only the participants and the data collectors know the specific sensitive content of the survey. A child-friendly consent form and a graduated consent process are used. Surveys are conducted only in a private space. Interviewers receive considerable training about what constitutes privacy, how to identify private spaces, what to do if they are having a difficult time finding a private space in an urban setting, and what to do if privacy is interrupted. For participants who need and want services for violence and HIV, a robust and active referral process has been established for getting them the help that they need. DVP's Grants Management Program provides critical technical assistance (TA) and capacity strengthening for these surveys to in-country partners.

With 24 implementations of the VACS, there is a mountain of data. For anyone interested, there is a process for accessing public use datasets for most of the countries and researchers are welcomed to perform secondary analyses. To highlight a few data points, childhood SV is highly prevalent in the lives of children 18 to 24 years of age prior to 18 years of age. For countries that have repeated VACS, there have been marked declines for males and females. There also have been very high rates of physical violence among this same age group, with males experiencing an increased burden of physical violence compared to females. In most countries, that is statistically significantly different. While emotional violence also is highly prevalent in the lives of children, declines have been observed in the countries where the VACS has been repeated.

In terms of the Data to Action process, one of the amazing things about these surveys is the action that occurs after the data are released. There is now a well-defined Data to Action process in order to maximize the impact of the survey that includes 4 major objectives, which are to: 1) interpret key findings from VACS data with key partners within each country to help interpret, translate, and understand the data; 2) use data to develop priority topics within and across sectors, with partners from each country thinking about what is most actionable within their own contexts; 3) identify ways to strengthen prevention and response to violence against children in these countries through strategies and actions that are backed by the best possible data and evidence; and 4) form the basis for multi-sector national action planning and identify next steps. This graphic illustrates the lifecycle of a VACS across 7 key steps, with Data to Action baked into the VACS process:



The first 6 steps are related to the implementation of the survey and generating the action, and Step 7 pertains to countries developing national action plans and program implementation. The colored letters spell out “INSPIRE” which is a World Health Organization (WHO) and CDC led Technical Package[19] pertaining to the 7 strategies for ending violence against children and to ensure that the actions are based on the best available evidence of what works to prevent and respond to violence against children. The 7 strategies of the INSPIRE Technical Package are depicted in the following graphic, with each of the letters of the word “INSPIRE” standing for one of the strategies:

Unlike many health topics, violence does not sit with one sector and touches children in all of the places where they live, work, and play. Therefore, it is very important with the Data to Action process that the sectors pull together to think about how they can maximize efforts to ensure that efforts are coordinated across the sectors and reduce duplication of efforts. For most of the countries where the DVP works, the Data to Action process culminates in a 3-day Data to Action workshop that brings together the key sectors of health; social services; policy, finance, and development; education; justice and law enforcement; and community, civil society, and faith-based partners. The first day of the workshop is focused on delving into the data to ensure that everyone understands it, helping with the interpretation of the data, and translating it. The next 2 days are focused on the partners sitting within their sectors and prioritizing the data that they think is the most actionable, and discussing what they already are doing and what they want to do going forward. The whole group reconvenes to talk about what that looks like. For most countries, that results in a national action plan.

In 2022, the first comprehensive review was conducted of country experiences following the VACS. This provides evidence of the process of the undertaking of the VACS. This review was supported with funding from the United States Agency for International Development (USAID), and Together for Girls serving as a key partner in disseminating this report.[20] Among the 20 countries that participated in the analysis, VACS data and post-VACS processes have resulted in important changes across the range of key policy and program areas. For example, 10 countries moved the needle on banning child marriage after they implemented their VACS. In 2010, an example is Kenya that had only a ban on corporal punishment. When the survey was repeated in 2019, major headway was reflected in terms of adding actions for all of the categories (e.g., adding/amending existing child safety laws and regulations, banning child

[19] https://www.who.int/publications/i/item/9789241565356
[20] https://www.togetherforgirls.org/en/resources/power-of-data-to-action-country-experiences-and-lessons-following-violence-against-children-and-youth-surveys

marriage, banning corporal punishment, improved staff capacity, new initiatives addressing the safety of girls, and VACS questions/indicators in national statistics).

To further elaborate on the results in Kenya and Eswatini, there was a 50% reduction in Kenya in the SV experience among females and a 67% reduction among males in childhood. There was a 41% decrease in physical violence among females and a 29% decrease for males. There was a 73% decrease in emotional violence among females and an 83% decrease among males. These remarkable changes occurred over about a 10-year period between the initial and repeat surveys. Given that the surveys are cross-sectional, they alone cannot explain why these changes occurred. However, it is important to highlight that a number of changes occurred between the 2 surveys, many of which were catalyzed by the initial survey itself. Kenya adopted a new constitution in 2010 that gave new rights to children, which was followed in 2016 by a Children's Act and the establishment of child-friendly courts. There was a lot of activity in income and economic strengthening that was aimed at reducing poverty and its association with violence, particularly cash transfer programs, financial literacy programs, and education subsidies. Numerous violence prevention-specific programs also were rolled out and scaled during that time. To return to the origin story and revisit the Eswatini results, this was the first VACS and it was repeated in 2022. Because the first survey was implemented only with girls, it is only possible to look at the change over time for girls and young women. As with Kenya, remarkable declines were observed with SV decreasing from 33% to 6%, physical violence decreasing from 25% to 5%, and emotional violence decreasing from 30% to 10%. Like Kenya, a lot of change occurred in Eswatini following the first VACS, with a reenergizing following the more recent survey in 2022.For both Kenya and Eswatini, these changes are incredible, and it is plausible that partners "pat themselves on the back" and take credit for solving the problem of violence against children in their countries, but that is not at all what happened. The rates documented in the repeat surveys are still unacceptably high, which has resulted in a determination to double down on efforts to protect children.

Some interesting secondary analyses have leveraged the Kenya repeat surveys to further explain or document the declines observed. Analysts from CDC led by a wonderful colleague, Francis Annor, produced a publication in 2023 that documented significant declines in sexual, physical, and emotional violence and significant declines in HIV risk behaviors and increased HIV testing. They also found that more female victims sought and received services for SV and more male victims knew where to go for services for SV between the 2 survey years.[21] Miedema et al published an interesting latent class analysis (LCA) that sought to understand how the latent classes of childhood adversity changed between the 2 time periods of 2010 and 2019.[22] This analysis found that different latent classes emerged between the 2010 and 2019 VACS. For both males and females, there was some continuity around themes across the 2 survey years. Orphanhood emerged as relevant in 2019 compared to 2010 for males. Understanding latent classes of adversity and how they change over time can help prevention efforts.

[21] Annor et al. Changes in the prevalence of violence and risk factors for violence and HIV among children and young people in Kenya: a comparison of the 2010 and 2019 Kenya Violence Against Children and Youth Surveys. Lancet Global (2021), 10 E124-E133

[22] Miedema et al. Cross-time comparison of adverse childhood experience patterns among Kenyan youth: Violence Against Children and Youth Surveys, 2010 and 2019. Child Abuse & Neglect, 141 (2023) 106153

To highlight a few innovative opportunities that the DVP has, a domestic VACS pilot is being conducted in Baltimore to understand whether the global model is replicable in the US setting and an Epi-Aid in Western Maryland. DVP also has worked together with its partner Together for Girls to produce guidelines for implementing a violence against children survey in a humanitarian context and has provided TA to population councils implementing Humanitarian VACS (HVACS) in Uganda and Ethiopia refugee camp settings. DVP is working on some new innovative projects with its PEPFAR partners that are seeking to understand the association between violence and HIV. In addition, DVP is always working to translate the lessons learned from global to domestic efforts across NCIPC.

Discussion Points

Dr. Shenoi inquired as to how the VACS could be translated into the US setting, particularly in terms of the groups of refugees that are entering the US from all over the world, in terms of driving local measures.

