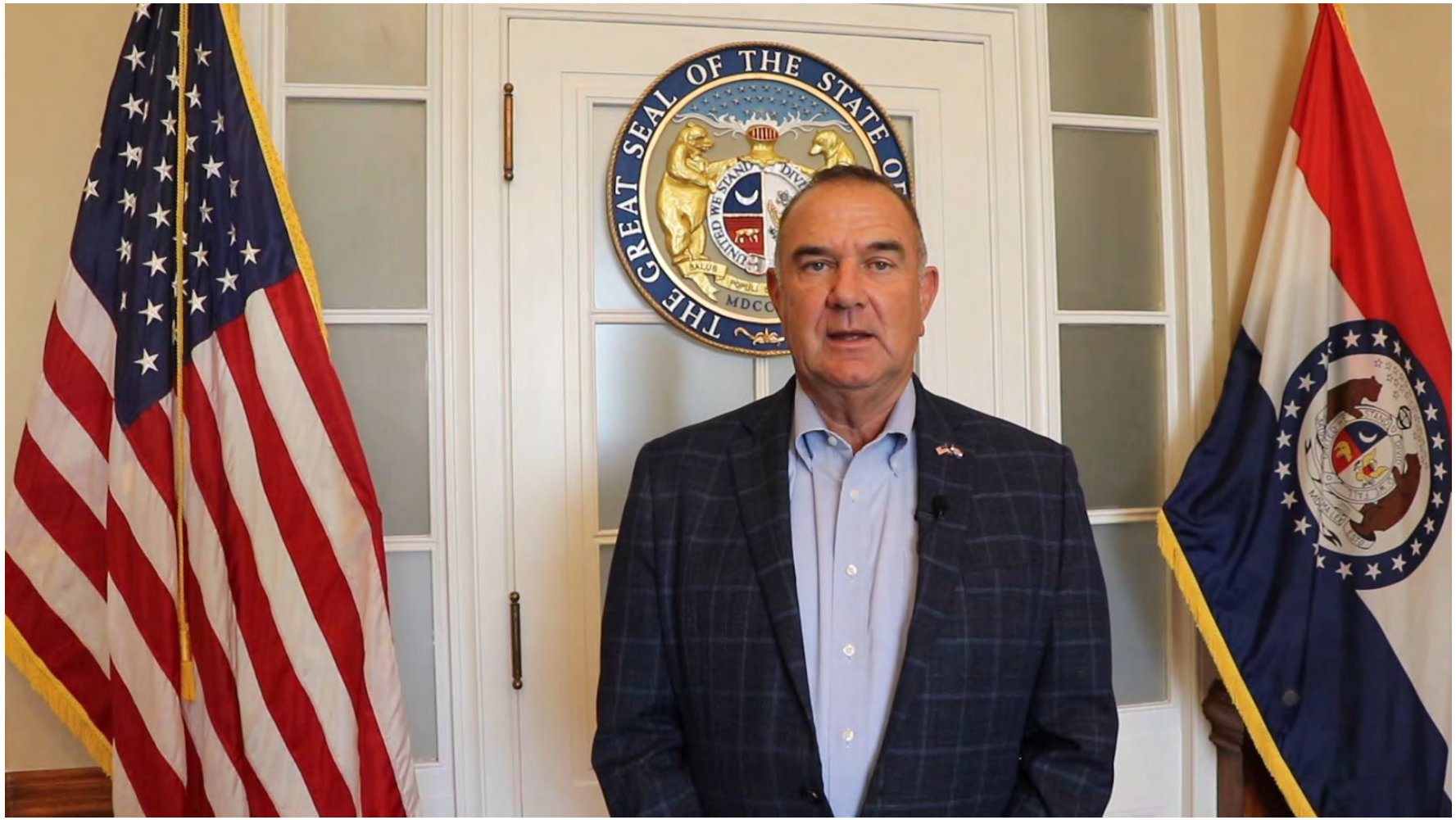
Welcome from CSG South Chairman Craig Blair

CSG SOUTH

Welcome from Lieutenant Governor Mike Kehoe



CSG | SOUTH

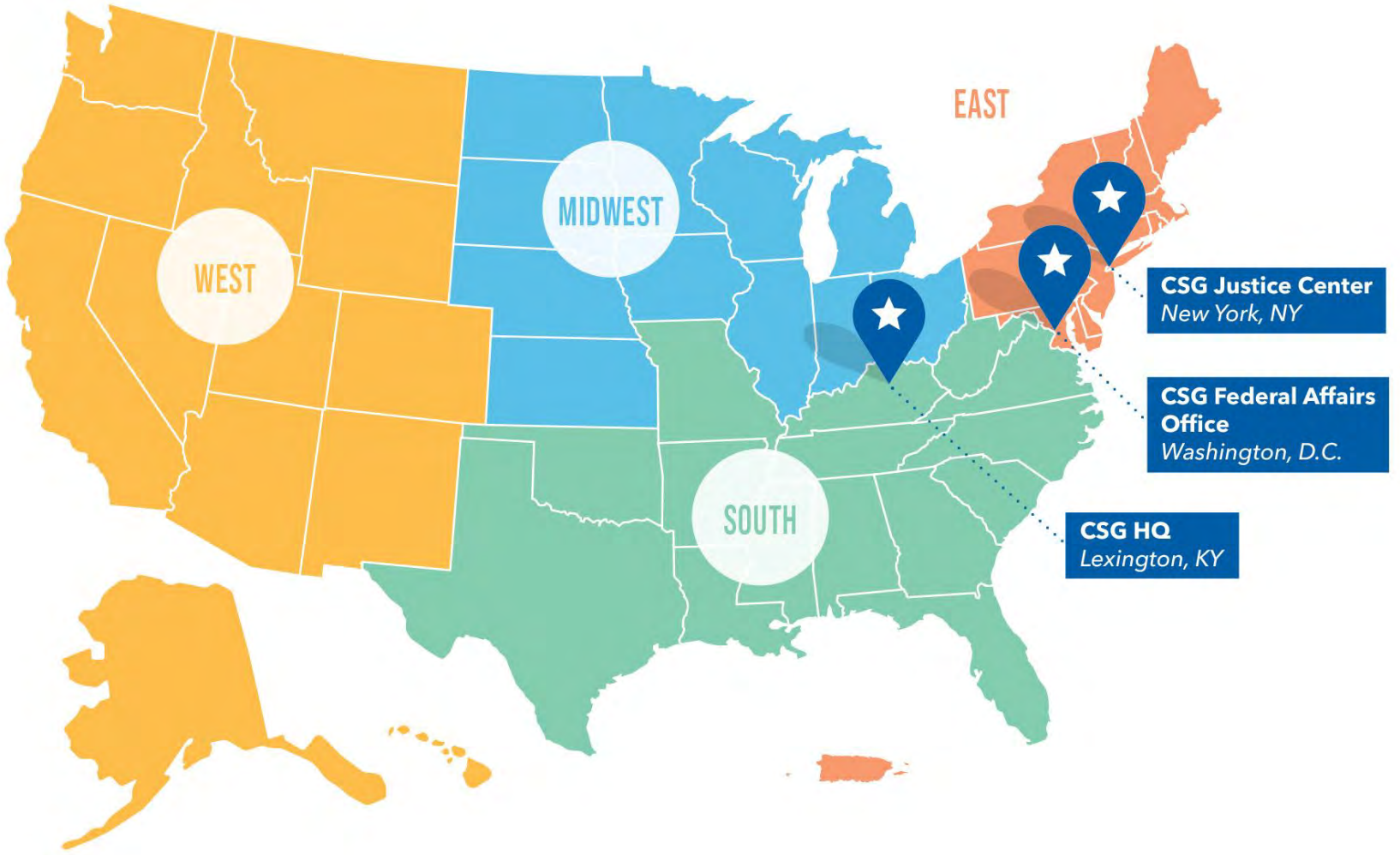
THE COUNCIL OF STATE GOVERNMENTS **SOUTHERN OFFICE**

CSG 101:

- Founded in 1933 by Colorado Senator Henry Wolcott Toll
- Serves all three Branches of State Government
- Nonpartisan/Not for Profit 501(c)(3)
- $58 Million Budget
- 300+ Employees
- Four Strong Regions
  - CSG South
  - CSG East
  - CSG Midwest
  - CSG West
- 56 Member States & Territories
- Justice Center
- 11 Affiliated Organizations

SOUTH

THE COUNCIL OF STATE GOVERNMENTS **SOUTHERN OFFICE**



CSG 101:
CSG JUSTICE CENTER

- Focus on Public Safety and Criminal Justice Issues
- Technical Assistance
- Part of CSG National

- We bring people together

  With our singular ability to reach federal, state and local leaders from all three branches of government, we gather people from both sides of the aisle and across the country to foster collaboration.

- We build momentum for policy change

  We synthesize and contextualize data to help policymakers enact and implement major reforms that address criminal justice challenges, many of which intersect with other systems, such as health, education and housing.

- We drive criminal justice forward with original research

  Our in-depth data analyses, coupled with extensive interviews of people on the front lines of the criminal justice system, inform improvements and spur national initiatives.

- We provide expert assistance

  Our unrivaled on-the-ground training and assistance helps state and local agencies translate the latest research into policy and practice.

CSG 101:
NATIONAL HEADQUARTERS, LEXINGTON, KY

- Advancement
- Accounting
- Communications
- Executive Management
- Human Resources
- Information Technology
- Legal
- CSG Center of Innovation

CSG SOUTH:
OUR CORE FOCUS AND VALUES

Our Core Focus:

- The most trusted and nonpartisan capacitor dedicated to Southern state governments.

