

Portfolio Review of the Division of Overdose Prevention: 2019 - 2023

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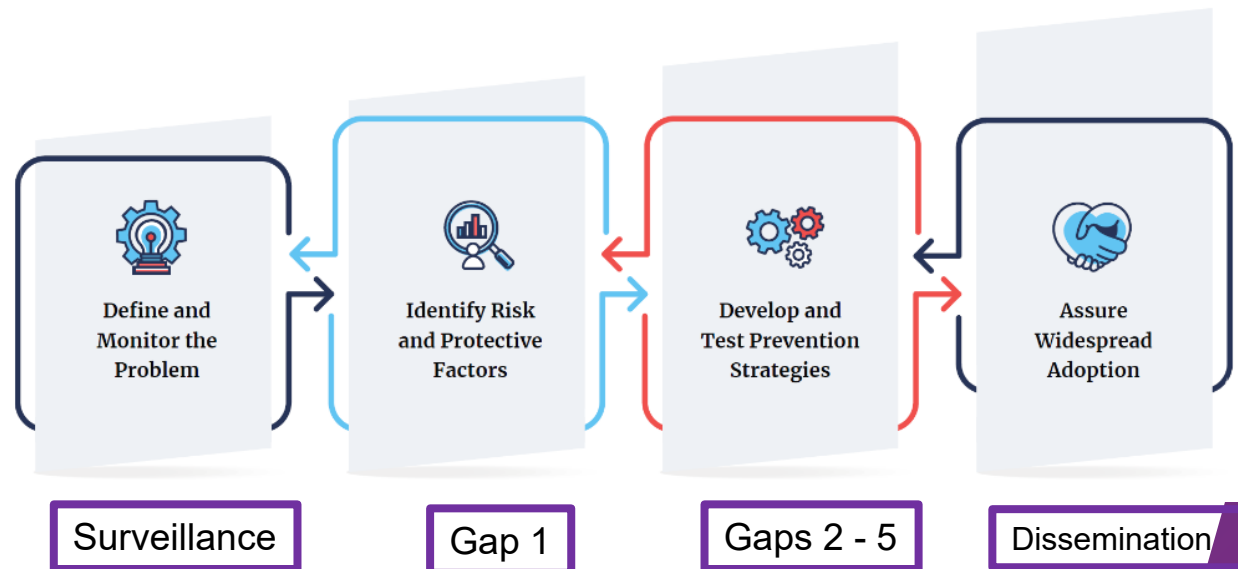
Deputy Associate Director for
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Division of Overdose Prevention



Agenda

The Public Health Approach DOP Surveillance, Research and Dissemination



Surveillance

Substance use

Overdose mortality

Overdose morbidity

Substance Use Disorder and Treatment

Opioid Prescribing

Naloxone Prescribing

This section will describe recent publications and data releases that have drawn attention to the public health issue of overdose.

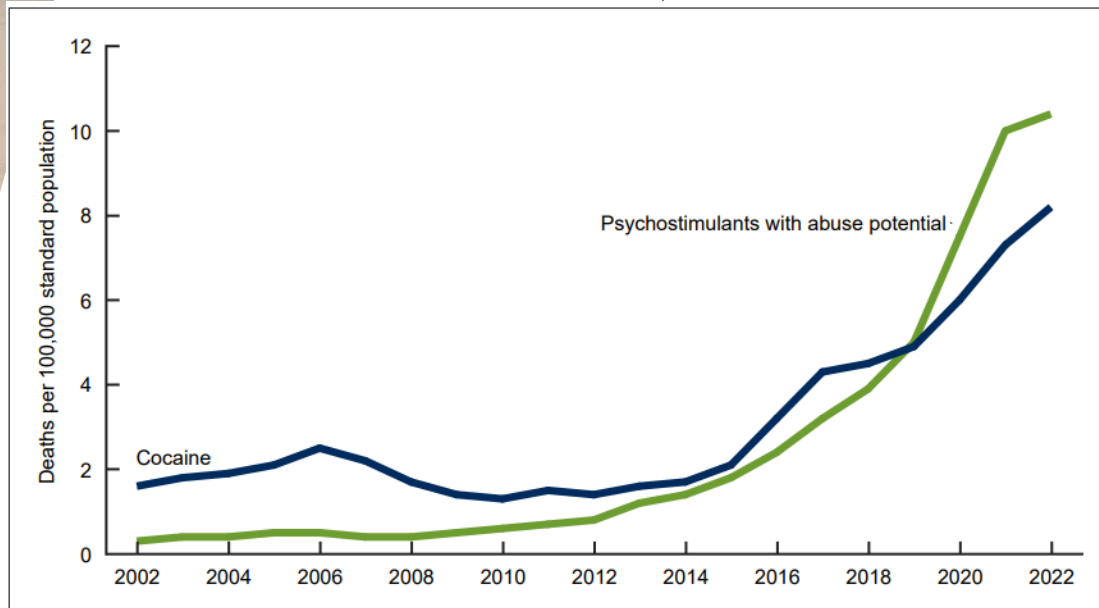
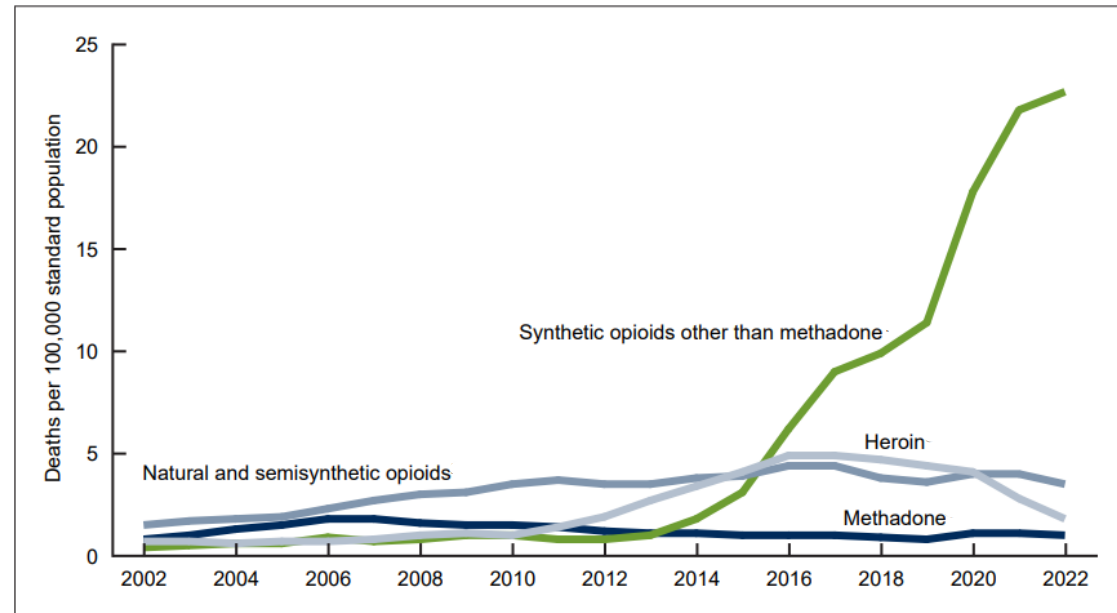
Substance Use

Substance use among people 12 and older in the past year – National Survey on Drug Use and Health (NSDUH), 2022

Substance use in the year prior to the survey

- + 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 Mortality

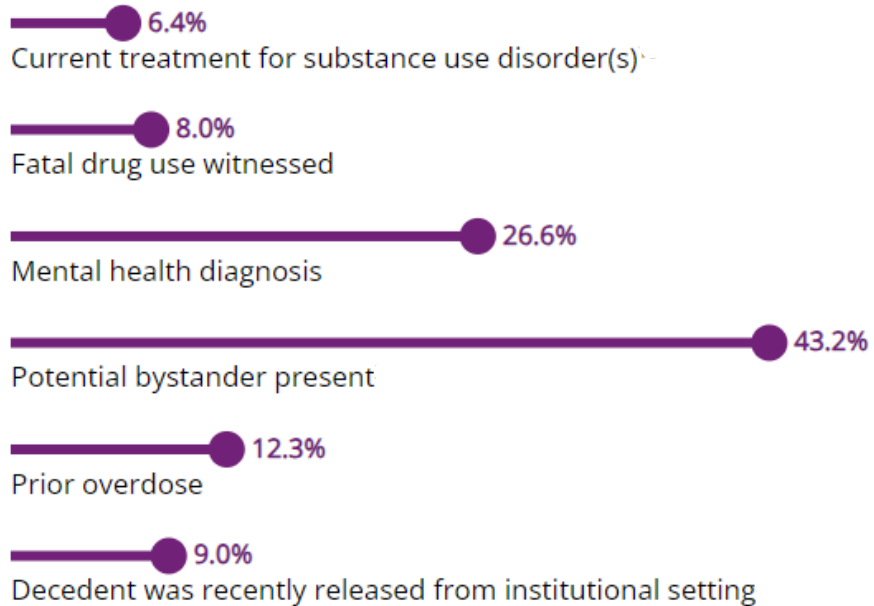


What were the circumstances¹ surrounding overdose deaths in 2022, Overall (30 jurisdictions)?