Ms. Chiang recognized that refugee children and migrant populations are very important. This is such an important issue globally for so many children who are exposed to horrific conditions and then are forced to leave their homes. That process can be highly traumatic and did inform the efforts on how to conduct these types of surveys in humanitarian contexts. This is a growing issue, so it is exciting to see that work moving forward. In terms of translating the lessons learned from the global to the domestic setting, DVP is excited to learn from the pilot in Baltimore. It is challenging to conduct face-to-face data collection in the US context, so there will be a lot of unpacking to do of that pilot when it concludes, but they are hopeful that it will be possible to continue to do this kind of work in the US and learning from the experience overseas.

Dr. Pollack Porter asked whether there are plans to think more about the suburban and rural contexts in the US, which seems to be in line with other countries doing this work.

Ms. Chiang indicated that the initial hope was to conduct rural data collection as part of the Baltimore pilot, which unfortunately could not happen. However, they are doing the Epi-Aid in Western Maryland in 2 rural counties with the highest rates of child maltreatment (CM) in the state. They were interested in understanding what is occurring there and if this represented an increase. After that Epi-Aid concludes, they will have a lot more information. Rural settings have unique challenges, which also is true in the global setting. There are specific challenges in urban settings and other challenges in rural settings. Anytime a national household survey is conducted, it is necessary to be prepared for both settings. DVP hopes to do more of this kind of work in rural settings and in the domestic setting.

Dr. Shenoi asked how child labor laws have an effect on the overall reduction in the statistics mentioned, because overall economic reasons probably drive a lot of children into vulnerable positions.

Ms. Chiang indicated that the VACS includes a few questions about history of work. They have worked with SMEs in child labor, but it is difficult to assess this with a short number of questions on the survey. There are limitations about what the VACS can say about child labor and its associations with violence. Some countries are particularly interested in this. The survey was conducted in Cote d'Ivoire, which was interested in trying to understand how children working on cocoa plantations might be at increased risk for violence. The survey does not have enough questions to delve too deeply into that issue, and sometimes it is complicated. Sometimes

things like work can be protective because it gives children more economic flexibility, and sometimes it can be a risk factor because it might not be a safe condition, or they might be exposed to adults who might be violent to them. It is a challenging and complex association that deserves a lot more research.

Dr. Miller asked whether community members, including young people, and organizations have been involved in translating the Data to Action.

Ms. Chiang responded that most of the countries have concerted efforts to make sure that community organizations and faith-based organizations have a place at the table. They often have a unique perspective and are very energetic and a great addition to the Data to Action workshops. A number of countries have worked to make sure that youth are represented in the Data to Action workshops and/or the process leading up to that. For example, in the 2023 Data to Action workshop in Eswatini, there was a panel with youth who provided their insights and discussed their experiences that was valuable for people to hear and take into account as they developed the national action plan for Eswatini. PEPFAR, which funds many of these surveys, is interested in making sure that youth are participating more in the Data to Action process and for youth-led organizations to be involved in the data collection process itself. This is a very important evolution.

Dr. Malik expressed gratitude for an eye-opening and moving presentation about the profound results. One of the slides showed a multifactorial pathway that enabled those amazing results and the fact that national policy was changed in terms of law enforcement, public education, and health education acting as deterrents. He asked whether it would be possible to drill down and point to the areas that produced the highest yield for those results across all of the countries. Given that all of the countries have different laws and cultures, something must have resonated as common action.

Ms. Chiang agreed that each country is contextually unique and the constellation of things in which there were declines in the 4 countries that have repeated VACS has been different in each place. Further unpacking that is warranted in order to better understand what is idiosyncratic versus what is replicable across different contexts.

Dr. Massetti added that because of the process of the VACS, the Data to Action starts at the beginning when multisectoral support and country leadership are built, with an emphasis on the country leading and championing this issue all the way through the Data to Action phase. This results in multisectoral commitment in terms of what healthcare, social services, education, et cetera are going to do. It is difficult to unpack and identify a particular policy change or program that drives the change, because it really is about all of it happening at once. Anecdotally, the active ingredient is the connective tissue. It is partly about shining the light on this issue, especially the issue of CSA which can so easily be “swept under the rug.” When the first survey was conducted in Eswatini, it was not illegal to perpetrate SV against a minor. That was one of the immediate policy changes that occurred, which addressed a huge gap in their laws. Beyond that, a lot of it is about bringing together the core public health approach.

Ms. Chiang emphasized that in the country ownership development process that starts at the beginning and informs throughout the entire process, having the right people in place is crucial in terms of adapting the survey to the local context, identifying challenges that might occur in the field, and having the power and influence to make change.

Dr. Malik asked whether a risk stratification tool was utilized to target where the VACS would be used in terms of which populations and communities, and whether there was any pushback from any countries that did not want to participate in the VACS.

Ms. Chiang indicated that these are national samples that are nationally representative. Oversampling has been done in some countries with adolescent girls and young women, which is driven by HIV risk, in an effort to delve into the issue of the intersection between violence and HIV—particularly for girls and women. There has not been pushback. Before ever going into a country to conduct the survey, there must be a strong commitment from the government to act on the data and in no way to suppress it when it comes out.

Dr. Walley asked whether there were changes in HIV transmission in the context of changes in HIV risk behaviors.

Ms. Chiang indicated that none of the countries that have repeated the VACS, which were the first implementations, included HIV testing. Inclusion of HIV testing began in 2015, with Botswana being the first country where this was implemented. The hope is at some point to conduct HIV testing at both points. It is possible to triangulate with other large surveillance efforts in these countries, and they do see that HIV prevalence is declining in parallel with violence prevention. The Annor article delved into understanding how risk factors have declined, how HIV service uptake behavior has declined, and the steep decline that has occurred in HIV prevalence at the same time.

Division of Overdose Prevention Portfolio Review, 2018 – 2023: Informing the 2025 Update to the Overdose Prevention Research Priorities

Lara (Lace) DePadilla, PhD
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Centers for Disease Control and Prevention

Dr. DePadilla provided an update on the overdose prevention research priorities for the DOP. The purpose of this review was to inform the 2025 update to the overdose prevention research priorities, which were last updated in 2020. The bulk of the review began with 2019, which is when the DOP was established. Extramural projects also were included that were funded in 2018 when the DOP was a branch and projects from 2016 when Prescription Drug Overdose was a team. The agenda and overall review were framed in terms of the public health approach. The research gaps specifically address risk and protective factors, as well as the evaluation of interventions designed to prevent overdose.

The DOP's primary focus is preventing fatal and non-fatal overdose. To that end, the DOP monitors morbidity, mortality, and related outcomes. While each substance does not confer the same risk for overdose, substance use is a key consideration in the DOP. Preventing use of substances, particularly those involved in overdoses, is key to primary prevention of overdose. Based on results from the National Survey on Drug Use and Health (NSDUH) in 2022,[23] substance use in the year prior to the survey was as follows:

[23] https://www.samhsa.gov/data/sites/default/files/reports/rpt42731/2022-nsduh-nnr.pd

- ❑ 22.0% (61.9 million people) used marijuana
- ❑ 3.1% (8.9 million people) misused opioids (heroin or prescription pain relievers)
- ❑ 1.9% (5.3 million people) used cocaine
- ❑ 1.0% (2.7 million people) used methamphetamine
- ❑ 0.4% (991,000 people) misused fentanyl, including 0.2% (686,000 people) used illegally made fentanyl (IMF)

Drug overdose deaths involving synthetic opioids, cocaine, and psychostimulants with abuse potential have risen sharply in recent years.[24]

SUDORS captures detailed information about decedent demographics, social and medical history, all drugs detected and involved in the deaths, and circumstances surrounding the overdose death. For example, SUDORS data show that approximately 65% of overdose deaths among 30 jurisdictions in 2022 had 1 or more potential opportunities for intervention to prevent the death, such as a potential bystander being present in 43.2% of cases.[25] SUDORS also has helped to highlight the growing number of deaths involving counterfeit pills and increases in overdose deaths, including IMFs among persons 10─19 years of age and disparities by race and ethnicity and income inequality.[26] SUDORS tracks all substances detected and involved in overdose deaths, including emerging substances like xylazine.