Our Core Values:

- Ambitious
- Adaptable
- Servants Heart
- Accountable
- Credible

Our Team

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Now Hiring

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To Be Filled by Jan. 2024

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Jack Williams
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July 17, 2023 start

Communications Coordinator
To Be Filled by Jan. 2024

CSG SOUTH 101:

- Established in 1947
- Executive Committee
- 15 Southern States
- 12 Staff Members
  - Policy & Research
  - Programs & Marketing
  - Events & Admin
- Funding
  - State Appropriations – 60/40
  - Private Sector
  - Grants & Foundations
  - Pay for Services

CSG SOUTH: POLICY RESEARCH AND ANALYSIS

- Six Standing Policy Committees
  - Education
  - Economic Development and Transportation
  - Fiscal Affairs & Government Operations
  - Human Services and Public Safety
  - Energy and Environment
  - Agriculture and Rural Development
- Policy Information Requests
- Policy Publications
- State Session Visits
- Policy Masterclasses
- Domestic & International Delegations

CSG SOUTH: LEADERSHIP DEVELOPMENT

- Center for the Advancement of Leadership Skills (CALS)
- Staff Academy for Governmental Excellence (SAGE)

CSG SOUTH: LEGISLATIVE STAFF RESOURCES

- Legislative Service Agency Directors Group (LSA)
- Staff Alliance for Intergovernmental Leadership (SAIL)
- Legislative Staff Exchange Program (LSEP)





CSG SOUTH: SOUTHERN LEGISLATIVE CONFERENCE (SLC)

- CSG South's Annual Meeting
- Largest regional gathering of legislative members and staff
- Over 2,200 attended in 2023, making it the largest SLC to date
- 35 sessions offered, including keynotes, policy sessions, government staff tracks, committee meetings, site visits, and more
- Robust Guest and Youth program in conjunction with policy and government staff sessions
- 110,00 meals packed during the conference's philanthropy project

CSG SOUTH AWARDS

(GIVEN ANNUALLY AT SLC)

- Carter/Hellard Legislative Staff Award Recipients

  Presented annually since 1990, the Carter/Hellard Legislative Staff Award is given to a staff member who has demonstrated excellence and dedication in service to Southern state legislatures.

- State Transformation in Action Recognition (STAR) Award

  The Southern Legislative Conference's State Transformation in Action Recognition (STAR) award recognizes impactful, creative, effective, and transferable state government solutions.

- Thomas B. Murphy Legacy Award

  The Thomas B. Murphy Legacy Award is presented to a Southern state legislator who has distinguished themselves by dutifully serving their constituents during their years in the legislature and actively participating in the Southern Legislative Conference.

SAVE THE DATE FOR SLC 2024!

JULY 21 – 25, 2024

THE GREENBRIER IN WEST VIRGINIA

Opioids 101

The Basics of Opioids and Pain Management

Maureen Knell, PharmD, BCACP
Clinical Professor
University of Missouri Kansas City
School of Pharmacy
Saint Luke's Medical Education Internal Medicine
Clinic

Learning Objectives

- Define opioid and related terms
- Describe how opioids work in the body
- Discuss types of pain
- Explain non-opioid and non-pharmacological options in a pain management treatment plan
- Outline the role of opioids in pain management based on a summary of clinical guidelines
- Identify safety strategies for minimizing opioid risks

Q & A: Questions and Answers

What are opioids?

Origin of Opioids

- Opium – produced by the poppy plant, *Papaver somniferum*
  - Grown and used for thousands of years
    - 3,400 B.C. opium poppy cultivated in lower Mesopotamia (Southwest Asia).
  - Medical uses in ancient medicine:
    - Known as powerful pain reliever
    - Additional uses for sleep, gastrointestinal effects, etc.
  - Non-medical use:
    - Pleasurable experience - euphoria (“high”)

Definitions

- **Opioids** - made from the plant or mimic natural substances found in the opium poppy plant
  - **Natural (Opiates):** heroin, morphine, codeine
  - **Semi-synthetic**: oxycodone, hydrocodone, hydromorphone, oxymorphone
  - **Synthetic**: methadone, fentanyl, tramadol
- **“Opioids vs. Opiates”**
  - often used interchangeably but they are techinically different

Other related terms

- **Analgesics (painkillers):**
  - Pain relieving medications – acetaminophen, ibuprofen, opioids
- **Prescription opioids/Opioid analgesics:**
  - Prescribed by healthcare provider
- **“Narcotic”/”Narcotic analgesic”**
  - Old term for opioids
  - Refers to ability to induce sleep, which doesn’t fully describe opioids
  - Reference to illegal drugs
  - Negative connotations – used as a term for drugs of abuse
  - Opioid is now the preferred term to avoid confusion

Focus of this presentation:

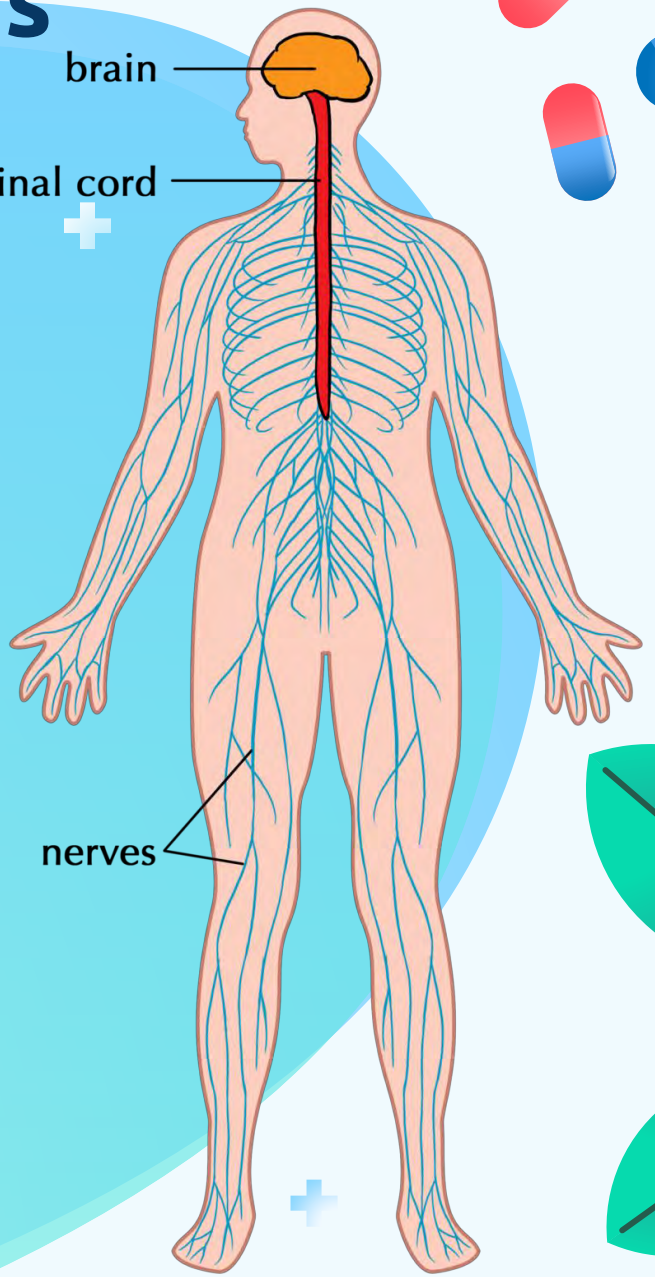
Prescription opioids / Opioid analgesics

Q:

How do opioids work?

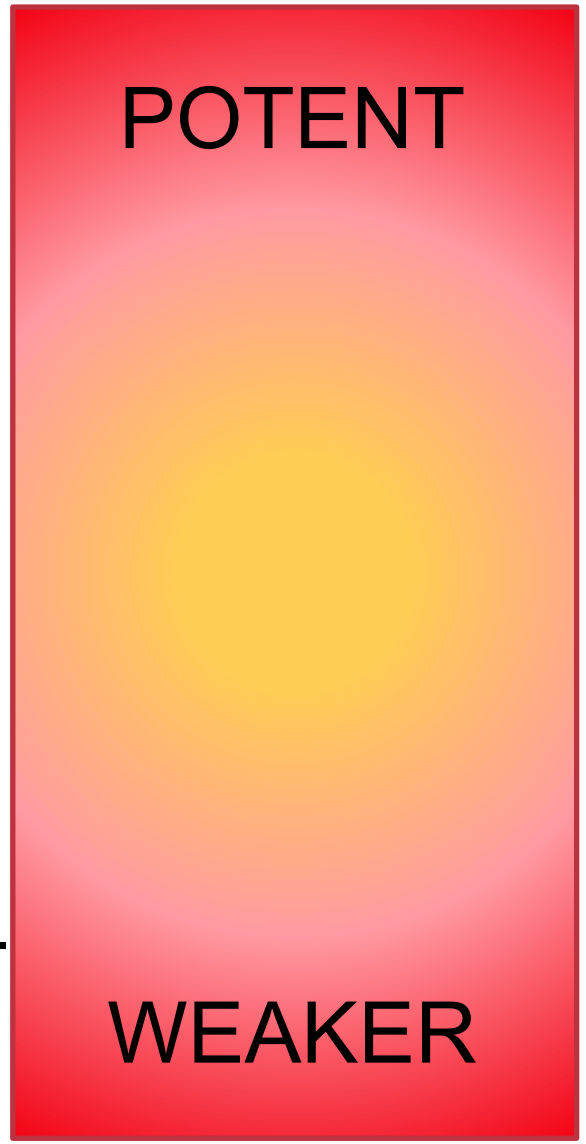
The Mechanism of Action of Opioids

When administered, opioids travel through the bloodstream and attach to proteins called opioid receptors on nerve cells in the brain, spinal cord and other organs. They modulate/change or block pain messages sent from the body through the spinal cord to the brain to change the feeling or perception of pain



Potency of Common Opioids/Opioid-Like Agents

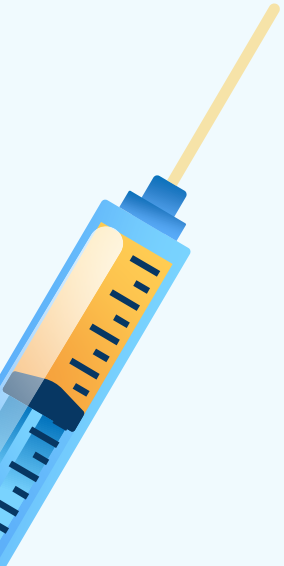
- Fentanyl----------
- Buprenorphine---------
- Oxymorphone----------
- Hydromorphone--------
- Methadone----------
- Oxycodone----------
- Morphine----------
- Hydrocodone----------
- Tramadol *(opioid-like agent)* —
- Codeine----------



- **Morphine** – "standard" opioid to which others are compared
- Opioids discussed in terms of **morphine milligram (mg) equivalents = MMEs**