64.7%

of drug overdose deaths had at least one potential opportunity for intervention



¹ Circumstance percentages are only among decedents with an available medical examiner or coroner report

SUDORS DASHBOARD

- State Unintentional Drug Overdose Reporting System
- Fatal Overdose Data

SUDORS Data

Emerging issues in overdose deaths

- + **Evidence of counterfeit pill use:** July–September 2019 to October–December 2021
 - Percentage more than doubled overall (2% to 4.7%)
 - Percentage more than tripled in western states (4.7% to 14.7%)
- + **Persons aged 10–19 years:** July–December 2019 to July–December 2021
 - Median monthly deaths increased 109%
 - Deaths involving **illegally made fentanyls (IMFs)** increased 182%
 - Approximately 90% of deaths involved opioids and 84% involved IMFs
- + **Route of administration:** January–June 2020 to July–December 2022,
 - Percentage of overdose deaths with **evidence of smoking increased** 73.7%
 - Percentage with evidence of injection decreased 29.1%

<https://www.cdc.gov/mmwr/volumes/72/wr/pdfs/mm7235-H.pdf>

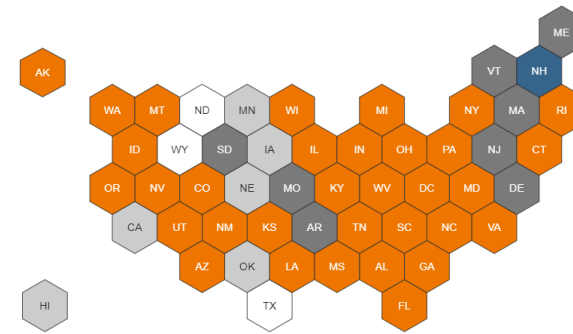
<https://www.cdc.gov/mmwr/volumes/71/wr/pdfs/mm7150a2-H.pdf>

Routes of Drug Use Among Drug Overdose Deaths — United States, 2020–2022 | MMWR (cdc.gov)

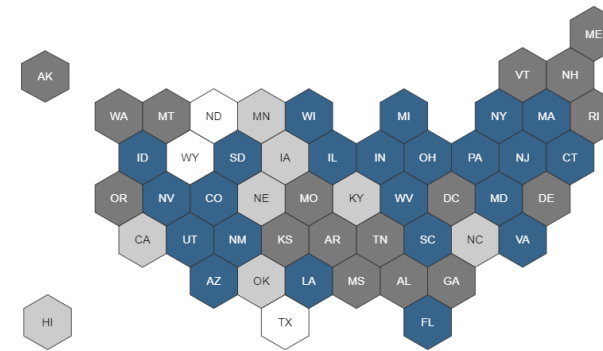
DOSE Dashboard

Nonfatal Overdose Syndromic Surveillance Dashboard

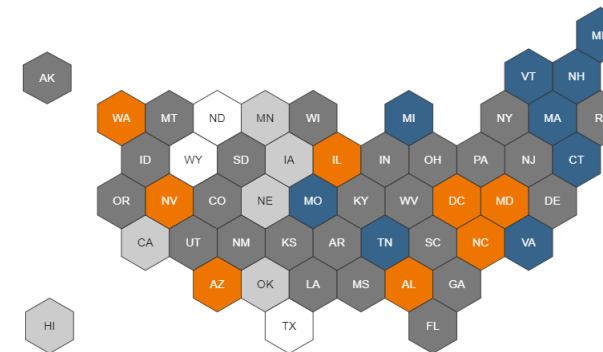
Please note these
data will be updated
in June 2024.



Dec 2019 to Dec 2020



May 2021 to June 2022

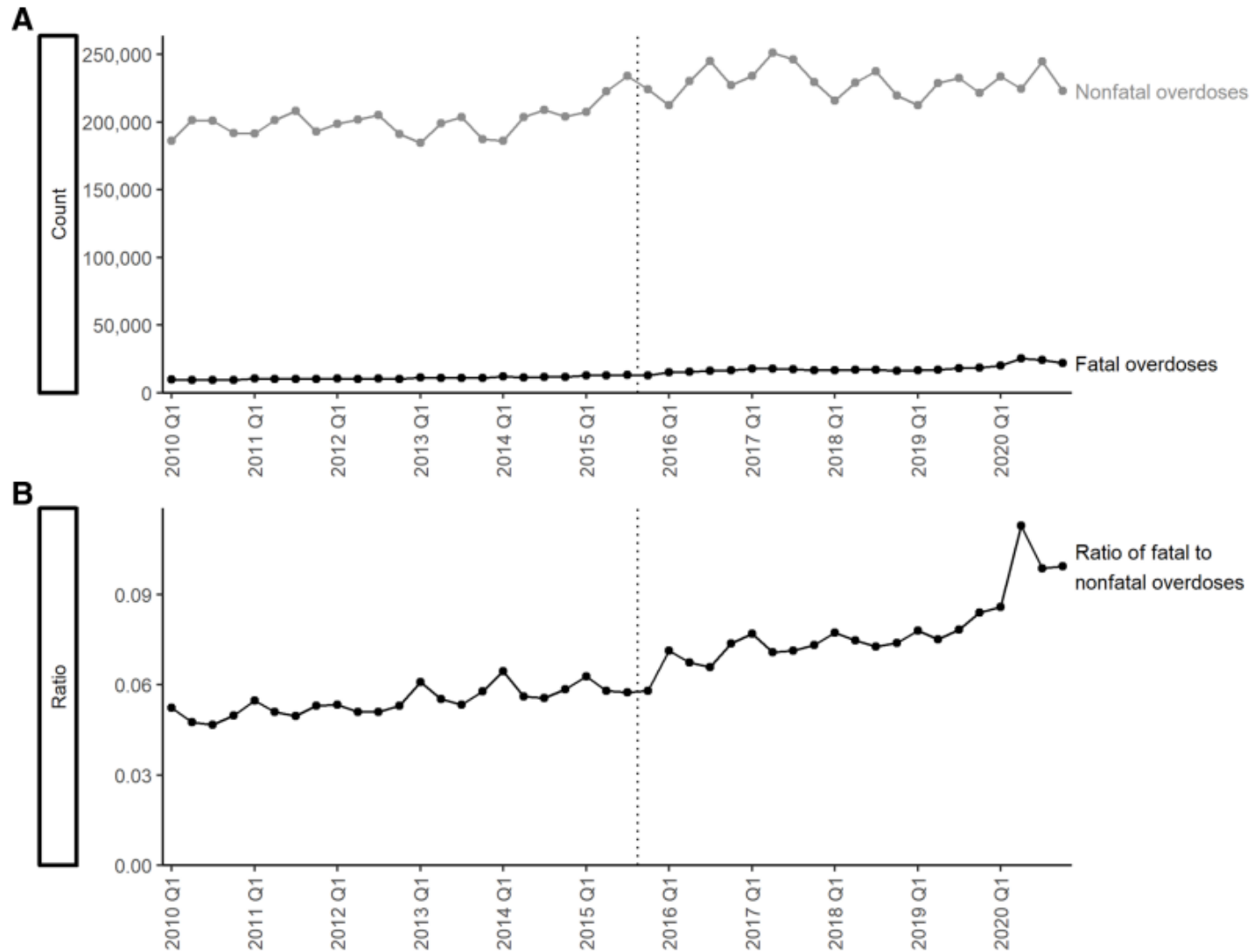


May 2022 to June 2023

Color Legend

- Significant Increase
- Significant Decrease
- No Significant Change
- Data Not Available/Not Reported
- Unfunded State

Ratio of fatal to nonfatal overdoses



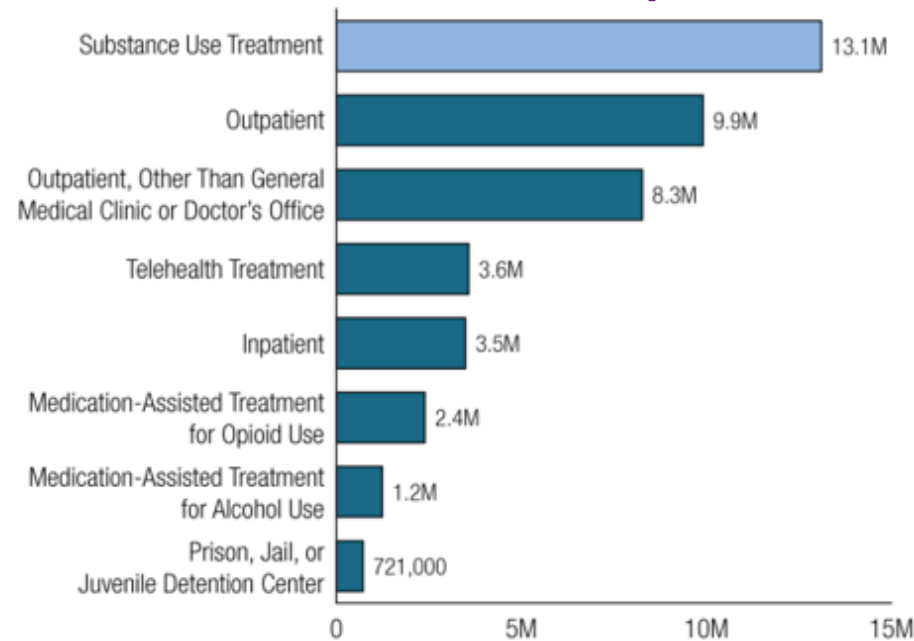
The greatest average quarterly percent change (AQPC) in fatal overdose counts was among synthetic opioid-involved overdoses, which increased by 7.1%.