The Drug Overdose Surveillance and Epidemiology (DOSE) System[27] captures non-fatal syndromic surveillance data. This system showed increases in non-fatal overdose in some states during 2020, decreases in some states in 2021 and 2022, and a mixture of increases and decreases across states in 2022 and 2023. These data will be updated during June 2024.

In a study of the ratio of fatal to non-fatal overdoses from 2010 to 2020,[28] although non-fatal synthetic opioid-involved overdoses were included only from 2016 to 2020, the greatest average quarterly percent change (AQPC) in fatal overdose counts was among synthetic opioid-involved overdoses that increased by 7.1%.The greatest change in non-fatal overdose counts was among heroin-involved overdoses, which increased by 4.3%. Ratio increases were driven by greater relative increases in fatal overdoses compared with non-fatal overdoses. Assessment of the ratio of fatal to non-fatal overdoses can be used to understand the lethality of different drugs and inform response and prevention efforts.

In terms of substance use treatment in the year prior to the NSDUH survey in 2022,[29] approximately 27.2 million people provided responses to questions that were consistent with having a drug use disorder. Among the 6.1 million people ≥12 years of age with OUD, 18.3% or less than 1 in 5, received MOUDs in the past year.

The first wave of the opioid overdose epidemic began with overdose deaths involving prescription opioids. This corresponds to natural and semi-synthetic opioids and methadone, which were increasing since at least 1999, making the improvement of opioid prescribing an important part of the approach to addressing the epidemic. There were reductions in opioid prescribing in some states from 2019 to 2022 using the Opioid Dispensing Rate Dashboard.[30]

[24] https://www.cdc.gov/nchs/products/databriefs/db491.htm
[25] https://www.cdc.gov/overdose-prevention/data-research/facts-stats/sudors-dashboard-fatal-overdose-data.htm
[26] https://www.cdc.gov/mmwr/volumes/72/wr/pdfs/mm7235-H.pdf; https://www.cdc.gov/mmwr/volumes/71/wr/pdfs/mm7150a2-H.pdf; https://www.cdc.gov/mmwr/volumes/73/wr/mm7306a2.htm
[27] https://www.cdc.gov/overdose-prevention/data-research/facts-stats/dose-dashboard-nonfatal-surveillance-data.html
[28] https://injuryprevention.bmj.com/content/30/2/114.abstract
[29] https://www.samhsa.gov/data/sites/default/files/reports/rpt42731/2022-nsduh-nnr.pdf
[30] https://www.cdc.gov/overdose-prevention/data-research/facts-stats/opioid-dispensing-rate-maps.html

Naloxone is a life-saving mediation that can reverse the effects of an opioid overdose. Pharmacists and other healthcare providers (HCP) play a critical role in ensuring that patients receive naloxone. The Naloxone Dispensing Rate Dashboard showed increases in naloxone prescribing in some states from 2019 to 2022.[31]

After briefly characterizing the problem and reviewing the measures related to some of the intervention strategies for overdose prevention, Dr. DePadilla identified the 2020 DOP research gaps, (abbreviated), which were to:

1. Identify risk and protective factors for drug overdose, with a focus on overdoses involving opioids, emerging drugs, and polydrug combinations

2. Evaluate the impact, implementation, and adoption of health system interventions designed to reduce drug overdose and other drug-related harms

3. Evaluate programs, practices, and policies that enhance public health and public safety collaborations to prevent and respond to overdose, and increase linkage to and retention in care, with a focus on health outcomes

4. Evaluate federal, state, and local laws, regulations, and policies with potential to address risk factors for and prevent prescription opioid and other prescription drug misuse, illicit drug use, overdose, and related harms

5. Develop and evaluate innovative prevention strategies designed to prevent overdose, including among those at greatest risk

Gaps 2 through 5 focused on the evaluation of intervention strategies. DOP recently updated its strategic plan to include 3 focus areas, one of which is surveillance. The other 2 will encompass DOP's research efforts and, thus, DOP's updated priorities. The first is focused primarily on linkage and retention strategies, and the second is focused on shared risk and protective factors in the broader prevention continuum. Dr. DePadilla presented information about DOP's progress on the 2020 priorities, and asked participants to keep these 2 ideas in mind as she would circle back to them toward the end of the presentation. While some funding opportunities would be described from the 2018 and 2016, DOP's focus is primarily on NCIPC intramural research and DOP-funded extramural research published between 2019 and 2023 addressing the 2020 research gaps, after the DOP was created. Also related to timing, she presented metrics about the publications as indicators of their impact. It is important to keep in mind that these indicators go up over time, in particular for more recent publications.

As shown in the following table, the aim is to distribute approximately $10 million for extramural research projects each year. In FY25, the DOP anticipates funding up to 15 recipients to conduct various research activities, including evaluation of programmatic and policy efforts, which the DOP has identified as important gaps in its research portfolio. Dr. DePadilla described accomplishments and future directions for each of the 2020 research gaps.

[31] https://www.cdc.gov/overdose-prevention/data-research/facts-stats/naloxone-dispensing-rate-maps.html

Extramural Research Accomplishments and Plans

Title (N=number of recipients)	Line	FY19	FY20	FY21	FY22	FY23	FY24	FY25
Research Grants to Identify Effective Strategies for Opioid Overdose Prevention (R01) (CE19-002) (N=8)	Opioid	5.8M	5.8M	5.625M	--	--	--	
Research Grants to Develop or Identify Effective Strategies to Prevent Overdose Involving Illicit Stimulants and Polysubstance Use Involving Stimulants (R01) (CE21-002) (N=10)	Opioid			4.375M	4.711M	4.711M	--	
Research Grants to Understand Polydrug Use Risk and Protective Factors, Patterns, and Trajectories to Prevent Drug Overdose (R01) (CE22-011) (N=4)	Opioid				1.397M	1.398M	1.393M	--
Research Grants to Evaluate Strategies to Prevent Overdose through Linking People with Illicit Substance Use Disorders to Recovery Support Services for People with Substance Use Disorder (R01) (CE22-010) (N=4)	Opioid				2.998M	2.998M	2.952M	--
Research Coags to Evaluate Community-Level Substance Use and Overdose Prevention Frameworks that Incorporate ACEs-Related Prevention Strategies (U01) (CE22-009) (N=1)	Opioid				.831M	.831M	.831M	.831M
Research Grants to Support New Investigators in Conducting Research Related to Understanding Polydrug Use Risk and Protective Factors (K01) (CE23-002) (N=1)	Opioid					.150M	.150M	.150M
Research Grants to Identify Effective Community-Based Strategies for Overdose Prevention (R01) (CE24-013) (N=5)	Opioid						3.750M	3.750M
Research to Evaluate Policy-Level Interventions to Prevent Overdose (R01) (CE24-012) (N=2)	Opioid						.700M	.700M
Research to Evaluate Primary and Secondary Overdose Prevention Activities Among Populations Disproportionately Affected by Overdose (CE25-149) (N=6)	Opioid							4.200M
TOTAL					9.937M	10.088M	9.776M	9.631M

Gap 1: Identify risk and protective factors for drug overdose, with a focus on overdoses involving opioids, emerging drugs, and polydrug combinations:

- ❑ **How do risk and protective factors differ by:**
  - **Sociodemographic and geographic characteristics**
  - **Intersectional social identities**
  - **Polydrug use**
  - **Early drug use initiation and escalation of use**

- ❑ **What are the associations among adverse childhood experiences (ACEs), prescription opioid misuse and/or illicit drug use, and chronic pain?**

- ❑ **What are norms and behaviors surrounding prescription opioid misuse, illicit drug use, overdose, and related health and behavioral outcomes?**

Most extramural publications or those with CDC authors fell into differences by drug and differences by sociodemographic and geographic characteristics. Some opportunities to increase inquiry, which will be combined with opportunities for extramural work at the end of this gap, include differences in risk and protective factors by intersectional identities; early drug use initiation and escalation of use; norms and behaviors; differences by polydrug use; and ACEs, prescription opioid misuse, and chronic pain.