Administration of Opioids

- Prescription opioids available in many drug formulations/routes of administration*
  - oral – tablet, capsule, suspensions, liquids, lozenges (lollipops), immediate release, extended release, sublingual
  - intravenous/injectable – in veins, muscles, below the skin
  - epidural – in spaces around the dura mater of the spinal cord
  - intrathecal – spinal canal to reach subarachnoid space so that it reaches the cerebrospinal fluid
  - nasal
  - transdermal (patch) on skin
  - rectal
  - others



* Note: not all prescription opioids are available in all formulations

Differentiating Fentanyl

- 50 – 100 times more potent than morphine
- Pharmaceutically manufactured products commonly used in treatment of severe acute and chronic pain

Pharmaceutical Products:

- oral transmucosal lozenges - “lollipops” (Actiq®)
- effervescent buccal tablets (Fentora®)
- sublingual tablets (Abstral®)
- sublingual sprays (Subsys®)
- nasal sprays (Lazanda®)
- transdermal patches (Duragesic®)
- injectable formulations

Illicitly manufactured

- powder or counterfeit tablets
- mass production of fentanyl-laced fake prescription pills
- made to look like prescription drugs such as:
  - oxycodone (Oxycontin® Percocet®)
  - hydrocodone (Vicodin®)
  - alprazolam (Xanax®);
  - amphetamines (Adderall®)

The Good:

Indications for Prescription Opioids

Pain (analgesic)
Cough (antitussive)
Diarrhea (anti-diarrheal)
Opioid Use Disorders – Medication Assisted Treatment (MAT)

What makes opioid medications effective for treating pain also can make them potentially dangerous

The Bad:

Side Effects of Opioids

COMMON

- Sedation (foggy, groggy, sleepy, drowsy, confused, cognitive impairment)
- Constipation
- Dizziness
- Nausea and Vomiting

LESS COMMON

- Itching
- Dry Mouth
- Immune System/Hormonal Dysfunction
- Sweating
- Bad/vivid dreams
- Others

The Ugly

More Serious Side Effects/Complications of Opioids

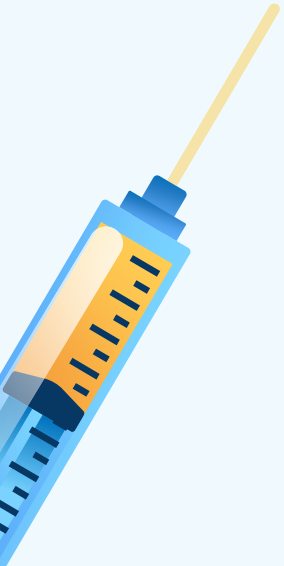
- **Respiratory depression**
  - leads to hypoxia (reduced oxygen circulating in the body) and reduced heart rate - causing coma, permanent brain damage or death
  - main cause of death in opioid overdoses
  - can occur in healthy people, particularly at higher doses
  - people with lung diseases such as asthma and COPD may be even more susceptible

More Serious Side Effects/Complications of Opioids

- **Tolerance** - reduced response to the opioid with repeated use
  - body gets used to the opioid – becomes less effective
  - related to how much drug is needed to feel effects
  - potential to require higher doses or more frequent dosing to achieve the same/desired effect
  - Increases risk for overdose and addiction

More Serious Side Effects/Complications of Opioids

- **Physical Dependence** - adaptation to a drug that produces symptoms of withdrawal when the drug is stopped
  - occurs with repeated use
  - body becomes reliant on taking the medication and experiences withdrawal without it
  - neurons and receptors adapt so they only function normally when the drug is present
  - not limited to opioids (caffeine, nicotine, blood pressure medications, stimulants, sedative, steroids, antidepressants, etc.)
  - dependence is not the same as addiction, but it can lead to addiction



More Serious Side Effects/Complications of Opioids

- **Addiction / Opioid Use Disorder (OUD)**
  - chronic brain **disease**
  - a problematic pattern of opioid use leading to clinically significant impairment or distress.
  - complex illness characterized by compulsive use of opioid drugs even when the person wants to stop, or when using the drugs negatively affects the person's physical and emotional well-being
  - causes brain changes which can result in harmful behaviors those who misuse opioids, whether prescription or illicit

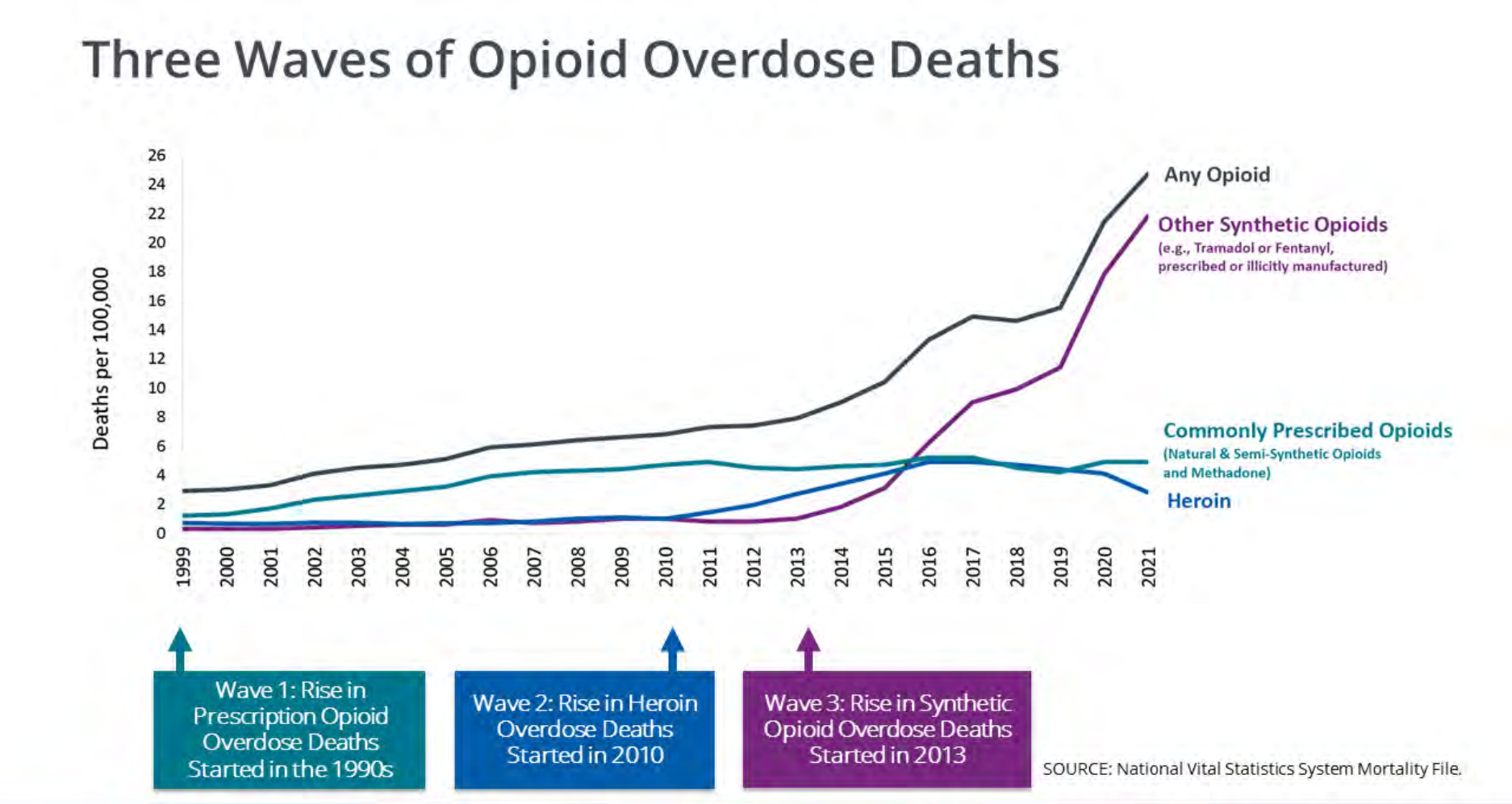
Addiction is a disease; Tolerance and Dependence aren't, but all can lead to opioid misuse, overdoses and deaths

Risk Factors for Opioid Overdoses

- Having an opioid use disorder
- Taking opioids by injection
- Resumption of opioid use after an extended period of abstinence (e.g. following detoxification, release from incarceration, cessation of treatment)
- Using prescription opioids without medical supervision
- Taking higher doses of opioids
- Using opioids in combination with alcohol and/or other substances or medicines that suppress respiratory function such as benzodiazepines, barbiturates, anesthetics or some pain medications
- Having concurrent medical conditions such as HIV, liver or lung diseases or mental health conditions.
- Populations at higher risk: males, people of older age and people with low socio-economic status are at higher risk of opioid overdose than women, people of young age groups and people with higher socioeconomic status

Deaths Related to Opioids

Overdose deaths



Lethal Doses of Illicit Opioids

Suicide Concerns

- The relationship between opioid prescribing and suicide risk is complex and difficult to assess
- Prescription opioids may be associated with both increased and decreased suicide risk
- Factors include:
  - opioids
  - mental health
  - pain
  - other medical comorbidities
- Suicide related to opioid use disorder
- Suicide related to discontinuation of opioids
  - Suicide due to suffering and untreated pain after opioids abruptly discontinued

Q: Why do we use opioids to treat pain?

Overview of the role of prescription opioids in pain management

Q:

What is pain and what are different types of pain?