The greatest change in nonfatal overdose counts was among heroin-involved overdoses, which increase by 4.3%

Ratio increases were driven by greater relative increases in fatal overdoses compared with non-fatal overdoses.

Substance use treatment in the year prior to the survey -- NSDUH, 2022

Types and Locations of Substance Use Treatment In the Past Year: Among People Aged 12 or Older in the Year Prior to the Survey

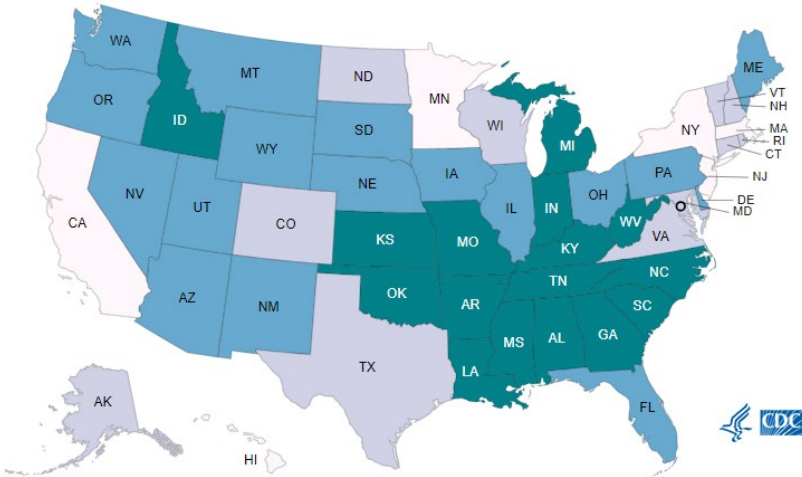


Number of People Receiving Substance Use Treatment in the Year Prior to the Survey

Opioid Prescribing

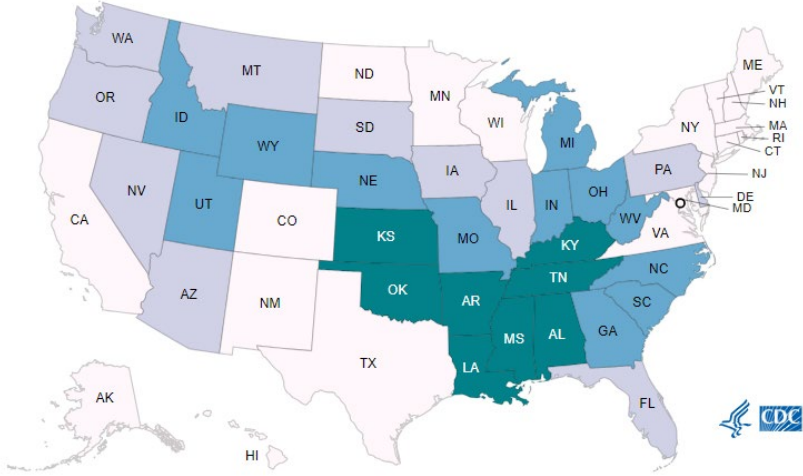
Year

2019



Year

2022



Opioid Dispensing Rate (per 100 persons)

- <36.1
- 36.1 - 42.7
- 42.8 - 52.8
- >52.8

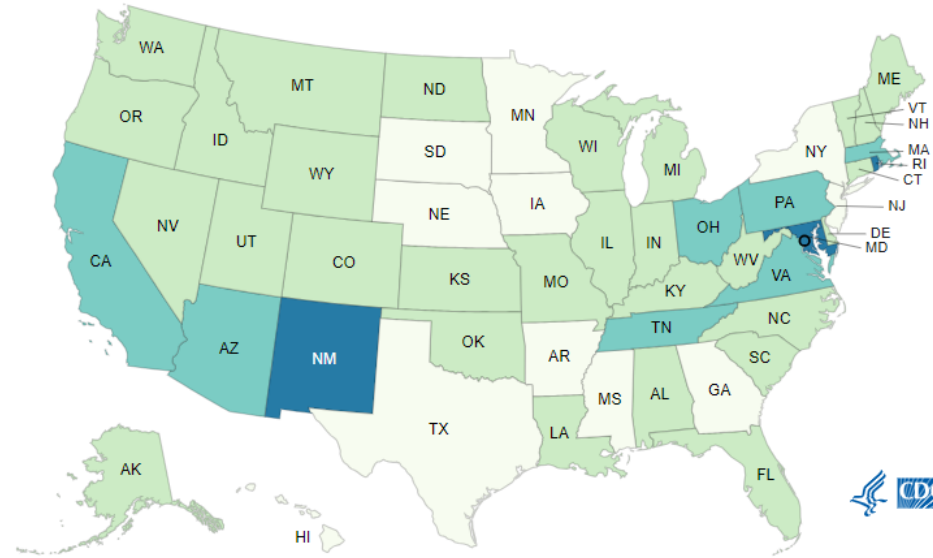
- Rate per 100 persons by state in 2019 and 2022
- Opioid Dispensing Rate Dashboard shows changes in some states from 2019 to 2022

Naloxone Prescribing

- Rate per 100 persons by state in 2019 and 2022
- Naloxone Dispensing Rate Dashboard shows changes in some states from 2019 to 2022