The first metric that was assessed for impact was Altmetric Scores. There were 10 articles that assessed risk and protective factors with more than 100 media mentions. These examined differences by drug, differences by sociodemographic and geographic characteristics, and differences by polydrug use. The second measure was scholarly citations, which identified 7 articles with more than 50 citations in scholarly documents that looked at variation in risk factors by drug, sociodemographic and geographic risk factors, polydrug use, and ACEs. The third metric was BMJ Analytics, which tracks where research is cited in clinical guidance and health

policy worldwide. This identified 6 articles describing risk and protective factors that were mentioned in at least 5 policy documents. The following table identifies the extramural projects that addressed risk and protective factors. For this gap, funded projects were included from 2016 when prescription drug overdose was a topic for a team rather than a division

Year	Project Title	Type of Recipient
2016	OPR mis/use and transitions to heroin and injecting in suburban and exurban Southern California	Cooperative Agreement
2016	Heroin use and overdose following changes to individual-level opioid prescribing	Cooperative Agreement
2016	Substance use outcomes of opioid dose reduction and discontinuation	Cooperative Agreement
2021	Leveraging Psychological Autopsies to Accelerate Research into Stimulant Overdose Mortality	Grant
2021	Stimulant Overdose in the Medicaid Population: Who is at Risk, and When are They at Risk	Grant
2021	Preventing Overdoses Involving Stimulants (POINTS)Study	Grant
2021	A Multi-Site Mixed Methods Study of Methamphetamine Use in the Mountain West	Grant
2021	A community-based systems science approach to assess risk and protective factors and improve the efficacy and equity of intervention strategies for stimulant use, use disorder, and overdose	Grant
2021	STIMuLINK	Grant
2021	Examining the iatrogenic effect of law enforcement disruptions to the illicit drug market on overdose in the surrounding community	Grant
2022	Understanding Polydrug Use Risk and Protective Factors, Patterns, and Trajectories to Prevent Drug Overdose - 2022	Grant
2022	Mixed methods study of polysubstance use to optimize overdose prevention	Grant
2022	Patterns and trajectories associated with overdose in patients co-prescribed opioids and benzodiazepines.	Grant
2022	Risk and Protective factors of Polydrug Overdose in North Carolina	Grant

Extramural publications are those led by authors funded for extramural projects and fell into differences by sociodemographic and geographic characteristics. There also were a number of papers on norms and behaviors, including PWUD reporting that carrying naloxone was not consistent with an abstinence identity and people receiving pain treatment feeling stigmatized and invalidated by cultural norms linking chronic pain to stereotypes of acting disingenuously (e.g., drug-seeking). Such work enhances resource and intervention development.

In terms of future directions for research on risk and protective factors in the DOP, as seen in the surveillance section of this presentation, continuing to focus on fentanyl will be important in 2025. Differences in risk and protective factors by intersectional identities can be explored more deeply among populations who are underserved, populations experiencing stigma, and populations experiencing risk due to multiple SDOH. It also is important to focus on early drug use initiation, escalation of use, norms and behaviors around drug use, incorporation of shared risk factors for mental health conditions and substance use, and differences in risk and protective factors by polydrug use. Another area that is important t highlight is the enhancment of buffers. An area of interest within the strategic plan is to increase education, research, and support to strengthen protective factors related to overdose, including enhancing treatment of pain.

Gap 2: Evaluate the impact, implementation, and adoption of health system interventions designed to reduce drug overdose and other drug-related harms:
:

- **What is the impact of . . .**
  - **insurer, pharmacy benefit manager, and pharmacy-related strategies?**
  - **provider and health system-based approaches?**

- **How do . . .**

- **health system strategies and approaches address social and systemic inequities?**
- **health impacts of health system strategies and approaches vary among populations?**

❑ **What are the . . .**
- **unintended consequences and benefits of health system interventions?**
- **attitudes, beliefs, knowledge gaps including among program implementors and populations for whom the interventions were designed?**

While there was a focus on measuring outcomes before and after the release of the 2016 Guideline, overall trends also were examined given the broader focus on the opioid crisis. The *Clinical Practice Guideline for Prescribing Opioids for Pain, 2022* will be incorporated later this section. A cohort study[32] found that patients who were opioid naïve continued to initiate opioid therapy after the release of the 2016 CDC Guideline, but trends in prescribing duration reversed and decreased. High-dose prescribing rates already were decreasing, but those trends accelerated after the CDC Guideline release. Results of another study[33] showed increases in non-opioid pain medication prescribing after the release of the CDC 2016 Guideline, suggesting that the guideline may be associated with an increase in guideline-concordant care, but additional studies are needed to understand the role of other secular changes in the opioid policy landscape and other sources of non-opioid medication use. From 2016 to 2021,[34] the total number of opioid analgesic prescriptions dispensed decreased by 32% and the number of unique opioid analgesic prescribers decreased by 7%. Over this same time period, the number of buprenorphine prescriptions dispensed increased by 36% and the unique number of buprenorphine prescribers increased by 86%. Despite advances, there remains a need for increasing the number of active buprenorphine prescribers. From 2018 to 2021, 10 health system intervention-focused extramural projects were funded by the DOP as shown in the following table:

Year	Project Title	Type of Recipient
2018	Mobile technology for buprenorphine treatment engagement and overdose prevention in out-of-treatment opioid users	Grant
2018	Optimizing Pregnancy and Treatment Interventions for Moms 2.0	Grant
2018	Improving Naloxone Access and Its Effects on Drug Abuse and Overdoses	Grant
2018	Implementing a Multimodal Path to RecOVEry (IMPROVE): Primary and Secondary Prevention of Opioid Overdose in Acute Care	Grant
2018	Linkage navigation to enhance initiation and engagement in treatment for opioid use disorder to prevent overdose	Grant
2018	Evaluation of state-mandated acute and post-surgical pain-specific CDC opioid prescribing guidelines	Grant
2019	Engaging clinicians to improve opioid safety and reduce overdose risk	Grant
2019	Impacting the Prescribing of Opioids through Academic Detailing	Grant
2019	Strategies for Improving Prescription Opioid Use in Perioperative Pain Management	Grant
2021	Beginning Early and Assertive Treatment for Methamphetamine Use Disorder (BEAT Meth): A comprehensive systems-level secondary prevention strategy to prevent stimulant related overdoses	Grant

Here is a brief summary of the 33 articles published from those projects:

❑ Academic detailing (n=3)

[32] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8278262/
[33] https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2793224
[34] https://pubmed.ncbi.nlm.nih.gov/37267746/

- ❑ Assessing disparities (n=2)
- ❑ Attitudes, beliefs, and knowledge (n=3)
- ❑ Health system approaches, provider approaches, approaches specific to pregnancy (n=17)
- ❑ Pharmacy-related (n=1)
- ❑ Unintended consequences and benefits (n=5)
- ❑ Impact of American College of Obstetricians and Gynecologists (ACOG) guideline (n=2)

Unintended consequences focused primarily on opioid tapering and discontinuation, which were important topics addressed within the implementation considerations within the *2020 Clinical Practice Guideline*. Attitudes and beliefs included a lack of perception among physicians that diversion was a prominent barrier to prescribing buprenorphine. In focus groups, physicians identified financial, logistical, and workforce barriers to prescribing medications to treat OUDs. Regarding attitudes among people with OUD, findings suggest that participants varying levels of positive and negative perceptions about medications for OUD are informed by nuances in their social networks and varying levels of exposure or education. BMJ Analytics found 29 policy sources that mentioned the *CDC Clinical Practice Guideline for Prescribing Opioids for Pain - United States, 2022*.