Pain Definitions

- No one agreed upon definition
- Derived from Latin word "poena" - meaning a fine, a penalty
- Uncomfortable sensation
  - Usually signals an injury or illness
  - Ranges from mild to severe, localized discomfort to agony
  - Has both physical and emotional components
  - Varying descriptions: prick, tingle, stab, sting, burn, or ache
  - May be sharp or dull

Definition of Pain

The revised IASP definition of pain: concepts, challenges, and compromises

Raja *et al.* (2020) | Pain

DOI: 10.1097/j.pain.0000000000001939

PAIN®

Classification of Pain

- **Acute**
  - Timeframe: less than 4 weeks
  - Warning signal/purpose
  - Tied to an “acute process” such as an injury, trauma labor pain, surgery or infection
- **Subacute**
  - Timeframe: 4– 12 weeks
  - ”In between acute and chronic pain”
  - Undertreated acute and subacute pain can lead to chronic pain

Classification of Pain

- **Chronic pain (Persistent pain)**
  - Timeframe: More than 12 weeks/3 months
  - Pain may be constant or may come and go
  - There may be ongoing cause of pain or no identified cause
    - Possible causes: disease or condition, injury, inflammation
    - May continue after evidence of the injury or illness has gone away or beyond expected time for healing of a condition or injury
  - Repeated stimulation of pain nerves may change the structure of nerve fibers and cells (called remodeling) making them more active or sensitive, sometimes permanently
  - Treatment of pain moves from relieving a temporary symptom while awaiting complete healing to treating a long-term disease

Types of Pain

Nociceptive

- caused by damage to body tissue – stimulates pain receptors
- various descriptions: sharp, stabbing, aching, throbbing, etc.
- Somatic pain - skin, muscles, joints, and bone
- Visceral pain – internal organs
- Examples: arthritis, pulled muscle, low back pain, appendicitis

Neuropathic

- caused by damage or disease directly affecting the nervous system
- various descriptions: shooting, burning, tingling (pin-prick), numbness
- Evoked pain – brought on by normally non-painful stimuli such as touch
- Examples: diabetic neuropathy, shingles, multiple sclerosis

"Other"

- considered disorder of pain regulation or neurological "dysfunction" or dysregulation
- no evidence of structural abnormalities, laboratory abnormalities or disease process
- diagnosed based on symptoms and ruling out other causes
- Examples: fibromyalgia, complex regional pain syndrome

Combinations and Other Classifications of Pain

- Types of pain combine and/or overlap
  - Acute/Chronic
  - Nociceptive/Neuropathic/Other
- Severity – mild/moderate/severe
- Additional classifications:
  - Cancer / Non-cancer (non-malignant pain)
  - Referred

Pain and Quality of Life

- Pain is the most common reason people seek medical care
- Untreated pain has a profound impact on quality of life
  - Physical, psychological, social, and economic consequences
  - Decreased mobility, increased risk of disability, impaired immunity, decreased concentration, poor mental health, anorexia, sleep disturbances, etc.

Impact of Chronic Pain on Quality of Life

Physical
- Functional ability
- Strength/fatigue
- Sleep and rest
- Nausea
- Appetite
- Constipation

Social
- Caregiver burden
- Roles and relationships
- Affection/sexual function
- Appearance

Psychological/Emotional
- Anxiety
- Depression
- Enjoyment/leisure
- Pain distress
- Happiness
- Anger
- Fear
- Cognition/attention

Spiritual
- Suffering
- Meaning of pain
- Religiosity

Adapted from Ferrell et al. *Oncol Nurs Forum*. 1991;18:1303–9.

Goals of Pain Management

Safely reduce pain and enhance function

Q:

What are other non-opioids options in managing pain?

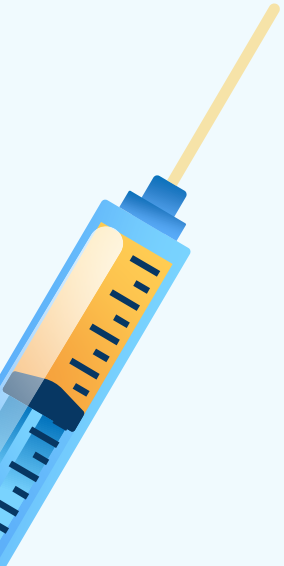
Non-medication treatments

- RICE
  - Rest
  - Ice
  - Compression
  - Elevation
- Superficial Heat
- Physical activity
- Yoga/Tai-chi
- Weight loss
- Massage
- Chiropractic
- Physical / occupational therapy
- Cognitive-behavior therapy (CBT)
- Relaxation techniques/mindfulness
- Acupuncture/acupressure
- Transcutaneous Electrical Nerve Stimulator (TENS)
- Smoking cessation
- Others

Non-opioid therapies

- **Over-the-counter (OTC) and prescription options**
- **Some better for nociceptive pain others for neuropathic pain**

- **Topical treatment**
  - diclofenac (Voltaren®) gel
  - muscle creams
  - lidocaine patches
- **Analgesics**
  - acetaminophen (Tylenol®)
  - Non-steroidal Anti-inflammatory drugs (NSAIDs)
    - ibuprofen (Motrin®)
    - naproxen (Aleve®)
    - meloxicam
    - celecoxib



- **Antidepressants**
  - duloxetine (Cymbalta®)
  - venlafaxine (Effexor®)
  - amitriptyline
  - nortriptyline
- **Anticonvulsants**
  - gabapentin (Neurontin®)
  - pregabalin (Lyrica®)
- **Dietary and herbal supplements**
  - glucosamine
  - chondroitin
  - others

Procedures

- Steroid injections
  - joint
  - epidural
  - trigger point
- Nerve blocks
- Radiofrequency ablation
- Spinal cord stimulator
- Intrathecal pain pumps
- Others

Non-medication and non-opioid treatments don’t always meet pain goals

- Reasons why non-medication and non-opioid therapy can’t be used or are insufficient therapies:
  - Lack of efficacy
  - Side effects
  - Contraindications
  - Cost barriers
- **Opioids only indicated as “last-line” options, in most cases**
- **Multi-modal therapy is recommended**
  - non-medication therapies and non-opioid therapies (unless contraindicated or intolerable) +/- opioid

Guideline Directed Medical Therapy (GDMT)

- Evidence (research)-based
- Goal to improve outcomes
  - improve communication between clinicians and patients about the benefits and risks of treatments
- Well proven in some disease states such as heart failure
- Some clinical guidelines exist for conditions where pain is a symptom (guidelines for different types of arthritis)
- States have enacted a variety of regulations and initiatives intended to improve the safety opioid prescribing based on guidelines
- **Challenge: limited research and evidence as to the “best” treatment in many areas of pain management**

Guideline - Brief Summary

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

Deborah Dowell, MD[1]; Kathleen R. Ragan, MSPH[1]; Christopher M. Jones, PharmD, DrPH[2]; Grant T. Baldwin, PhD[1]; Roger Chou, MD[3]

[1]Division of Overdose Prevention, National Center for Injury Prevention and Control, CDC;
[2]Office of the Director, National Center for Injury Prevention and Control, CDC;
[3]Pacific Northwest Evidence-based Practice Center and Oregon Health & Science University, Portland, Oregon

Determining Whether or Not to Initiate Opioids for Pain : Acute Pain

- **Nonopioid therapies – At least as effective as opioids :**
  - Common acute pain conditions
  - Minor surgeries typically associated with minimal tissue injury and mild postoperative pain
- Maximize use of nonopioid pharmacologic and non-medication therapies
  - topical or oral NSAIDs, acetaminophen
  - ice, heat, elevation, rest, immobilization, or exercise

Determining Whether or Not to Initiate Opioids for Pain : Acute Pain

- **Opioid therapy - important role for:**
  - Acute pain related to severe traumatic injuries
  - Invasive surgeries typically associated with moderate to severe postoperative pain
  - Other severe acute pain when NSAIDs and other therapies are contraindicated or likely to be ineffective

Determining Whether or Not to Initiate Opioids for Pain : Subacute and Chronic Pain

- **Non-opioid therapies are PREFERRED**
- Maximize use of nonpharmacologic and nonopioid pharmacologic therapies as appropriate for the specific condition and patient
- **Opioids**
  - only consider if expected benefits for pain and function are anticipated to outweigh risks to the patient

Misinterpretation of 2016 Guidelines: Collateral Damage

“There’s a need to recognize first of all that there is a large number of patients who are in significant pain, and their lives and livelihood are impaired by it. They don’t choose to be in pain and on opioids. These patients should not be denied their opioid prescriptions because of the blanket application of recent guidelines, but it’s a growing trend to deny them.”

-- Elliot J. Krane, MD, keynote speaker, American Pharmacists Association Annual Meeting 2017

Misinterpretation of 2016 Guidelines: Collateral Damage

- Guidelines are **NOT intended to be:**
  - **Used as an inflexible, rigid standard of care or absolute limits to policy or practice**;
    - they are intended to be guideposts to help inform clinician, patients, organizations, health care systems, and government entities
- **Misapplication** of the recommendations to populations outside the scope of the guideline.
- **Avoid patient abandonment**
  - Barriers to access for opioids used for legitimate medical purposes
  - Increase suffering, disabilities and decreased quality of life
  - Abrupt discontinuations
  - Overdose deaths from illicit drugs in patients previous on prescription opioids managed by healthcare providers
  - Reported suicides due to lack of pain management

Assessing Risk and Addressing Potential Harms of Opioid Use

- Before starting and periodically during continuation of opioid therapy, clinicians should discuss and evaluate risks and benefits of opioids with individual patients
- Clinicians should work with patients to incorporate into the management plan strategies to mitigate risk
- Patients should be involved meaningfully in decisions about starting and continuing opioid therapy

Risk Mitigation Strategies

- When opioids are indicated:
  - Lowest dose for shortest duration (no greater quantity than needed)
    - Many states have quantity limits on new opioids prescriptions
  - Consider situations to taper opioids down or off
  - Close monitoring is warranted
    - Benefits and risks
    - Toxicology screening (urine drug screen monitoring)

Risk Mitigation Strategies- Naloxone

- Offer naloxone and educate patients on overdose prevention and naloxone use and offer to provide education to members of their household
- **Naloxone – opioid antagonist (“blocker”)**
  - blocks opioid receptors
  - displaces opioids from receptor sites in the brain and reverses respiratory depression that usually is the cause of overdose deaths
  - rapidly reverses opioid overdoses

Naloxone - Particularly For Patients At Increased Risk of Opioid Overdoses

- History of overdose
- History of substance use disorder
- Sleep-disordered breathing
- Taking higher dosages of opioids (e.g., ≥50 MME/day)
- Taking benzodiazepines with opioids
- At risk for returning to a high dose to which they have lost tolerance (e.g., patients undergoing tapering or recently released from prison).