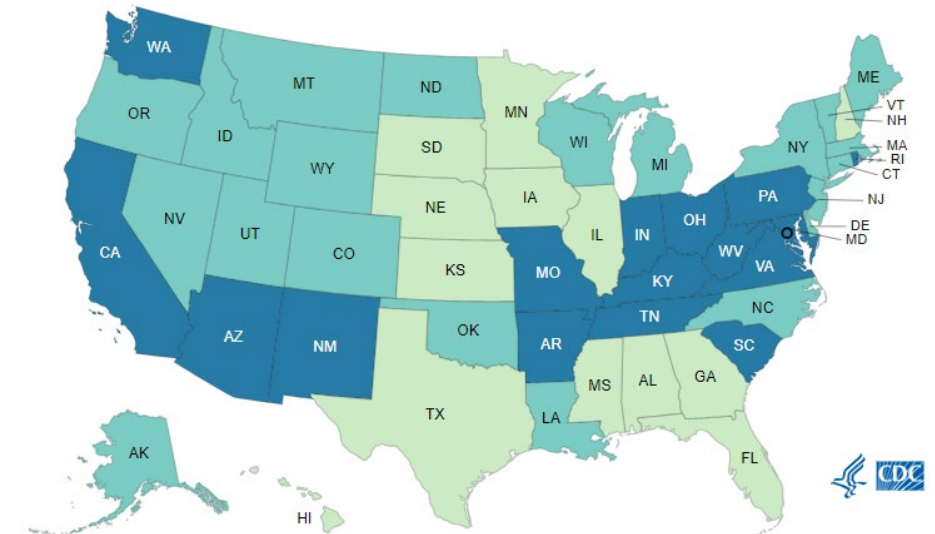
Year

2019 ▾



Year

2022 ▾



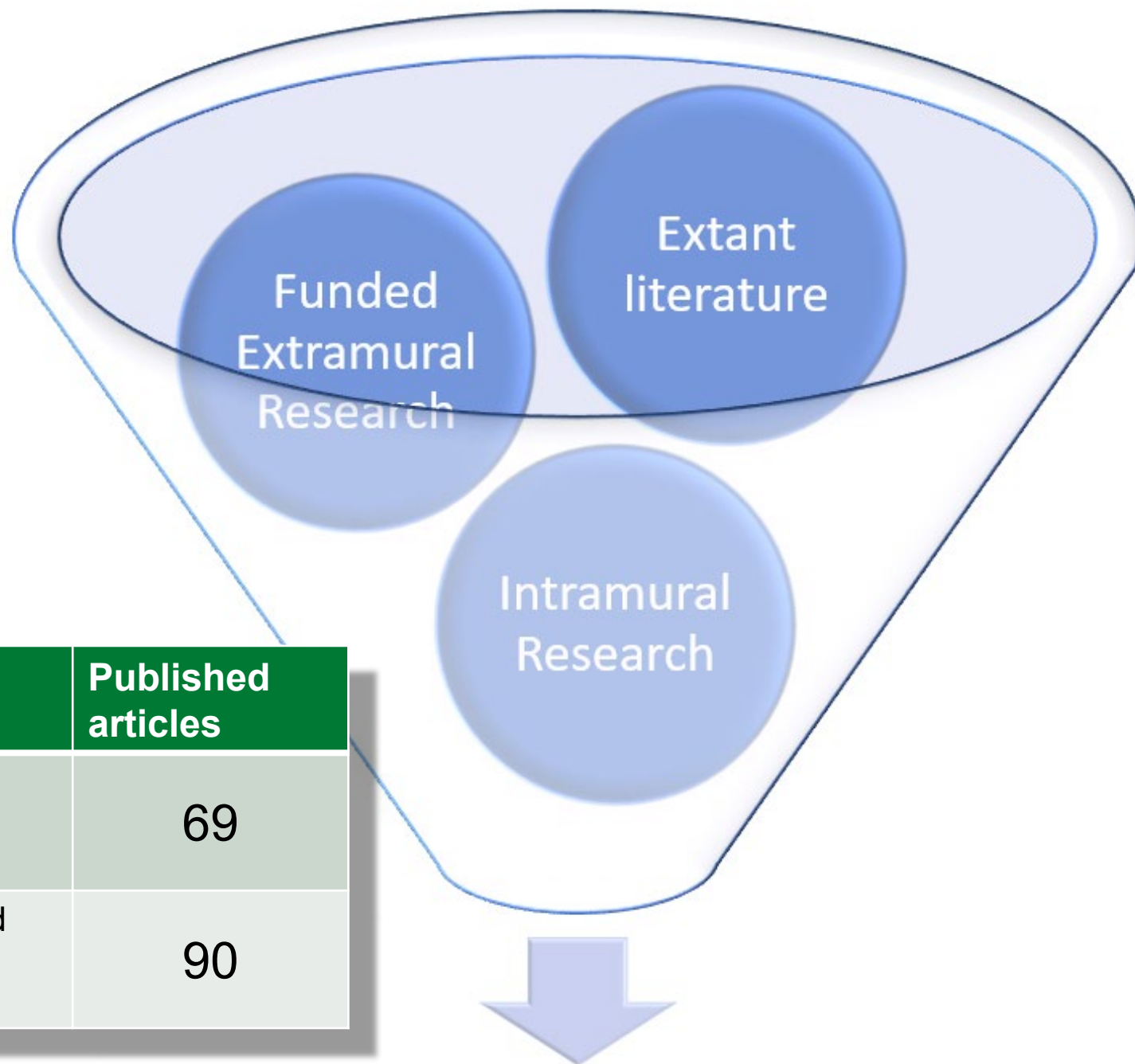
2020 Division of Overdose Research Gaps

2020 Division of Overdose Research Gaps

- + Identify risk and protective factors for drug overdose, with a focus on overdoses involving opioids, emerging drugs, and polydrug combinations
- + Evaluate the impact, implementation, and adoption of health system interventions designed to reduce drug overdose and other drug-related harms
- + 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
- + 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
- + Develop and evaluate innovative prevention strategies designed to prevent overdose, including among those at greatest risk

How we address these gaps

Our focus today is on NCIPC intramural research and DOP funded extramural research published between 2019 and 2023 addressing the 2020 research gaps



Source	Published articles
NCIPC Intramural Research	69
DOP Funded Extramural Research	90

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

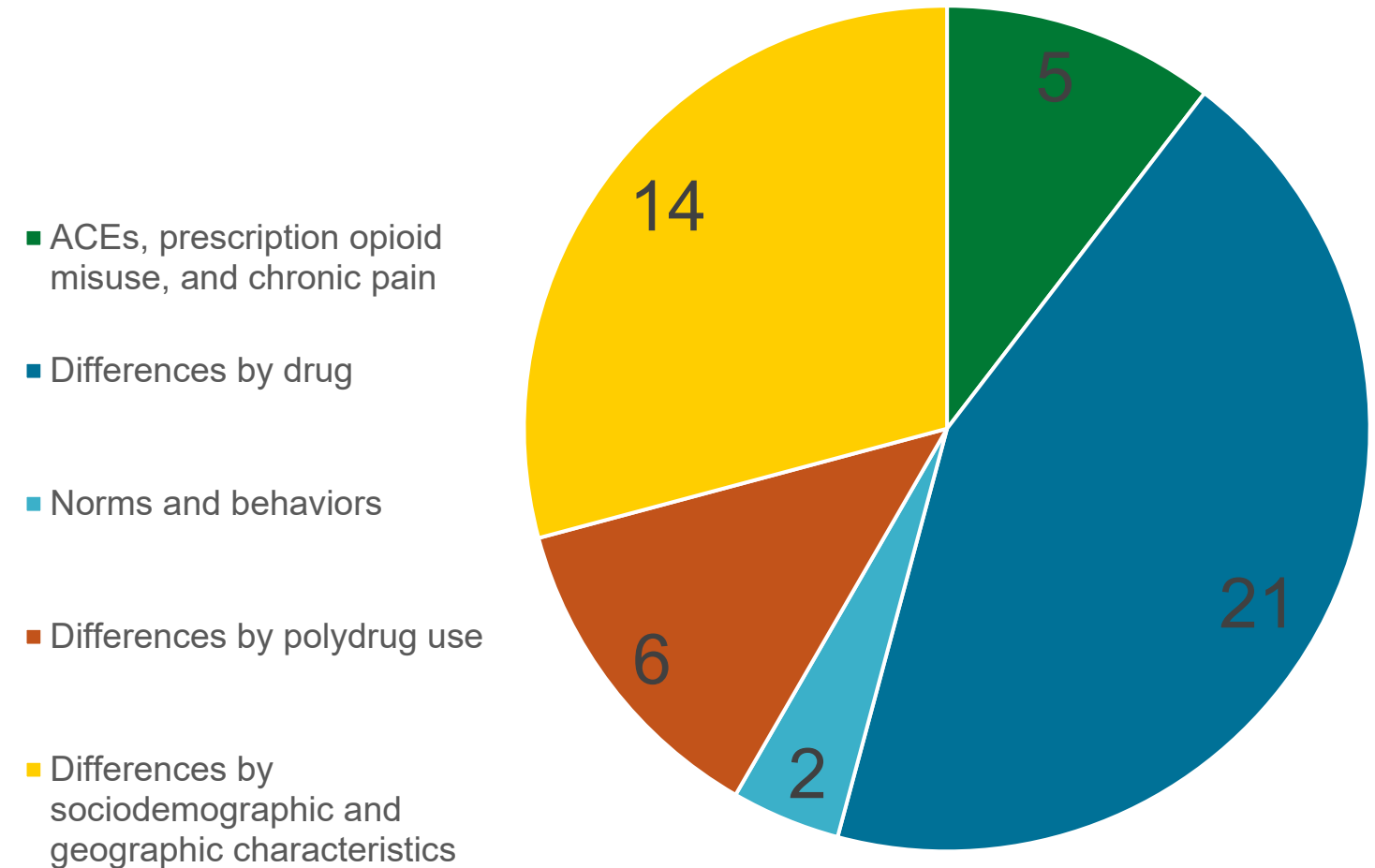
- + How do risk and protective factors differ by
 - sociodemographic and geographic characteristics
 - intersectional social identities
 - polydrug use
 - early drug use initiation and escalation of use
- + What are the associations among adverse childhood experiences (ACEs), prescription opioid misuse 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?

Gap 1 Intramural Articles

Opportunities to increase inquiry

- Differences in risk and protective factors by intersectional identities
- Early drug use initiation and escalation of use
- Norms and behaviors
- Differences by polydrug use
- ACEs, prescription opioid misuse, and chronic pain

Research articles published between 2019 and 2023 (N=48)



Note: articles were coded such that categories are mutually exclusive; however, it is possible that some articles could have fallen into more than one category

Impact of Intramural Articles – Altmetric Scores

+ 10 articles with more than 100 media mentions

■ Differences by drug

- **Drug Overdose Deaths Among Persons Aged 10–19 Years — United States, July 2019–December 2021**
- **Gastroschisis Trends and Ecologic Link to Opioid Prescription Rates - United States, 2006-2015**
- **Binge Drinking and Prescription Opioid Misuse in the U.S., 2012-2014**
- **Indication-Specific Opioid Prescribing for US Patients with Medicaid or Private Insurance, 2017**

■ Differences by sociodemographic and geographic characteristics

- **Vital Signs: Drug Overdose Deaths, by Selected Sociodemographic and Social Determinants of Health Characteristics - 25 States and the District of Columbia, 2019-2020**
- **Drug Overdose Deaths with Evidence of Counterfeit Pill Use — United States, July 2019–December 2021**
- **Opioid Prescribing Rates in Nonmetropolitan and Metropolitan Counties Among Primary Care Providers Using an Electronic Health Record System — United States, 2014-2017**
- **Buprenorphine Dispensing Among Youth Aged ≤19 Years in the United States: 2015-2020**