In terms of future directions for health system intervention research, in 2025, it will be important to acknowledge that a cascade of care approaches for OUD includes screening, diagnosing, and linking those with OUD to care. There currently are missed opportunities in this continuum that the DOP can work toward addressing. The DOP also would like to explore approaches that incorporate medications for OUD and behavioral health, specifically in terms of how the integration of mental health services can go beyond co-location. Similarly, the DOP anticipates the benefit of further examining approaches that incorporate social services, such as case management along with medications for OUD and access to support for basic needs. Primary prevention offers another opportunity for greater exploration, as well as health system approaches for PWUD. Attitudes and beliefs in this research area include stigma.

Gap 3: Evaluate programs, practices, and policies that enhance public health and public safety collaborations to prevent and respond to overdose, and increase linkage to and retention in care, with a focus on health outcomes:

- ❑ **What is the effectiveness of programs, practices, and policies that . . .**
  - **enhance linkage of individuals with substance use disorder to evidence-based in criminal justice settings?**
  - **incorporate referrals to trauma-informed substance use treatment that increase access to and use of naloxone in different contexts and settings on opioid overdose and related harms?**

- ❑ **How does provision of other social and behavioral services impact the effectiveness of linkage to care strategies?**

- ❑ **What are the most salient risk and protective factors and prevention strategies among those at higher risk?**
  - **What factors are most salient among racial and ethnic minority populations?**

- ❑ **What are the attitudes, beliefs, knowledge gaps among program implementors and program recipients, that serve as barriers and facilitators to public health-public safety collaboration and intervention uptake?**

Findings highlight the initial studies of the DOP-led work, as well as the range of linkage strategies currently implemented in areas for improving practice in research, such as the need for more linkages to evidence-based strategy such as MOUD, harm reduction, and wrap-around services. From 2018-2021, there were 8 public health/public safety focused extramural projects funded by the DOP and shown in the following table:

Year	Project Title	Type of Recipient
2018	Reducing Overdose After Release from Incarceration (ROAR)	Grant
2018	Knock and Talk: Public Health-Public Safety Partnerships for Post-Overdose Outreach and Prevention	Grant
2018	Evaluation of an Experimental Educational Module on Opioid-related Occupational Safety to Minimize Barriers to Overdose Response among Police Officers	Grant
2018	Effects of remote motivational enhancement and MySafeRX on post-detox engagement and retention in buprenorphine treatment	Grant
2019	A Rigorous Evaluation of the Opioid Intervention Court Strategy - A Public Health Response	Grant
2019	Evaluating Problem Solving Courts as a Public Health Intervention to Prevent Opioid Overdose	Grant
2021	Evaluation of a novel intervention to prevent polysubstance overdoses involving illicit stimulants	Grant
2021	Integrating responses to stimulant overdose among post-overdose programs	Grant

There were 9 extramural articles addressing public health/public safety collaborations. Publications describing a post-overdose outreach project showed effectiveness and described implementation characteristics. The peer recovery support specialist article is an overview of program components and future directions. An example of unintended consequences that were highlighted here addressed unintended consequences that warrant checking. Other findings in this gap area are still in the preliminary stages.

In terms of future directions for research on public health/public safety collaborations, it will be helpful to see the evolution of extramural work that is in preliminary stages. Additionally, the DOP can envision research on impacts of CDC public health/public safety coordination and frameworks. The DOP also can begin with evaluability assessments to find out which strategies are promising and might be ready for evaluation. This work can benefit from more evaluation work focusing specifically on disproportionately affected populations and linkage to evidence-based interventions, including MOUD.

Gap 4: Evaluate federal, state, and local laws, regulations, and policies with potential to address risk factors for and prevent prescription opioid and other prescription drug misuse, illicit drug use, overdose, and related harms:

- **What is the impact of:**
  - **prescription drug monitoring program-focused policy interventions**
  - **policies designed to improve prescribing practices for treatment of pain**
  - **policies designed to expand access to and increase provision of medications for opioid use disorder**
  - **policies designed to improve overdose response**

- **What are the unintended consequences and benefits of policies and how do these policies worsen or reduce existing disparities**

- **What are the key factors (e.g., attitudes, implementation, and resources) that mediate the effect of policy interventions**

Of specific importance is the impact that these policies among groups experiencing a disproportionate burden of overdose and/or groups who are at greater risk of experiencing adverse outcomes related to substance use due to SDOH. Among DOP's intramural articles, they coded 1 article as a policy designed to improve overdose response and reduce fatal overdose in accordance with the research gap. The article was titled *The One-Year Association of Drug Possession Law Change with Fatal Drug Overdose in Oregon and Washington*.[35] The findings of this study suggest that legal changes to remove or decrease criminal penalties for drug possession are not associated with the fatal drug overdose rate 1-year post-implementation and indicated that further research is needed to examine the medium- and long-term consequences of these legal changes. There also was a literature review of the impact of opioid prescribing limits that went from 2013 to 2019, which noted a lack of studies on unintended consequences, which also is referenced elsewhere.

[35] *JAMA Psychiatry*. 2023 Dec 01; 80(12):1277-1283

In 2016 when Prescription Drug Overdose was a team, there was 1 policy-focused extramural project funded by DOP. However, a NOFO was issued for 2024 to specifically address policy intervention analyses and DOP looks forward to learning from future recipients. In addition to work the DOP funded specifically to assess policies, its extramural scientists explored the impact of policies in peer-reviewed articles as part of their other projects. In terms of the impact of policies to increase access to naloxone, a population-based study of data from 2005 to 2016 used the National Vital Statistics System (NVSS) that applied a difference-in-differences (DID) design to evaluate 50 states and DC. They found that states adopting naloxone access laws granting direct authority to pharmacists experienced statistically significant declines in fatal opioid-related overdoses. However, other types of naloxone access laws appeared not to be associated with decreases or increases in mortality. There were 3 studies that examined the impact of policies to improve prescribing, 1 study related to prenatal substance use, 1 study related to opioid litigation, and 1 study focused on comprehensive prescription drug monitoring program (PDMP) mandates.

With respect to future directions for research addressing laws, regulations, and policies, the DOP highlights policies to improve access to and retention in the full continuum of evidence-based pain therapy options. This includes access to appropriate diversified, effective, non-pharmacologic and pharmacologic pain management options that are person-centered, affordable, accessible, and well-coordinated. The DOP also can continue to explore unintended consequences and benefits of policies (e.g., related to improving prescribing). Key factors that mediate the effects of policy implementation, including stigma (e.g., related to MOUD) and the impact of cannabis legislation also can be explored.

Gap 5: Develop and evaluate innovative prevention strategies designed to prevent overdose, including among those at greatest risk:

- **Impact of new interventions:**
  - **New or innovative prevention approaches designed for populations at greater risk**
  - **New or innovative approaches to prevent youth initiation of drug use, including those that engage multiple sectors within the community**

- **Impact of adaptations:**
  - **Effectiveness among populations at greater risk**
  - **Interventions from other settings and for other outcomes**
  - **Address unique risks associated with factors such as social and systemic inequities, ACEs, and emerging drugs or drug combinations**

- **Effect of strategies designed to prevent overdose on related injury outcomes, such as suicide, ACEs, and drug-impaired driving**

- **New settings (school setting, faith-based and other community settings)**

- **Barriers and facilitators:**
  - **Attitudes, beliefs, or knowledge gaps, including among program implementors and recipients**
  - **Social inequities, including the social determinants of health and social identities**