DIRECTIONS

NARCAN®

Naloxone HCl Nasal Spray 4 mg

Emergency Treatment of Opioid Overdose

Important:

- For use in the nose only
- Do not test nasal spray device before use
- 1 nasal spray device contains 1 dose of medicine
- Each device sprays 1 time only

Step 1: CHECK if you suspect an overdose:

- **CHECK** for a suspected overdose: the person will not wake up or is very sleepy or not breathing well
  - yell "Wake up!"
  - shake the person gently
  - if the person is not awake, go to Step 2

Step 2: Give 1st dose in the nose

- **HOLD** the nasal spray device with your thumb on the bottom of the plunger
- **INSERT** the nozzle into either NOSTRIL
- **PRESS** the plunger firmly to give the 1st dose
- 1 nasal spray device contains 1 dose

Step 3: Call 911

- **CALL 911** immediately after giving the 1st dose

Step 4: WATCH & GIVE

- **WAIT** 2-3 minutes after the 1st dose to give the medicine time to work
- if the person wakes up: Go to Step 5
- if the person does not wake up:
  - **CONTINUE TO GIVE** doses every 2-3 minutes until the person wakes up
  - it is safe to keep giving doses

Step 5: STAY

- **STAY** until ambulance arrives: even if the person wakes up
- **GIVE** another dose if the person becomes very sleepy again
- You may need to give all the doses in the pack

Unfold for *Directions*

Unfold for *Directions*

EMERGENT®

For opioid emergencies, call 911. For questions on NARCAN, call 1-844-4NARCAN (1-844-462-7226) or go to www.narcan.com.

A1162

Risk Mitigation Strategies– Prescription Drug Monitoring Programs (PDMP)

- **PDMP** - electronic database that tracks controlled substance prescriptions in a state for pharmacies and clinicians
- Clinicians should:
  - Review the state prescription drug monitoring program to determine whether the patient is receiving opioid dosages or combinations that put the patient at high risk for overdose
  - Not dismiss patients from their practice on the basis of PDMP information
    - Doing so can adversely affect patient safety and could result in missed opportunities to provide potentially lifesaving information

Risk Mitigation Strategies - Risk Evaluation and Mitigation Strategy (REMS)

- Drug safety program that the U.S. Food and Drug Administration (FDA) can require for certain medications with serious safety concerns to help ensure the benefits of the medication outweigh its risks
- **<u>Program includes element to assure safe use:</u>**
  - **communication to the patient** – Medications Guides
  - **communication to healthcare providers, pharmacists and healthcare settings (training, policies/procedures)**
  - **required activities or clinical interventions (training/certification required laboratory monitoring)**

Risk Mitigation Strategies

- Avoid using opioids with other medications that cause central nervous system depression (e.g. alcohol, benzodiazepines)
- Ensure that treatment for depression and other mental health conditions is optimized
- Use extra caution and increased monitoring in patients with kidney impairment, liver impairment, and for patients aged ≥65 years

Risk Mitigation Strategies– Proper Disposal

- **Medication Take-Back Option <u>preferred</u>**
  - Remove all personal information
  - Locate at site or event at pharmacies, law enforcement facilities, community sites
    - DEA or National Associations of Boards of Pharmacy, website to locate permanent disposal boxes
    - Google Maps – type in “drug (or medication) disposal near me"
    - DEA – National Prescription Drug Take Back Events

Risk Mitigation Strategies– Proper Disposal

- Alternative when cannot reach a drug take back location promptly, or there is none available in community
- Remove or scratch out personal information from bottles
- FDA recommends **mixing with unpalatable substances and placing in a non-descript container in the trash**:
  - Coffee grounds
  - Kitty litter
  - Dirt
  - Packets from pharmacy (biodegradable gel)
- Some long-acting opioids (extended-release - ER) and other opioids are recommended to be flushed due to dangers – **FDA Opioid Flush List**
  - Morphine ER, Oxycodone ER (Oxycontin®), fentanyl patches

Q:

What are the “take home points” from this presentation?

Prescription Opioid Use - Balance

Pain management should include multi-modal therapy

Side Effects

Preferred use of non-medication and non opioid therapy

Continued Education and Research

Healthy People 2023 - Reduce (chronic) pain and misuse of prescription pain relievers

A Patient's Right to accessible pain management

Opioid Use Disorder

Risk Mitigation Strategies/ Assess for Risk of Opioid Overdoses

Focus pain therapies on individual needs of the patient

Opioids are last line but do provide potential benefit

Opioids Overdose Deaths

<u>BALANCED</u> approach and partnership between Patients, Clinicians/Health Care Providers and Policy Makers

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Understanding Addiction as a Chronic Disease:
Implications for the Treatment of Opioid Use Disorders

Doug Burgess, MD
Medical Director of Addiction Services
University Health
Associate Professor of Psychiatry
University of Missouri- Kansas City

- I have no conflicts of interest to disclose

- Learning Objectives:
  - List 3 similarities between substance use disorders and other chronic diseases
  - Identify 3 neuroadaptations associated with transition to drug addiction
  - Describe the general principles of a Medication First, Low Threshold model of care
- Behavioral Outcome:
  - Participants will gain an appreciation for the biological underpinnings of addiction and use this knowledge to identify inherent biases and barriers to care within traditional addiction treatment models

What is a chronic disease?

- **MedicineNet**- *condition lasting 3 months or more, by the definition of the U.S. National Center for Health Statistics. Chronic diseases generally cannot be prevented by vaccines or cured by medication, nor do they just disappear*
- **Wikipedia**- *a human health condition or disease that is persistent or otherwise long-lasting in its effects or a disease that comes with time. The term chronic is often applied when the course of the disease lasts for more than three months. Common chronic diseases include arthritis, asthma, cancer, COPD, diabetes and viral diseases such as hepatitis C and HIV/AIDS*
- **CDC**- *A condition that lasts greater than 1 year and requires ongoing medical attention or limits activities of daily living or both.*
- **WHO**- *are not passed from person to person. They are of long duration and generally slow progression. The four main types … are cardiovascular diseases (like heart attacks and stroke), cancers, chronic respiratory diseases (such as chronic obstructed pulmonary disease and asthma) and diabetes.*
- **Australian Institute for Health and Welfare**- *a condition with complex causality, with multiple factors leading to their onset; a long development period, for which there may be no symptoms; a prolonged course of illness, perhaps leading to other health complications; associated functional impairment or disability.*

Some Common Characteristics of Chronic Diseases

- Heritable
- Environmental and Behavioral Influences common
- Biological underpinnings
- Long lasting with periods of remission and periods of acute exacerbation
- Medication management is frequently first line and most effective with behavioral augmentation
- Without effective treatment they progress
- Treatment (medications) can control symptoms but they often return when treatment is stopped

Heritability

- Heritability of substance use disorders has been widely studied
  - Siblings with parents diagnosed with alcohol use disorder (AUD): 49.3%-50% of brothers and 22.4%-25% of sisters developed AUD
  - Consistent pattern across substance use disorders

Substance Use Disorder in Parents	Life Time Relative Risk in Siblings
Cannabis	1.78
Cocaine	1.71
Nicotine	1.77

Bierut et al , 1998

Heritability of Opioid Use Disorder

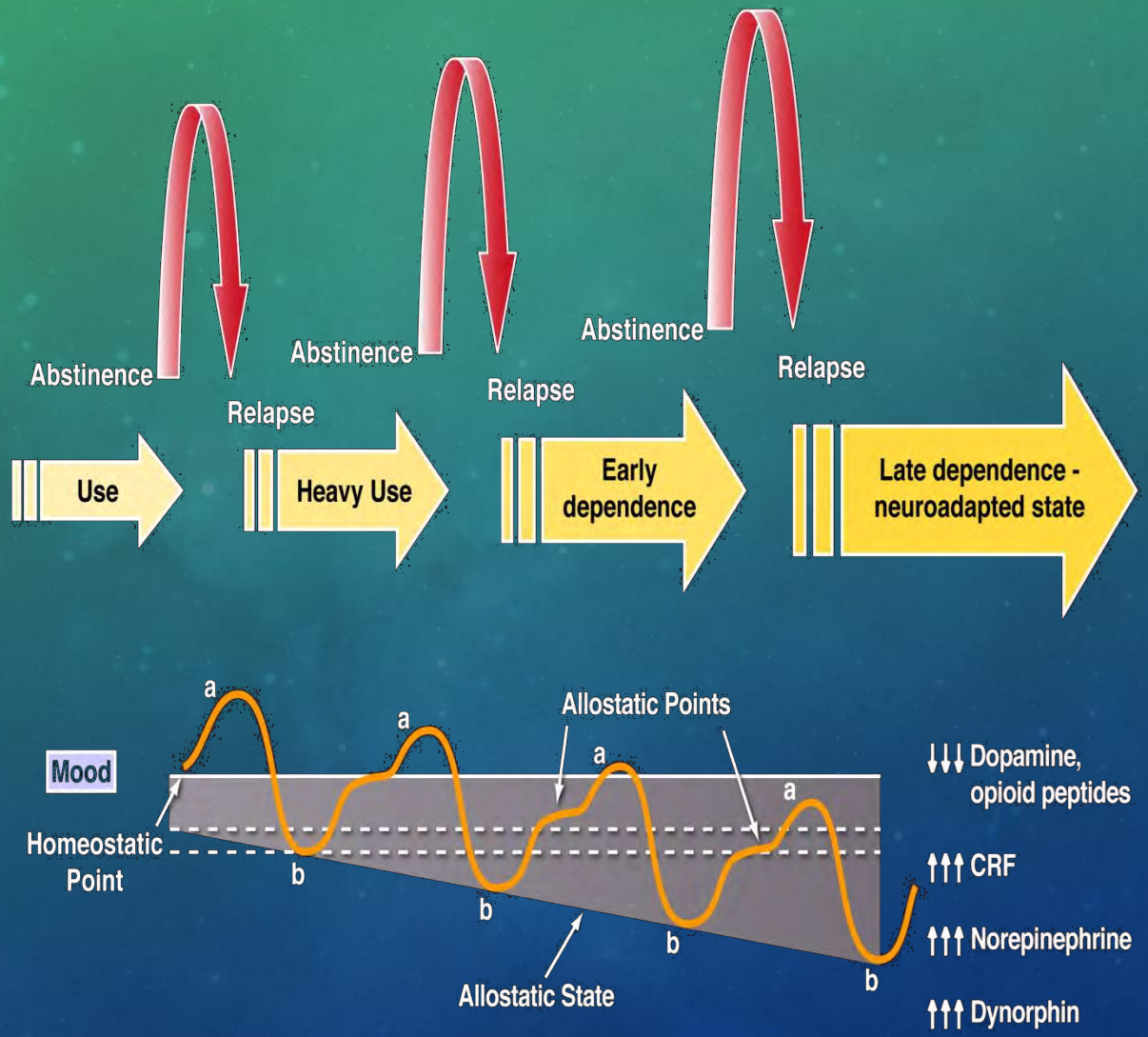
- Twin and Family studies estimate heritability percentages from 23%- 54% (Kendler et al 2000, Tsuang et al. 1998)
  - Numerous candidate genes have been identified as potentially playing a role. (Crist et al. 2019)
    - Why the Wide variability?
      - Multifactorial
      - Hypothesis Driven
  - Genome Wide Association Studies (GWAS)
    - SUDs are unique in that they require exposure

Environmental Factors

- <u>Diabetes</u>
  - Neighborhoods
    - Food Deserts
    - Access to safe parks, gyms etc
  - Finances/Access to Care
  - Trauma
  - Lifestyle Choices
- Chronically elevated blood sugars cause physical changes in pancreas and cells within the body.