■ Differences by polydrug use

- **Notes from the Field: Unintentional Drug Overdose Deaths with Kratom Detected - 27 States, July 2016-December 2017**
- **Vital Signs: Characteristics of drug overdose deaths involving opioids and stimulants — 24 states and the District of Columbia, January–June 2019**

Impact of Intramural Articles – SCOPUS

+ 7 articles with more than 50 citations in scholarly documents

■ Differences by drug

- **The relationship between incarceration history and overdose in North America: A scoping review of the evidence**

■ Differences by sociodemographic and geographic characteristics

- **Vital Signs: Drug Overdose Deaths, by Selected Sociodemographic and Social Determinants of Health Characteristics - 25 States and the District of Columbia, 2019-2020**
- **Resurgent Methamphetamine Use at Treatment Admission in the United States, 2008-2017**
- **Opioid Prescribing Rates in Nonmetropolitan and Metropolitan Counties Among Primary Care Providers Using an Electronic Health Record System — United States, 2014–2017**

■ Differences by polydrug use

- **Notes from the Field: Unintentional Drug Overdose Deaths with Kratom Detected - 27 States, July 2016-December 2017**
- **Vital Signs: Characteristics of drug overdose deaths involving opioids and stimulants — 24 states and the District of Columbia, January–June 2019**

■ ACEs, prescription opioid misuse, and chronic pain

- **Adverse childhood experiences increase risk for prescription opioid misuse**

Impact of Intramural Articles – BMJ Analytics

+ 6 articles mentioned in at least 5 policy documents

■ Differences by drug

- **Drug Overdose Deaths Among Persons Aged 10–19 Years — United States, July 2019–December 2021**
- **Indication-Specific Opioid Prescribing for US Patients with Medicaid or Private Insurance, 2017**

■ Differences by sociodemographic and geographic characteristics

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Extramural Research

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

OPR = Opioid Pain Reliever

Gap 1 Extramural Articles

Research articles published between 2019 and 2023 (N=31)

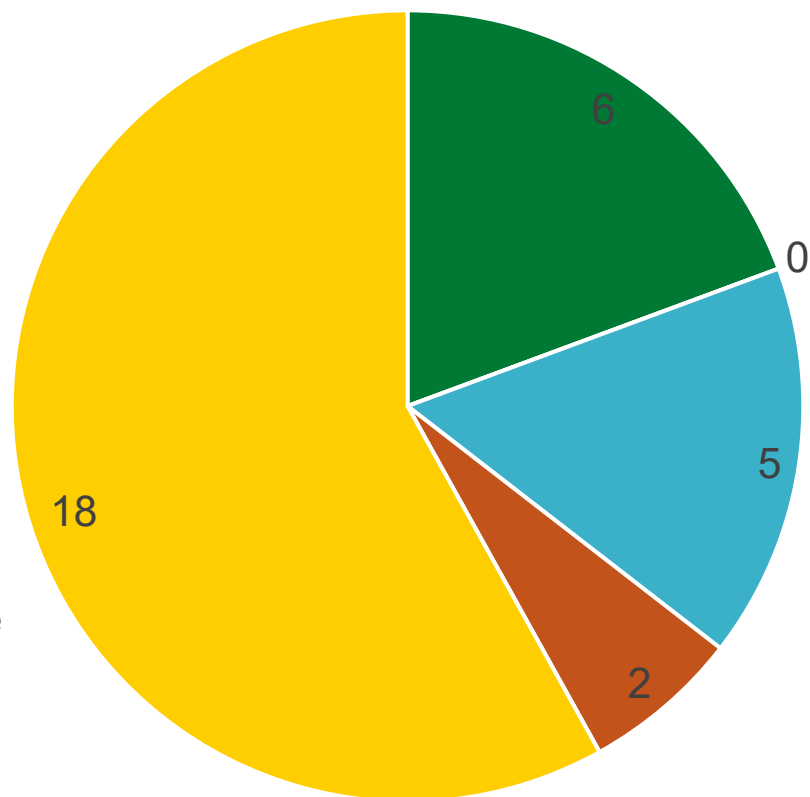
■ ACEs, prescription opioid misuse, and chronic pain

■ Differences by drug

■ Norms and behaviors

■ Differences by polydrug use

■ Differences by sociodemographic and geographic characteristics



Note: articles were coded such that categories are mutually exclusive; however, it is possible that some articles could have fallen into more than one category

- Opportunities to increase inquiry
- Differences in risk and protective factors by intersectional identities
- Early drug use initiation and escalation of use
- Differences by polydrug use – *FY 22 publications should be coming out soon*
- Contributions to highlight
- Norms and behaviors among people who use drugs

Future Directions for Research on Risk and Protective Factors

Intra and Extramural

Altmetrics: Highest = 3403

16 with > 100 media mentions

SCOPUS: Highest = 168

9 with > 50 citations

BMJ Analytics: Highest = 11

8 with at least 5 mentions in policy
documents

- Continued focus on **fentanyl** while monitoring emerging substances
- Differences in risk and protective factors by intersectional identities
 - Populations who are underserved
 - Populations experiencing stigma
 - Populations experiencing risk due to multiple social determinants of health
- Early drug use initiation and escalation of use
- Norms and behaviors around drug use
- Incorporation of shared risk factors for mental health conditions and substance use
- Differences in risk and protective factors by polydrug use

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...

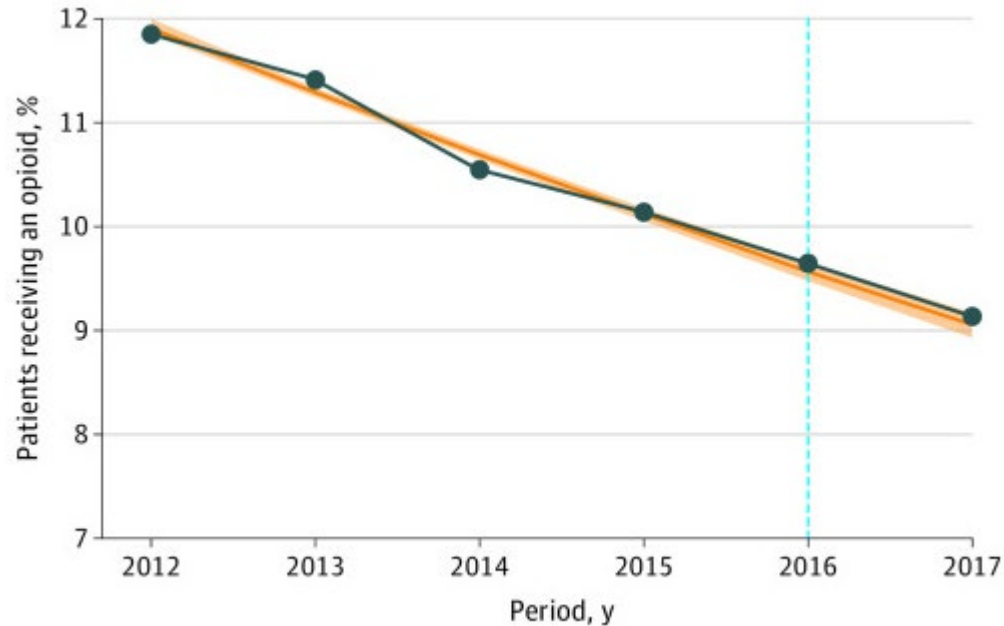
- unintended consequences and benefits of health system interventions
- attitudes, beliefs, knowledge gaps including among program implementors and populations for whom the interventions were designed

Gap 2: Intramural Articles Addressing the Adoption of Health System Interventions -- 7

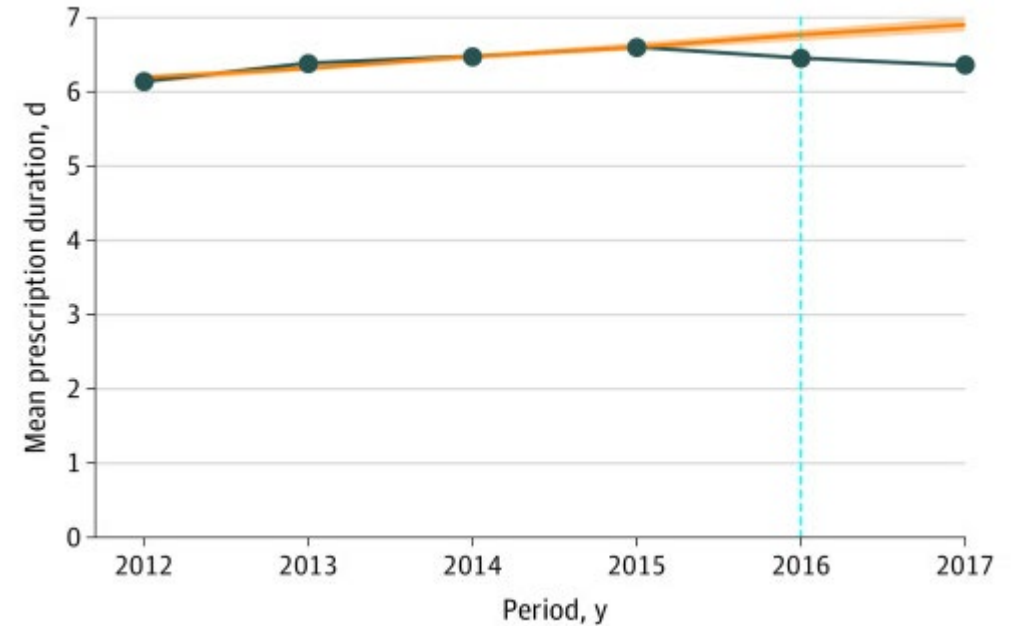
- + Impact of health system approaches – 6
 - 3 of these were specific to the *CDC Guideline for Prescribing Opioids for Chronic Pain, 2016*
 - The guideline was intended to help primary care providers ensure the safest and most effective treatment for their patients
 - 3 were about health system approaches more broadly
- + Secular trends in buprenorphine and opioid analgesic prescribing were also examined