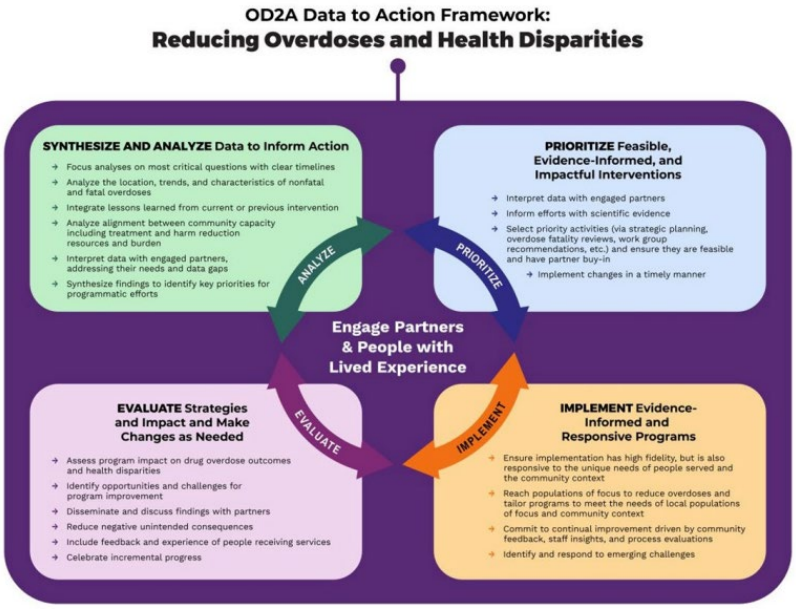
The need for continued advancement in research and research designs were described in a review of interventions that spanned from 2013 through 2018—just before the beginning of this portfolio review. DOP staff also described a pilot of the Martinsburg Initiative and summarized the results of HIV-focused interventions on overdose-related outcomes. From 2018 to 2022, there were 12 extramural projects funded by the DOP and classified as addressing this gap, which are listed in the following table:

Year	Project Title	Type of Recipient
2018	A Multi-Tiered Safety Net Following Naloxone Resuscitation from Opioid Overdose	Grant
2018	An evaluation of a social network intervention for primary and secondary prevention of opioid overdoses.	Grant
2018	Evaluation of Community-based Drug User Health Hubs to Reduce Opioid Overdoses in NY State	Grant
2018	Rapid initiation of buprenorphine/naloxone to optimize MAT utilization in Philadelphia	Grant
2019	Studying the PhilAdelphia Resilience Project as a Response to Overdose (SPARRow)	Grant
2019	Implementing statewide emergency department care pathways for addiction recovery after opioid overdose	Grant
2019	Randomized Controlled Trial of Relay- NYCs Nonfatal Overdose Response Program	Grant
2022	Evaluating an ACEs-Targeting Advocate Model of a Substance Use Prevention Program	Cooperative Agreement
2022	Linking Individuals Needing Care for Substance Use Disorders in Urban Emergency Departments to Peer coaches (LINCS UP)	Grant
2022	Evaluation of Kentucky Access to Recovery Linkage Strategy	Grant
2022	Supporting Treatment Access and Recovery through Linkage and Support (STAR-LS)	Grant
2022	Emergency department community health worker-peer recovery navigation for linkage to recovery: A mixed methods evaluation	Grant

Dr. DePadilla highlighted a couple of articles related to levels of care intervention and telehealth low barrier treatment. These include the establishment of ED policies for treatment and services after opioid overdose improved naloxone distribution, behavioral counseling, and referral to treatment at hospitals without previously established opioid overdose services. The telehealth analysis yielded 3 themes (e.g., easier access, layered digital divide, and clinician control). In terms of easier access for some, telehealth facilitates care for many patients who have difficulty attending in-person appointments due to logistical and psychological barriers. Regarding a layered digital divide, engagement with telehealth can be limited by patients' access to and comfort with technology. There also is the matter of clinician control. Some clinic staff believe that patients should have the freedom to choose, but patient access can depend on clinician perception of patient stability rather than patient preferences.

Regarding future directions for research addressing innovative interventions, the DOP anticipates that the evaluability of recipient-funded work could contribute to identification of promising practices as candidates for rigorous evaluation. Among interventions that have shown effectiveness, examination funded work could aid in understanding modifiers of implementation success to improve future adaptations and uptake. The DOP acknowledges that more work would be beneficial around rigorous evaluation research for youth substance use, prevention, and mitigation, including cannabis and related products. The DOP looks forward to seeing the results of previously funded research, including the NOFO recently released.

Regarding the connection between research and practice in the DOP, the DOP's research can support the overall evidence base for interventions implemented at the local level. Similarly, implementation can help to inform research priorities. Overdose to Action (OD2A) supports jurisdictions in implementing prevention activities and collecting data on overdoses. Prevention for States (PfS) was the funding that preceded OD2A. The OD2A Framework for Reducing Overdoses and Health Disparities is illustrated in the following graphic:



In this space, DOP scientists examined and described funded activities for recipients of prevention for states and OD2A funding. Here is a list of some of those papers:

- ❑ Inventories of funded activities among recipients:
  - Identification of activities among four states receiving CDC funding from 2016-2017
  - Scope of activities and challenges among Prevention for States recipients
  - An inventory of ACEs related activities among OD2A recipients
  - An inventory of public health/public safety activities described among OD2A recipients
- ❑ Comparison of academic detailing models among 11 Prevention for States recipients
- ❑ Challenges with staffing for opioid overdose response among Prevention for States recipients

DOP scientists also developed studies that described quality improvement efforts that built off of the 2016 Guideline. Another article to highlight describes the DOP's overdose response strategy. Evaluations related to this project will follow. Given the DOP's investments in states and local communities, it is key that the DOP's research priorities reflect the incorporation of strategies that resonate with these communities that may be earlier in the continuum of evidence-building. Some examples include the following:

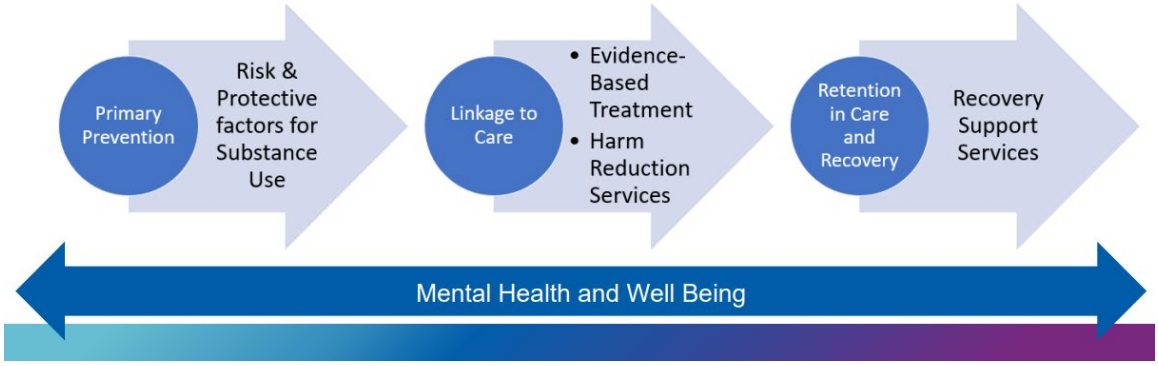
- ❑ Rigorous evaluation of interventions for cannabis and related products among youth, including adaptations of tobacco and alcohol interventions
- ❑ Rigorous evaluations of communications campaigns
- ❑ Evaluations of effects of drug checking on overdose
- ❑ Evaluation of Overdose Fatality Reviews (OFRs), which is in progress
- ❑ Implementation science can inform the field for interventions that have shown impact
- ❑ OD2A state and local recipient performance measures include detailed process information that can inform outcome evaluations and implementation science, representing another aspect of the Data to Action cycle

To briefly introduce DOP's updated strategic plan for the purpose of linking it to their future or updated research priorities, 2 of the strategic focus areas include research to:

- ❑ Increase rigorous evaluation, applied research, and opportunities for linking and retaining persons with disproportionate risk for overdose and adverse outcomes related to substance use to harm reduction services, evidence-based treatment, and recovery support services.

- ❑ Identify and address shared risk and protective factors associated with substance use initiation and misuse and other comorbidities across the prevention continuum, including mental health and well-being.