- <u>Substance Use Disorders</u>
  - Neighborhoods
    - Region of the country/world
    - Prevalence in the area, Peer groups
  - Finances/Access to Care
  - Trauma
  - Lifestyle Choices
- Chronic exposure to substances cause **physical changes** in brain and nervous system within the body.

ALLOSTATIC CHANGE IN EMOTIONAL STATE ASSOCIATED WITH TRANSITION TO DRUG ADDICTION



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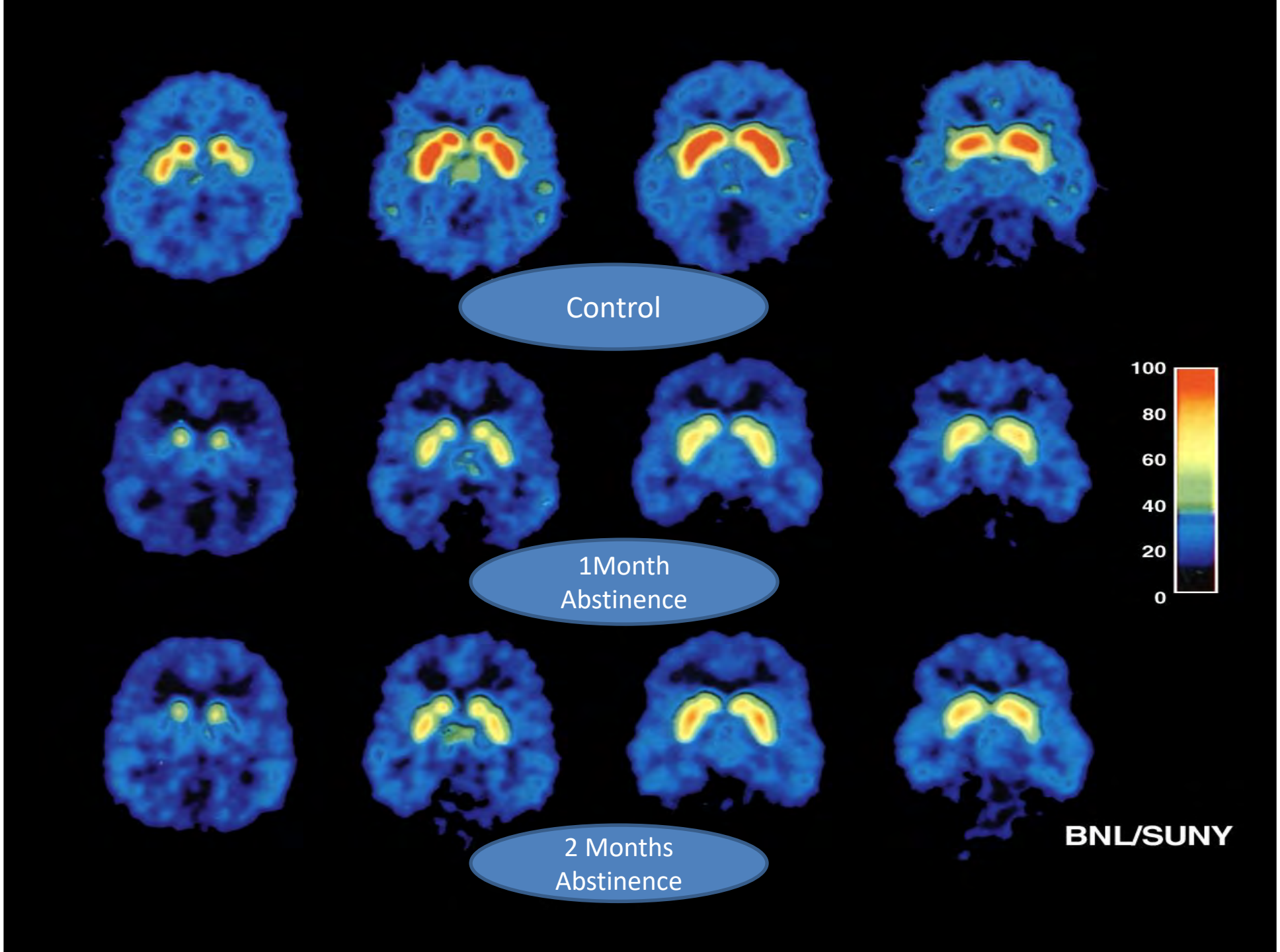
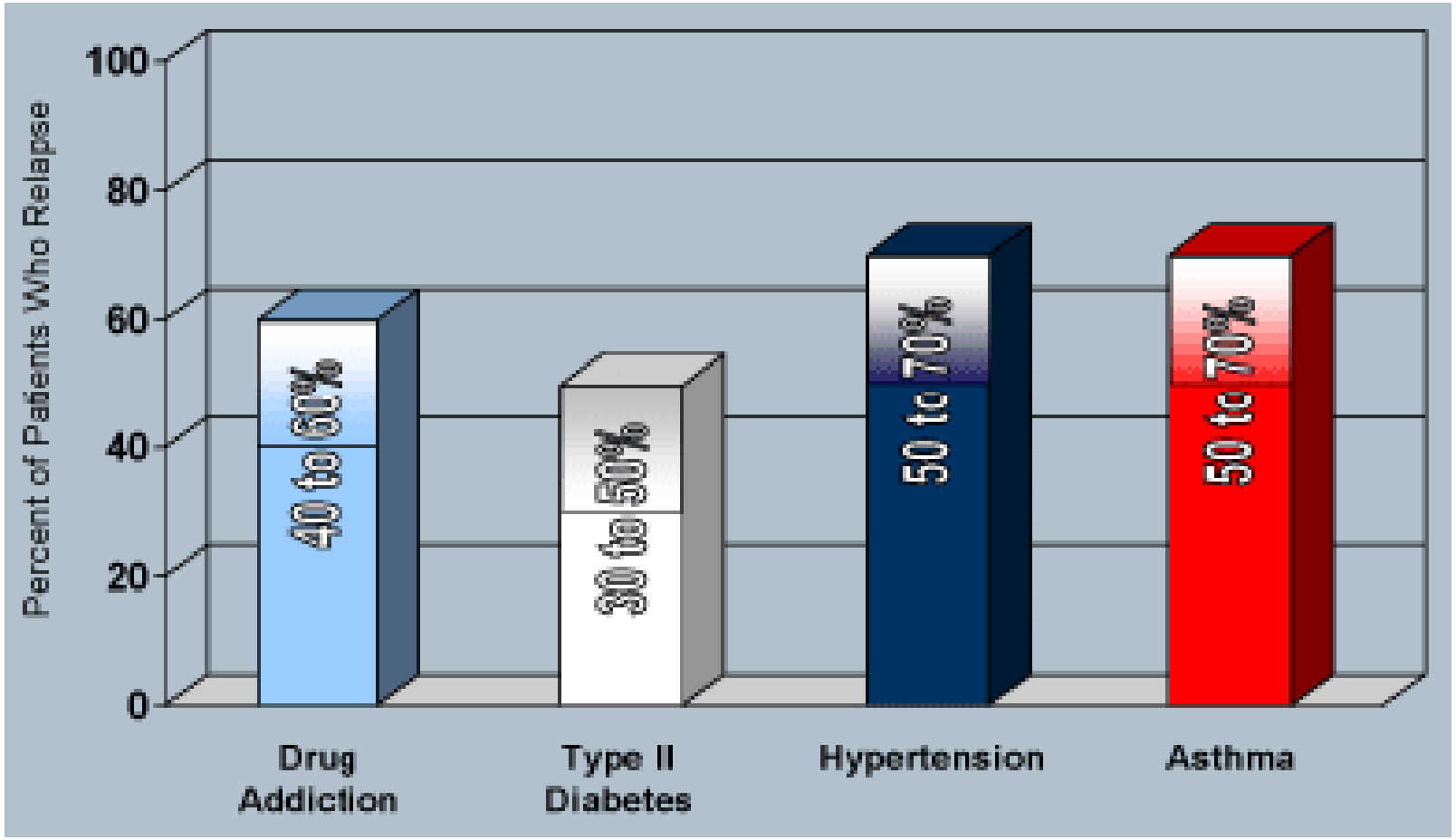

Control
1Month
Abstinence
2 Months
Abstinence
100
80
60
40
20
0
BNL/SUNY

Course of chronic illness

- Treatment often involves medication and lifestyle change
  - Medication often 1st line in advanced cases
  - No arbitrary restrictions on treatment
- Variable response is common early on in treatment
- Full or partial remission is often followed by intermittent flare ups and the need for additional treatment.
- *With most chronic diseases, sustained, uncomplicated remission is the exception, not the rule.*
  - *Trend towards improved health and wellness*
  - *Manage the symptoms and harm associated with the disease.*
  - *Danger in framing response to treatment as "all or nothing"*

Relapse Rates of other Chronic Diseases



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Chronic Disease Management

- You have a family member with diabetes for over 5 years. Her blood sugars have been under good control but at a recent visit, tests indicate significantly elevated blood sugars. Which of the following approaches would you expect the clinic to take?

  A) Continue treatment unchanged - your family member will not improve until she decides she wants to.

  B) Discharge your family member from clinic for not following the diet, exercise and medication plan. She is a relapsed diabetic.

  C) Mandate completion of a residential treatment program as a condition of continued treatment in the clinic

  D) Explore recent live events, dietary changes, exercise habits and medication adherence to provide a personalized adjustment to the current treatment. Increase frequency of follow up to assess for response to changes.

Chronic Disease Management

- You have a family member with opioid use disorder for over 5 years. Her urine toxicology tests have been consistent with no drug use, but several recent tests indicate use of opiates. Which of the following approaches would you expect the clinic to take?