- + Please note that the 2022 Clinical Practice Guideline for Prescribing Opioids for Pain, 2022 will be incorporated later this section

Opioid Naïve and Subsequent Prescriptions



Patients Who Were Opioid Naïve and Who Subsequently Received an Opioid Prescription vs Linear Projections Based on Preguideline Trend

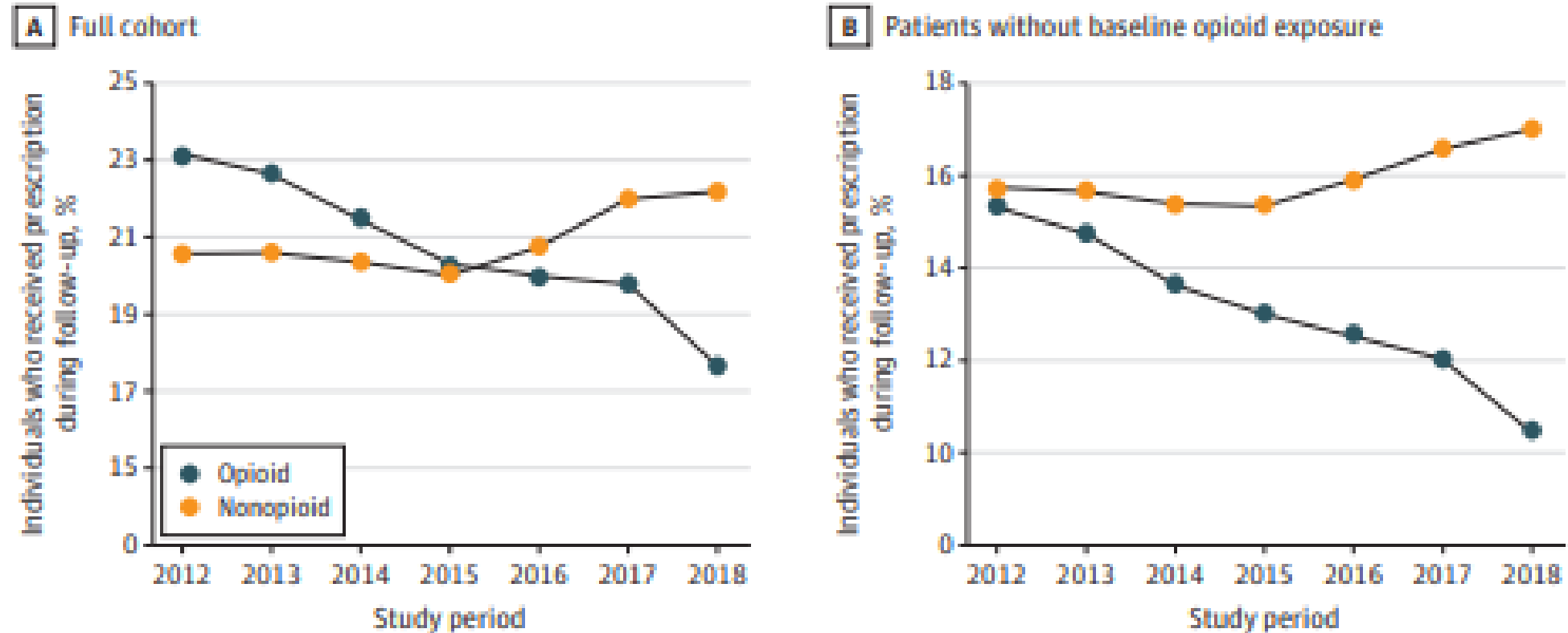


Mean Initial Prescription Duration Among Patients Who Were Opioid Naïve Receiving Any Opioid Prescription vs Projections From Preguideline Trend

Altmetric: 241, SCOPUS: 46, BMJ Analytics: 1

Nonopioid Pain Prescriptions

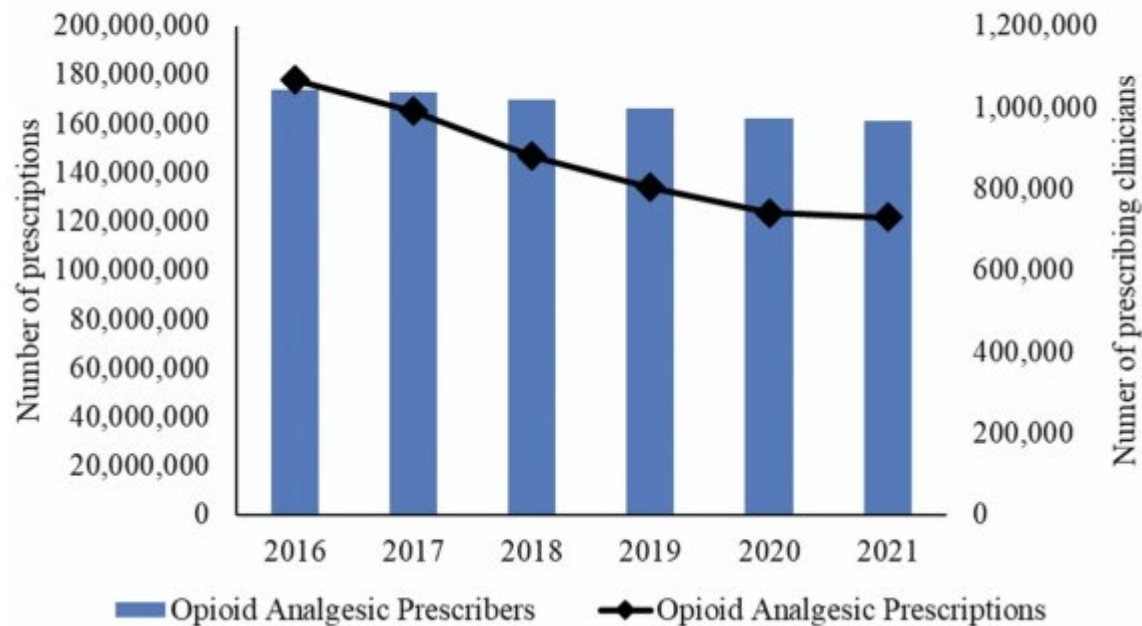
Figure 1. Percentage of Patients Who Received Opioid vs Nonopioid Pain Prescriptions During Follow-up



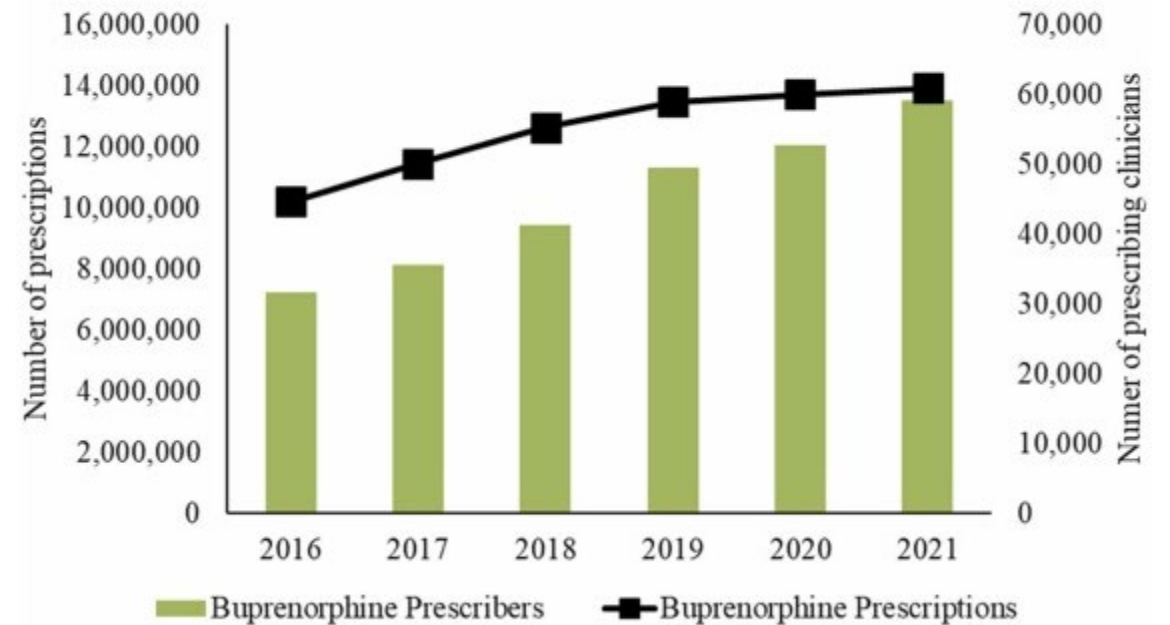
Altmetric: 102, SCOPUS: 9, BMJ Analytics: 2

Opioid Pain Medications and Buprenorphine

a. Opioid analgesics



b. Buprenorphine



Number of prescriptions and prescribing clinicians for opioid analgesics and buprenorphine, 2016–2021.