It is important to note that the shared risk and protective factors include the SDOH as upstream risk factors for overdose. This graphic depicts one way these ideas could fit together visually from primary prevention to retention in care and recovery, with the importance of mental health and wellbeing highlighted throughout:



In closing, Dr. DePadilla invited the NCIPC BSC members to share their thoughts on the DOP portfolio and any thoughts they might have for the DOP to consider as they move forward to developing their updated research priorities for 2025.

Discussion Points

Dr. Walley emphasized how impressive this portfolio review and the growth of the work that has been done within the DOP were. The surveillance has been extremely useful from the public health, clinical, and research perspectives. He observed that NSDUH is still being used for prevalence data and suggested that there is a need for a more sophisticated measure of prevalence for people with OUD and people who are at risk for overdose. Several local entities have used multiplier methods or capture-recapture methods to develop prevalence for OUD. This is important in terms of having a denominator and tracking how that denominator varies over time and space. While that may require data that are not yet available, he wondered whether that is on the agenda. He noted that one reason he was asking was because the WHO and United Nations Office on Drugs and Crime (UNODC) set a benchmark for MOUD coverage at 50% of people who have OUD. While he has not heard of that being used in the US, it is a benchmark that is used widely in Europe and the Europeans, Australians, and other countries hold themselves to trying to achieve that benchmark. The estimate for the US is somewhere between 15% to 25% range of coverage rate, but that depends upon having an accurate measure of the denominator.

Dr. DePadilla indicated that they do not have anything in place at this time. They conducted a clinical study focused on MOUD that had representation from across the country, but it was nothing like denominator data. She agreed about the importance of this and that it is something the DOP needs to consider.

Dr. Baldwin added that the DOP has briefed the NCIPC BSC on the investment they have in the OD2A on linkage to care and retention in care surveillance, which they are trying to pursue further. They also are looking at novel data streams, including leveraging electronic health records (EHRs) to obtain better documentation. While he recognized that this did not fully address Dr. Walley's question, he thought it was a fair question with which the DOP would continue to wrestle. They also have strengthened their relationship with SAMSHA, so there are opportunities to work together to ensure that there are good denominator data on OUD prevalence.

Dr. Vivolo-Kantor agreed that Dr. Walley raised some good points that the DOP staff have been thinking about, but there is a lot to put together to think forward about all of the work that needs to be done first before moving forward to do something more intensive.

Dr. Compton expressed excitement to engage Dr. Walley, who has written some very important work on the capture-recapture methodologies to help better estimate those who would need MOUD. This is complicated for public health data because simply having a diagnosis of an OUD is not enough, because many of those with an OUD in population surveys have mild conditions with only a couple of symptoms. Yet, the medications typically are for those with moderate to severe OUD. This is an important topic and he is thrilled that it is put forth for CDC to help the country wrestle with it. Much of the work Dr. DePadilla highlighted is work that the DOP does independently and in conjunction with many partners across the department. That has been important to see in terms of the DOP leading the entire federal response to the opioid crisis in so many ways. One area he was curious about in terms of the DOP's emphasis regarded engaging the public health community, which has been at the lead in some places. In other areas, they also have been part of the stigma about OUD and have not focused as aggressively on overdose as they might have—at least in past years. He asked what their thoughts were about how advantage could be taken of the unique position of CDC within the nation's public health departments and responses.

Dr. DePadilla agreed that partners are a huge part of their work and something that every branch in the DOP works to generate and support partnership efforts. From the perspective of the research priority development, some thought can be given to how to incorporate the perspectives of partners into the development of the priorities in the hope that they will be received and expected that may help to grapple with the positives and negatives identified.

Dr. Kunins expressed kudos to the entire DOP team. Having watched from afar through the local public health lens, the increasing amount of support, guidance, and funding have profoundly affected the work of public health in cities. To reiterate what Drs. Walley and Compton said pertaining to the denominator problem, she emphasized that they encounter this when trying to understand the scope of the problem, the incidence, and ultimately in trying to set metrics for rates or numbers of people they can get into effective care as a public health strategy at the local level. In terms of the prevention spectrum, one gap in the presentation and literature pertained to prevention strategies for moving from first use to the development of a use disorder and finding interventions that can reduce moderate to severe OUDs, other SUDs, or any use disorder. She would like CDC to take this on. A priority population that needs to be addressed is persons experiencing homelessness in terms of interventions and work around

this growing and profoundly at-risk population with regard to overdose. Routes of administration need to be addressed as a source of investigation and intervention. With the national transition to use of fentanyl via smoking, the framework of how interventions are thought about must be changed since injection drug use and overdose risk is preoccupying everyone.

Dr. DePadilla said she was taking careful notes while Dr. Kunins was speaking, and agreed that these are issues the DOP needs to consider as they move into the update of the research priorities.

Dr. Shenoi observed that there are wonderful, validated tools for Screening, Brief Intervention, and Referral to Treatment (SBIRT). Because the early introduction of opioids leads to adulthood SUD, he wondered how to increase manifold in the pediatric or young adult age groups to get those taken care of before they move toward adulthood and higher chances of use disorder. He asked whether work has been done with respect to the guidelines with groups such as the American Academy of Pediatrics (AAP) to include their input as well.

Dr. Baldwin agreed that the DOP needs an increased focus on the adolescent population. There is a pediatrician on staff now, Dr. Andrew Terranella, who is leaning in on this work to identify adolescents and young adults who have an SUD and making sure that the treatment modalities are available to younger persons where stigma exists even further because there is extreme reluctance. He is specifically associated with, and was just approved by the DOP, to be involved with the AAP in a more formal way.

Public Comment Session

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

Overview

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.

Public Comments

Qing Li, MD, DrPH
OB/GYN-Trained Perinatal Injury Epidemiologist
Affiliate, Tulane University
Good afternoon. My name is Qing Li. I'm an OB/GYN-Trained Perinatal Injury Epidemiologist with an Injury Center dissertation award on pregnancy and intimate partner violence. As an affiliate of Tulane University, I would like to comment on the first presentation today on the CDC's new Behavioral Health Coordination Unit. Last April, Dr. Debra Houry . . . and referred me to the coming launch of the Behavioral Health Coordination Unit. Over 20 years ago, the 42 US Code was passed in 2001 that provided the CDC Director with authority to investigate the

intersection of violence and maternal morbidity and mortality. However, what was written in law in 2001 has not been implemented into activities at CDC. The US's leading causes of pregnancy-associated deaths are drug overdose, homicide, and suicide—all of which have been increasing in the past decade and in many cases intersecting with intimate partner violence. During the public comments of the BSC on January 11th, Dr. Elizabeth Fitelson, Dr. Dorothy Cilenti, and I presented this 20-year gap and advocated for data integration and a coordinated response through 6 proposed items. Each death each violent death for pregnant and post-partum women has been captured by separate systems at the CDC. The Injury Center has the NVDRS, SUDORS, and the Maternal Mortality Review Information Application (MMRIA) from the Division of Reproductive Health (DRH). The DRH has the data but hasn't investigated pregnancy-associated violent deaths. There was an analysis by injury experts recently, but Dr. Linda Swartz passed away in 2005. Dr. Alex Crosby, who was invited to contribute a report in 2017, has retired. In most states IPV hasn't been quantified in reports from MMRCs and injury researchers couldn't access MMRC data. We need structured collaboration guided by the CDC leadership . . . [unclear] healthy connections back 2 generations . . . so I'd like to request support from members of the BSC. Thank you.