A) Continue treatment unchanged- your family member will not change until she decides she wants to.

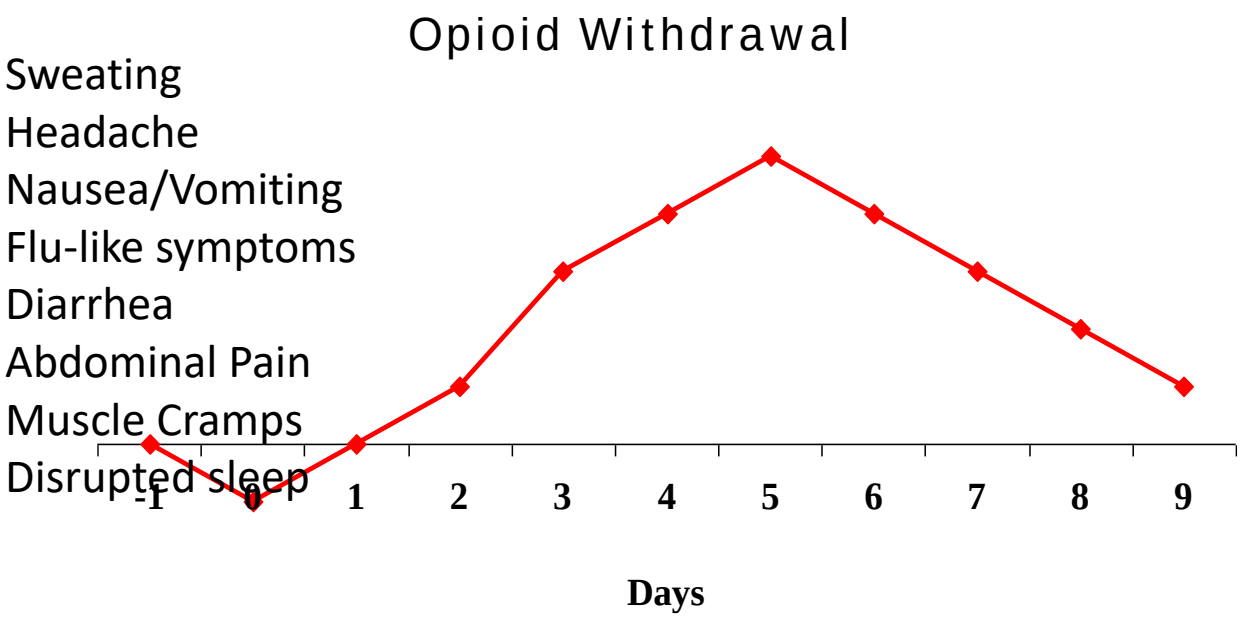
B) Discharge your family member from clinic for not following the treatment plan. She is a relapsed opioid addict.

C) Mandate completion of a residential treatment program as a condition of continue care.

D) Explore recent live events, psychological changes, relapse prevention strategies and medication adherence to provide a personalized adjustment to the current treatment. Increase frequency of follow up to assess for response to changes.

Should we be using medications as first line treatment?

Opioid withdrawal



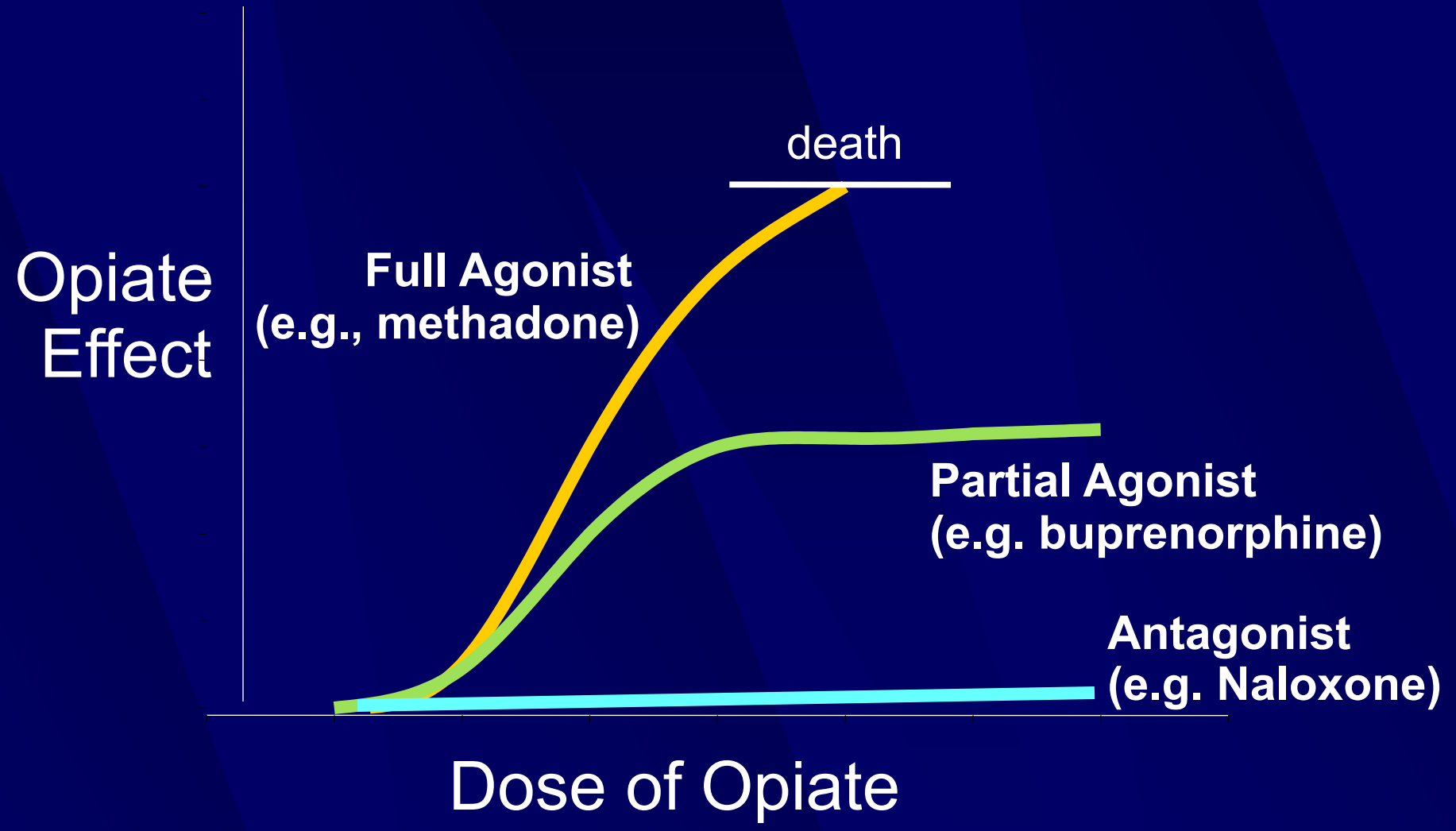
Opioid Withdrawal Syndrome
Protracted Symptoms

- Deep muscle aches and pains
- Insomnia, disturbed sleep
- Poor appetite
- Reduced libido, impotence, anorgasmia
- Depressed mood, anhedonia
- Drug craving and obsession

Medication for Addiction Treatment (MAT) of Opioid Use Disorder

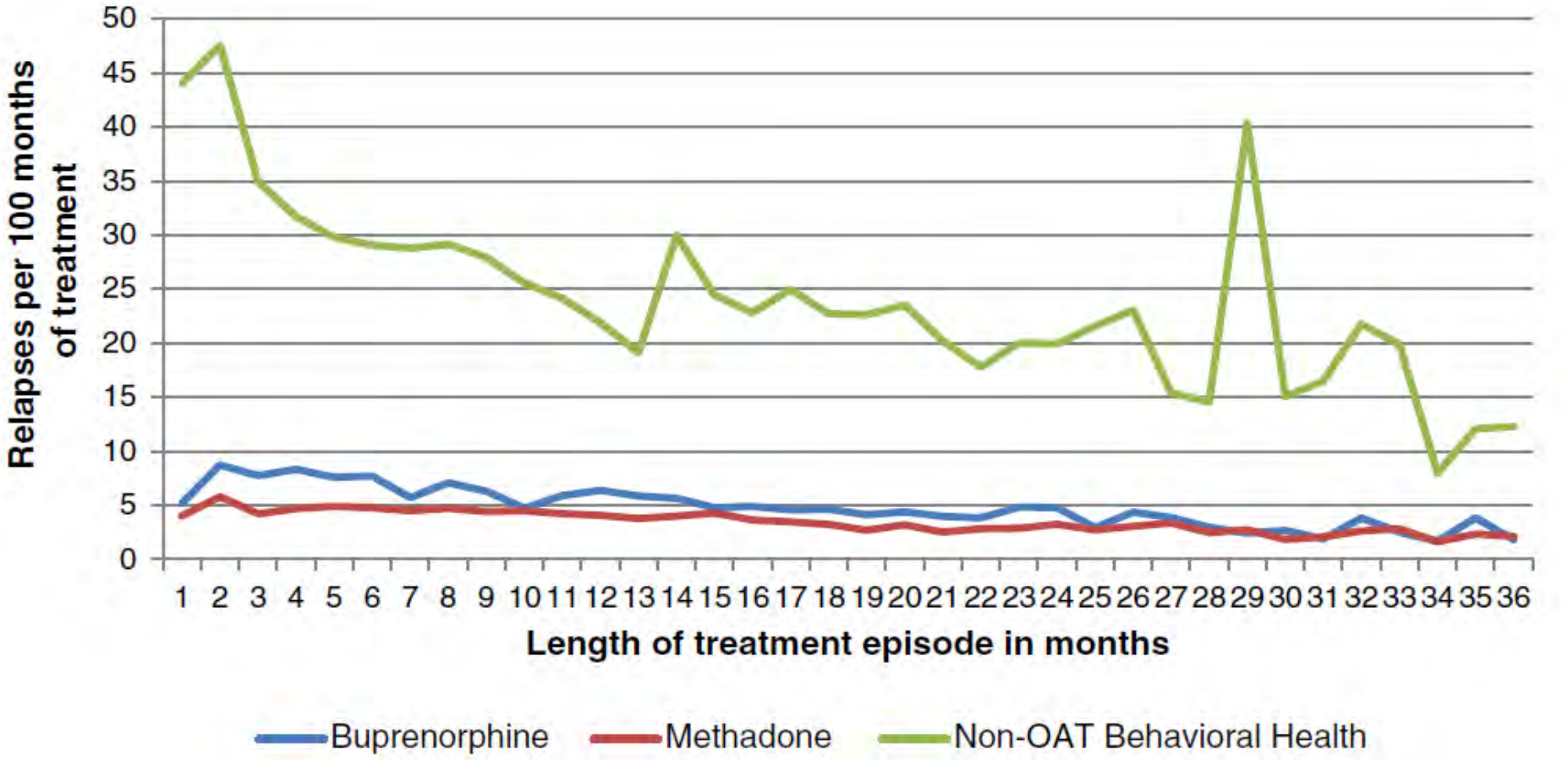
- Pharmacological
  - Methadone:
    - Full Agonist
    - reduces mortality and morbidity, illicit drug use, criminal activity
  - Buprenorphine (Suboxone):
    - Partial Agonist
    - more accessible, less potential for overdose
  - Naltrexone:
    - Full Antagonist
    - Some controversy over studies that demonstrated efficacy

Partial vs. Full Opioid Agonist



Should we be using medications as first line treatment?