Altmetric: 8, SCOPUS: 6

[Change in opioid and buprenorphine prescribers and prescriptions by specialty, 2016-2021 - PubMed \(nih.gov\)](#)

Extramural Research

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

Gap 2: Extramural Articles Addressing the Adoption of Health System Interventions– 33

- + Academic detailing – 3
- + Assessing disparities – 2
- + Attitudes, beliefs, and knowledge -- 3
- + Health system approaches, provider approaches, approaches specific to pregnancy – 17
- + Pharmacy-related – 1
- + Unintended consequences and benefits – 5
- + Impact of ACOG guideline -- 2

CDC Clinical Practice Guideline for Prescribing Opioids for Pain - United States, 2022

- Altmetric = 2716
- SCOPUS = 335
- BMJ Policy = 29

Source	Source Type
Federal Register	government
Regeringskansliet	government
AHRQ	government
Centers for Disease Control and Prevention (CDC)	government
Centers for Disease Control and Prevention (CDC)	government
Generalitat de Catalunya	government
Generalitat de Catalunya	government
State of Missouri	government
State of Tennessee	government
State of Arizona	government
State of Georgia	government
Government Publishing Office (GPO)	government
City of San Francisco	government
State of Missouri	government
Generalitat de Catalunya	government
Generalitat de Catalunya	government
State of Florida	government
Centers for Disease Control and Prevention (CDC)	government
Centers for Disease Control and Prevention (CDC)	government
World Health Organization	government
American Society of Interventional Pain Physicians	think tank
BMJ Best Practice	think tank
RAND Corporation	think tank
RAND Corporation	think tank
Cato Institute	think tank
Cato Institute	think tank
Cato Institute	think tank
CountyCare Health Plan	think tank
Australian and New Zealand College of Anaesthetists	think tank

What kind of policy sources did BMJ analytics find?

- Impacts
 - Linkage and retention into synergistic approaches
 - pain management
 - opioid use disorder
 - mental health
 - Primary prevention at initial exposure (adolescent sports injury, dental treatment)
 - Health system approaches for people who use drugs
 - Hospital at discharge
- Health disparities
- Attitudes and beliefs among clinicians and interventions to address
- Evaluation of the 2022 Clinical Practice Guideline

Future Directions for Health System Intervention Research

Intra and Extramural

Altmetrics: Highest = 2407
5 with > 100 media mentions
SCOPUS: Highest = 443
2 with > 50 citations
BMJ Analytics: Highest = 27

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?
 - that 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?

Gap 3 Intramural Articles Addressing Public Health/Public Safety Collaboration-- 3

- + Impact of public safety approaches – 2
 - Case study of an Opioid Rapid Response Program (ORRP)-coordinated event
 - A description of a pilot of the Public Health and Safety Team (PHAST) framework
- + Scoping review of assertive linkage programs to improve linkage to care for people who use drugs
 - Highlighted need for linkage to more evidence-based strategies

Extramural Research

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

Gap 3 Extramural Articles Addressing Public Health/Public Safety Collaboration-- 9

- + Post-overdose outreach - 3
 - Scoping review, effectiveness, implementation characteristics
 - Effectiveness over 93 municipalities in Massachusetts
- + Peer recovery support specialists - 1
- + Post-prison release (protocol only) - 1
- + Unintended consequences of law enforcement interventions - 2
- + Attitudes, beliefs and knowledge gaps (protocol only) - 1
- + Problem solving courts (preliminary only) - 1

Future Directions for Research on Public Health/Public Safety Collaborations

Intra and Extramural

Altmetrics: Highest = 1553
2 with > 100 media mentions
SCOPUS: Highest = 57
1 with > 50 citations
BMJ Analytics: Highest = 3

- Research on impacts of CDC public health public safety coordination and frameworks
- Some extramural work is in process, but more rigorous evaluation of public health public safety strategies is needed
- Specific focus on disproportionately affected populations, linkage to evidence-based interventions, including medications for opioid use disorder

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

Gap 4 Intramural Articles Addressing Laws, Regulations, and Policies -- 7

- + Impact of Prescription Drug Monitoring Program (PDMP)-focused policies – 3
- + Impact of knowledge of Good Samaritan Laws (mediator)
- + Impact of policy to improve access to medications for opioid use disorder
- + Impact of policy designed to reduce overdose
- + Literature review of impact of opioid prescribing limits (2013 – 2019)
 - Noted lack of studies on unintended consequences

Extramural Research

Year	Project Title	Type of Recipient
2016	Assessing the Unintended Consequences of Restrictive Opioid Pain Reliever Policies	Cooperative Agreement

*Coming soon! FY 24 NOFO
Focused on Policy Impacts*

Gap 4 Extramural Articles Addressing Laws, Regulations, and Policies -- 8

- + Impact of policies to increase access to naloxone – 2
 - Authority to pharmacists showed increases; other types no change
- + Impact of policies to improve prescribing -- 3
- + Prenatal substance use – 1
- + Opioid litigation – 1
- + Comprehensive prescription drug monitoring program mandates -- 1

- Policies to improve access to and retention in the full continuum of evidence-based pain therapy options
- 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 medications for opioid use disorder)
- Exploring the impact of cannabis legislation

Future Directions for Research Addressing Laws, Regulations, and Policies

Intra and Extramural

Altmetrics: Highest = 1897

3 with > 100 media mentions

SCOPUS: Highest = 152

2 with > 50 citations

BMJ Analytics: Highest = 18

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

Gap 5 Intramural Articles Addressing Innovative Interventions – 4

- + New interventions: Review of literature – intervention research 2013-2018
 - Substantial increase in studies but not in level of evidence
- + New interventions for youth
 - The Martinsburg Initiative, small sample, pilot findings
- + Interventions for other outcomes
 - HIV-focused interventions (behavioral-psychosocial, MOUD, financial and scheduling incentives, and case management) reduce risk of injection and other drug use
- + Facilitators
 - States successful in reducing opioid dispensing selected activities that built upon existing policies and interventions

Extramural Research

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

Gap 5 Extramural Articles Addressing Innovative Interventions -- 9

- + Levels of care intervention (Rhode Island)
- + Protocol for Relay (peer-delivered intervention)
- + Pharmacy and community distributed naloxone
- + Hepatitis C Virus elimination
- + Feasibility study of technology assisted opioid education
- + Lessons Learned Pandemic and epidemic system barriers
- + Telehealth – low barrier treatment
- + Effects of COVID on treatment
- + Perspectives on medication for treatment of methamphetamine use