James (Jim) Nowicki, MBA
Senior Associate
Booz Allen Hamilton

My name is Jim Nowicki. I've been a CDC contractor for almost 20 years. I'm with Booz, Allen, Hamilton. I just wanted to express my appreciation personally and on behalf of my colleagues for taking the time to get together and share this information. It is important for us to be informed, and it is very important for the public to be informed. I have taken way too many notes, and it has generated a lot of ideas, but I won't try to articulate them now. I would just fumble, but I will say one thing. The Behavioral Health Coordinating Unit is such an important initiative, and it connects the dots. I think it connects all of the dots that are happening inside injury when you think of all of the issues that you're dealing with. So many of them relate back to the behavioral health crisis in many ways in this country, but also in the other areas of CDC, which has been acknowledged. They have been working on this issue for a long time through the Mental Health Workgroup. Finally, I also appreciate the many references down to the community level because that's where it all is. I work for a company that provides technology. This is not a sales piece, but we always talk about the wonders of technology. The way that we can seek to apply that to really help the people at the community level is key. We can do that, but don't take your eyes off of that. Thank you.

Announcements, Closing Comments, & Adjournment

Amy Bonomi, PhD, MPH
Co-Chair, BSC NCIPC
Dean and Professor of Public Health
College of Health and Human Services
San Diego State University

Dr. Bonomi expressed gratitude to the presenters, members of the public who listened in throughout the day, the CDC audio technician, Cambridge Communications' staff, and CDC staff who made the meeting possible. She reminded all BSC and Ex Officio members to send an email to Mrs. Tonia Lindley at ncipcbsc@cdc.gov stating that they participated in this meeting.

With no announcements made, further business raised, or questions/comments posed, **Dr. Bonomi** officially adjourned the Forty-Seventh meeting of the NCIPC BSC at 3:29 PM ET.

Certification

I hereby certify that to the best of my knowledge, the foregoing minutes of the June 6, 2024, BSC NCIPC meeting are accurate and complete:

Date	**Amy Bonomi, PhD, MPH** **Co-Chair, BSC NCIPC**
Date	**Elizabeth Miller, MD. PhD** **Co-Chair, BSC NCIPC**

Attachment A: NCIPC BSC Member Attendees

BSC NCIPC Co-Chairs

Amy Bonomi, PhD, MPH
BSC NCIPC, Co-Chair
Dean and Professor of Public Health
College of Health and Human Services
San Diego State University

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

Designated Federal Officer (DFO)

Corrine Ferdon, PhD
Office of Science, Director
National Center for Injury Prevention and Control
Centers for Disease Control and Prevention

NCIPC BSC Members

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

Wendy Ellis, DrPH
Assistant Professor and Center Director
Center for Community Resilience
Milken Institute School of Public Health
George Washington University

Mohammad Jalali (MJ), PhD, MSc
Assistant Professor
Harvard Medical School

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

Hillary V. Kunins, MD, MPH
Director of Behavioral Health
San Francisco Department of Public Health

Kaleem Malik MD, MS, FAAEM
Trauma Emergency Medicine Physician, Chicagoland Area
Director of Medical Disaster Response
United Nations, Humanity First Organization

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

Keshia Pollack Porter, PhD, MPH
Chair, Department of Health Policy and Management
Bloomberg School of Public Health
Johns Hopkins University

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Attachment B: Acronyms Used in This Document

Acronym	Expansion
2Gen	2-Generation
3Gen	3-Generation
AAP	American Academy of Pediatrics
ACEs	Adverse Childhood Experiences
ACOG	American College of Obstetricians and Gynecologists
Action Alliance	National Action Alliance for Suicide Prevention
ADS	Associate Director for Science
AI/AN	American Indian/Alaskan Native
ASPE	Assistant Secretary for Planning and Evaluation
ASTHO	Association of State and Territorial Health Officials
BHCC	Behavioral Health Coordinating Council
BHCU	Behavioral Health Coordinating Unit
BRFSS	Behavioral Risk Factor Surveillance System
BSC	Board of Scientific Counselors
CAN	Child Abuse and Neglect
CBO	Community-Based Organization
CCTI	Cambridge Communications and Training Institute
CDC	Centers for Disease Control and Prevention
CDER	Center for Drug Evaluation and Research
CIOs	Centers, Institutes, and Offices
CM	Child Maltreatment
CLASP	Center for Law and Social Policy
COI	Conflict of Interest
CSA	Childhood Sexual Abuse
CSP	Comprehensive Suicide Prevention Program
D2A	Data-to-Action
DC	District of Columbia
DFC	Drug-Free Communities
DFO	Designated Federal Official
DID	Difference-in-Differences
DIP	Division of Injury Prevention
DOP	Division of Overdose Prevention
DOSE System	Drug Overdose Surveillance and Epidemiology System
DPC	(White House) Domestic Policy Council
DRH	Division of Reproductive Health
DVP	Division of Violence Prevention
ED	Emergency Department
EHR	Electronic Health Records
EITC	Earned Income Tax Credits
Epi-Aid	Epidemiologic Assistance
ET	Eastern Time
FACA	Federal Advisory Committee Act
FDA	Food and Drug Administration
FY	Fiscal Year
HCP	Healthcare Providers
HHS	(Department of) Health and Human Services

Acronym	Expansion
HIV	Human Immunodeficiency Viruses
HOPE	Healthy Outcomes from Positive Experiences
IHS	Indian Health Services
IMF	Illegally Made Fentanyl
IPV	Intimate Partner Violence
IWG	Interagency Workgroup
IPV	Intimate Partner Violence
LCA	Latent Class Analysis
LTC	Linkage to Care
MHA	Mental Health America
MMRCs	Maternal Mortality Review Committees
MMRIA	Maternal Mortality Review Information Application
MMWR	*Morbidity and Mortality Weekly Report*
MOUD	Medications for Opioid Use Disorder
NCCDPHP	National Center for Chronic Disease Prevention and Health Promotion
Action Alliance	National Action Alliance for Suicide Prevention
National Strategy	*National Strategy for Suicide Prevention*
Action Alliance	National Action Alliance for Suicide Prevention
NCBDDD	National Center on Birth Defects and Developmental Disabilities
NCIPC / Injury Center	National Center for Injury Prevention and Control
NHIS	National Health Interview Survey
NIAAA	National Institute on Alcohol Abuse and Alcoholism
NICHD	Eunice Kennedy Shriver National Institute of Child Health and Human Development
NIDA	National Institute on Drug Abuse
NIH	National Institutes of Health
NIMH	National Institute of Mental Health
NOFO	Notice of Funding Opportunity
NQF	National Quality Forum
NSDUH	National Survey on Drug Use and Health
NSSP	National Strategy for Suicide Prevention
NSSP	National Syndromic Surveillance Program
NVDRS	National Violent Death Reporting System
NVSS	National Vital Statistics System
OD2A	Overdose Data to Action
OFRs	Overdose Fatality Reviews
OSE	Office of Surveillance and Epidemiology
OUD	Opioid Use Disorder
PCEs	Positive Childhood Experiences
PDMP	Prescription Drug Monitoring Program
PfS	Prevention for States
PI	Principal Investigator
SAMHSA	Substance Abuse and Mental Health Services Administration
PDMP	Prescription Drug Monitoring Program
PEPFAR	President's Emergency Plan For AIDS Relief
PSU	Primary Sampling Unit
PPS Sampling	Probability-Proportion-to-Size Sampling

Acronym	Expansion
PWLE	People With Lived Experience
PWUD	People Who Use Drugs
RSAR	Regulatory Science and Applied Research
RSS	Regulatory Science Staff
SBIRT	Screening, Brief Intervention, and Referral to Treatment
SDOH	Social Determinants of Health
SES	Management, Operations, Communication, and Policy
SME	Subject Matter Expert
SPCC	Suicide Prevention and Crisis Care subcommittee of the HHS BHCC
SUD	Substance Use Disorder
SUDORS	State Unintentional Drug Overdose Reporting System
SV	Sexual Violence
SWOT	Strengths, Weaknesses, Opportunities, and Threats
TA	Technical Assistance
UNICEF	United Nations Children's Fund
UNODC	United Nations Office on Drugs and Crime
US	United States
USDA	US Department of Agriculture
USED	US Department of Education
VACS	Violence Against Children and Youth Survey
WHO	World Health Organization
YRBS	Youth Risk Behavior Survey
YRBSS	Youth Risk Behavior Surveillance System