*Coming soon! FY 24
NOFO Focused on
Innovative
Interventions*

Future Directions for Research Addressing Innovative Interventions

Intra and Extramural

Altmetrics: Highest = 53

SCOPUS: Highest = 47

BMJ Analytics: Highest = 7

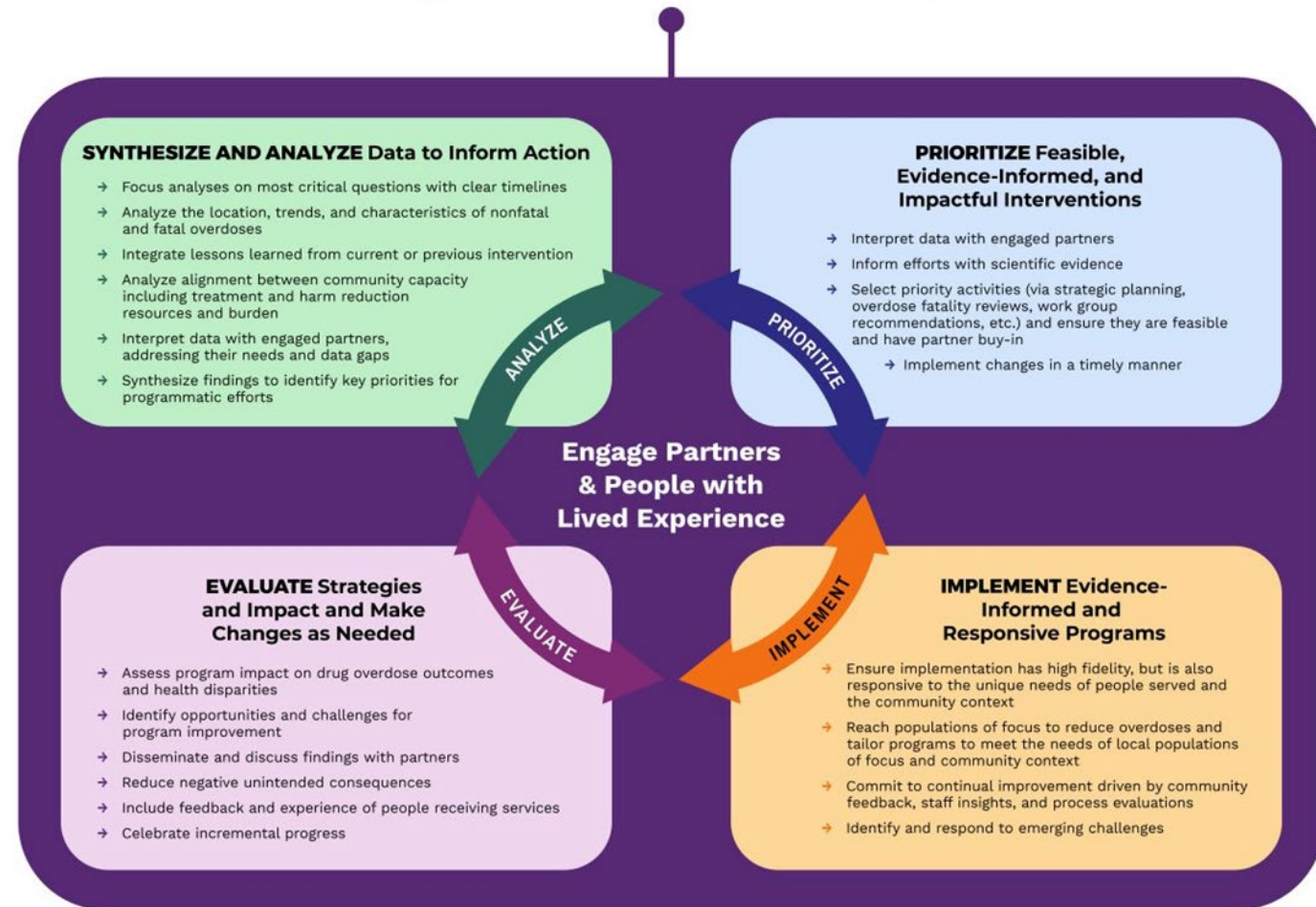
- + Identification of promising practices as candidates for rigorous evaluation
- + Examination of modifiers of implementation success to improve future adaptations and uptake
 - Risk profile, including burden of overdose and type of drugs
 - Health inequities
- + Rigorous evaluation research for youth substance use prevention and mitigation, including cannabis and related products

Dissemination

Overdose Data to Action (OD2A)

- + OD2A supports jurisdictions in implementing prevention activities and in collecting data on overdoses
- + The goal is to use those data to enhance programmatic and surveillance efforts
- + Prevention for States (PfS) preceded OD2A
- + The goal for PfS was to provide state health departments with support to advance interventions to prevent overdose

OD2A Data to Action Framework: Reducing Overdoses and Health Disparities



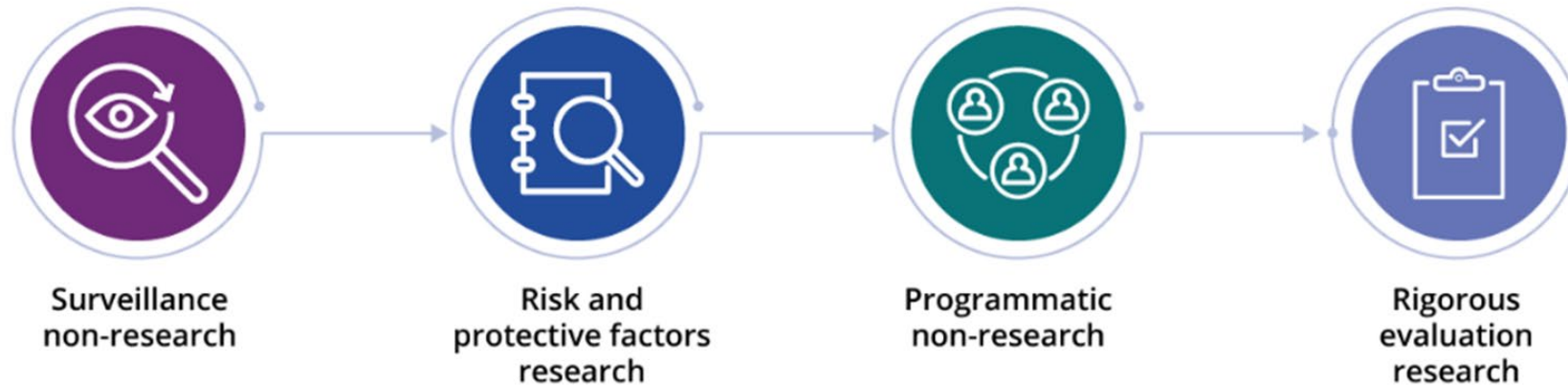
Implementation Studies – Funded Recipients

- + 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

Implementation Studies – Health System and Overdose Response Strategy

- + 2016 Guideline Quality Improvement (QI) Efforts
 - Development of EHR-based QI measures for long term opioid therapy for chronic pain
 - Identification of factors related to success among health systems participating in a QI Collaborative
 - Description of facilitators, barriers, lessons learned, and guiding principles for informatics innovation and partnership development
- + Use of telehealth to prescribe buprenorphine, the challenges faced by clinicians, and strategies employed by them to manage patients with OUD during the pandemic
- + Description of the Overdose Response Strategy: Evaluation to follow

Programmatic non-research drives research



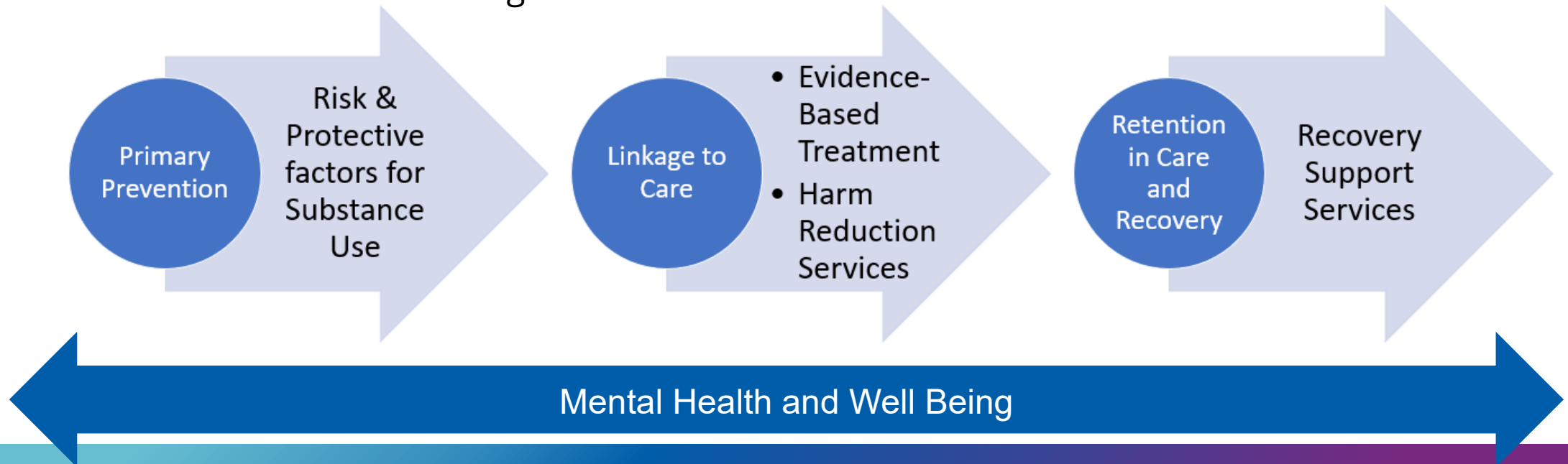
- + Rigorous evaluation of interventions for cannabis and related products among youth, including adaptations of tobacco and alcohol interventions
- + Rigorous evaluations of communications campaigns
- + Evaluations of effects of drug checking on overdose
- + Evaluation of Overdose Fatality Reviews – this work is in progress
- + Implementation science can inform the field for interventions that have shown impact
- + OD2A State and Local recipient performance measures

DOP Strategic Plan

What might that look like?

+ Two of the strategic focus areas include research:

- 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.



Thank you!

The findings and conclusions in this presentation are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