Medication Alone versus Psychosocial Interventions Alone



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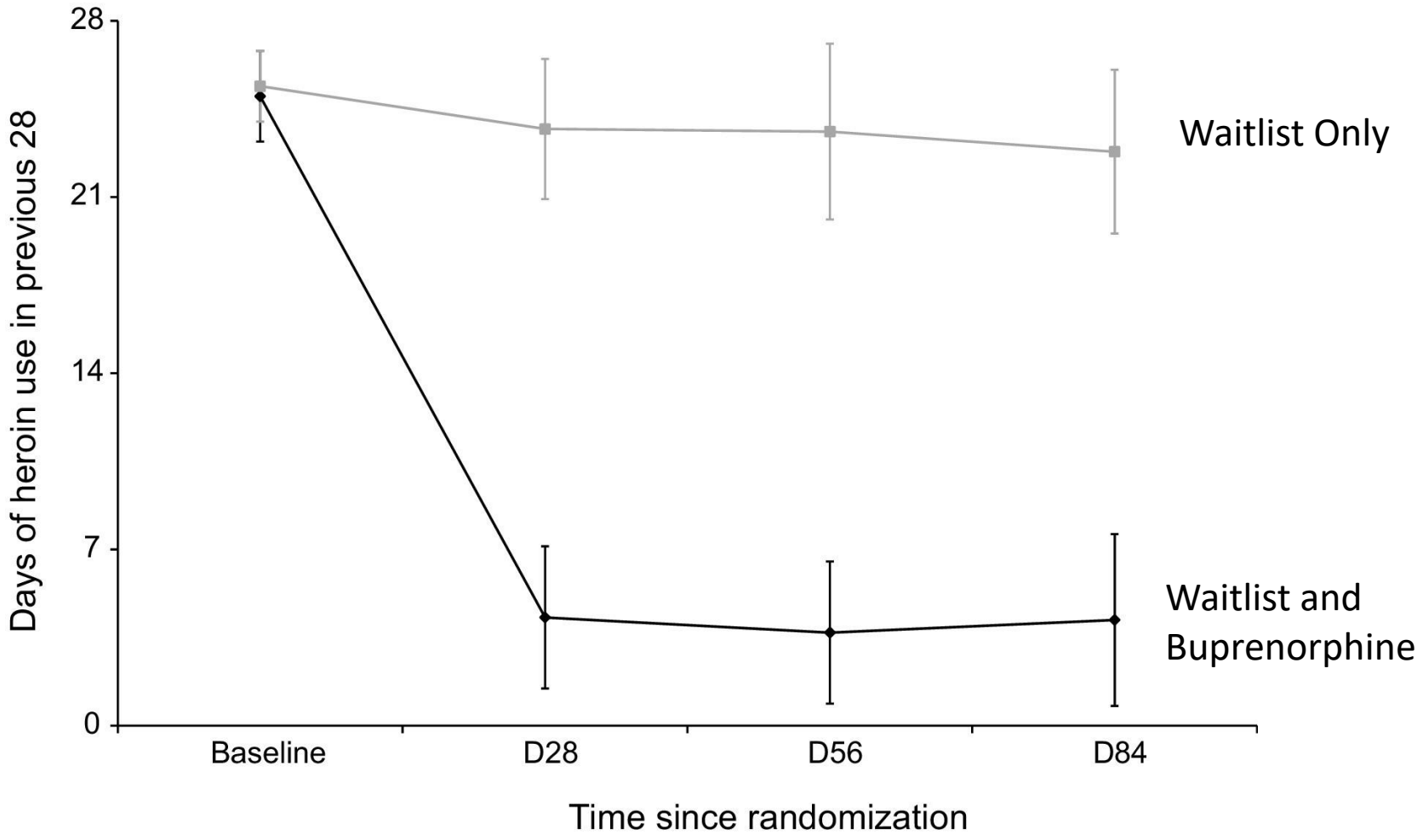
Waitlist Buprenorphine



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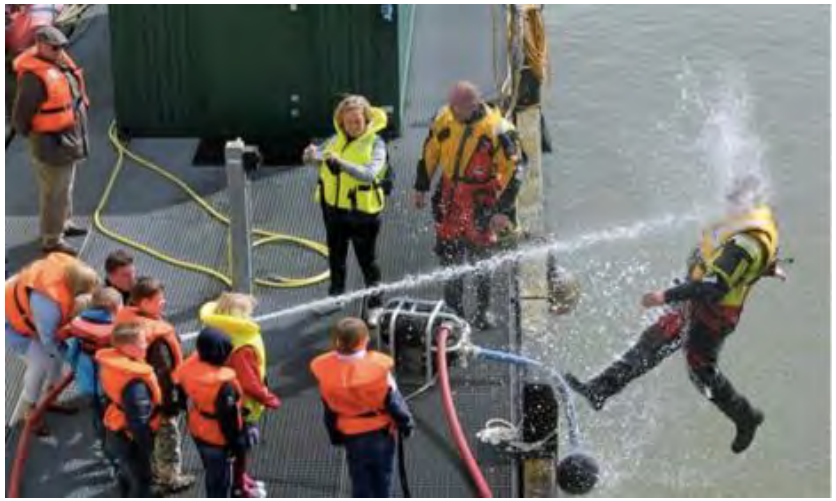
Where Are We Failing?

- In 2020, there were about 1.1 million people in treatment for a SUD
- Estimated prevalence of substance use disorders in the US is about 20 million
- We are unable to meet the need for treatment if we only rely on specialty care clinics/providers
- In 2020, only 11% of treatment programs offered medication to treat OUD
  - 9% wouldn't allow it
  - 49% allow it if you bring it with you



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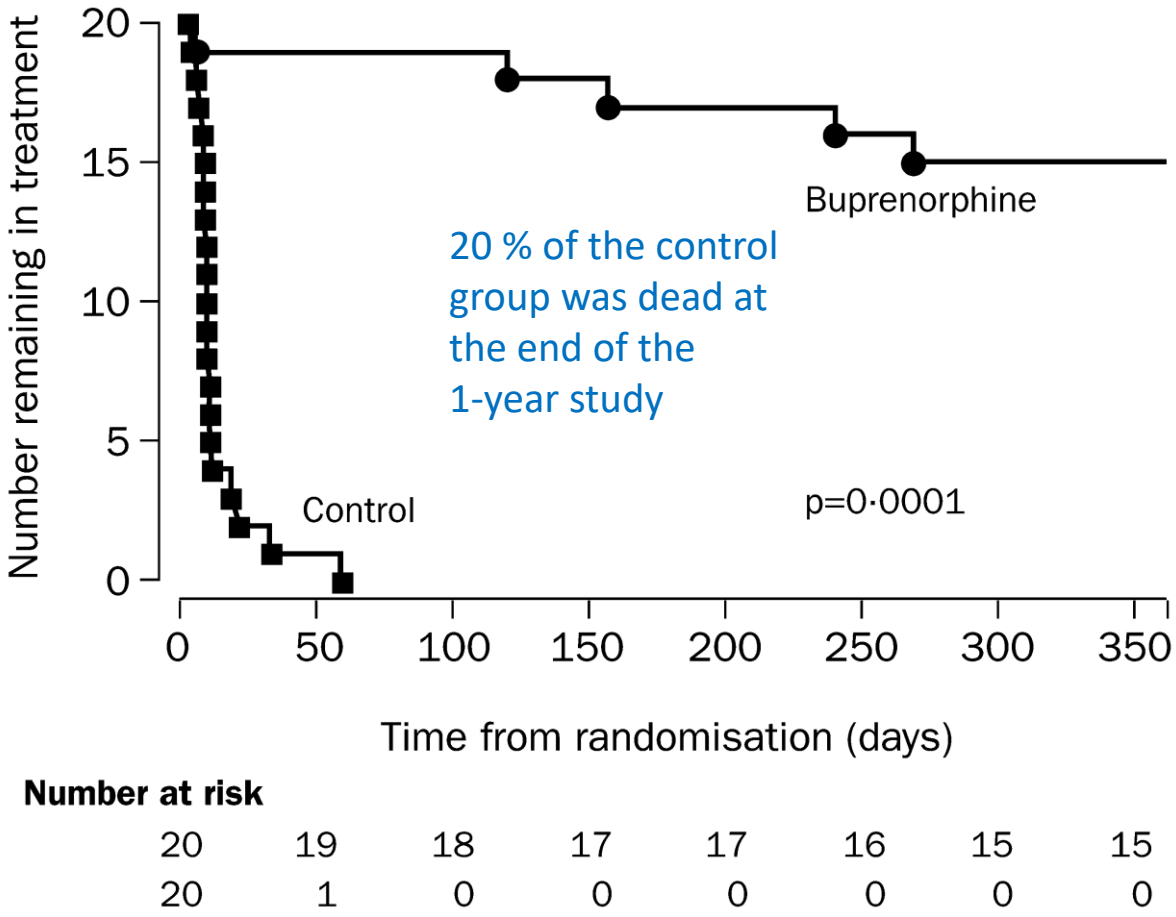
Buprenorphine with Intensive Psychosocial Interventions v.s. Intensive Psychosocial Interventions Alone



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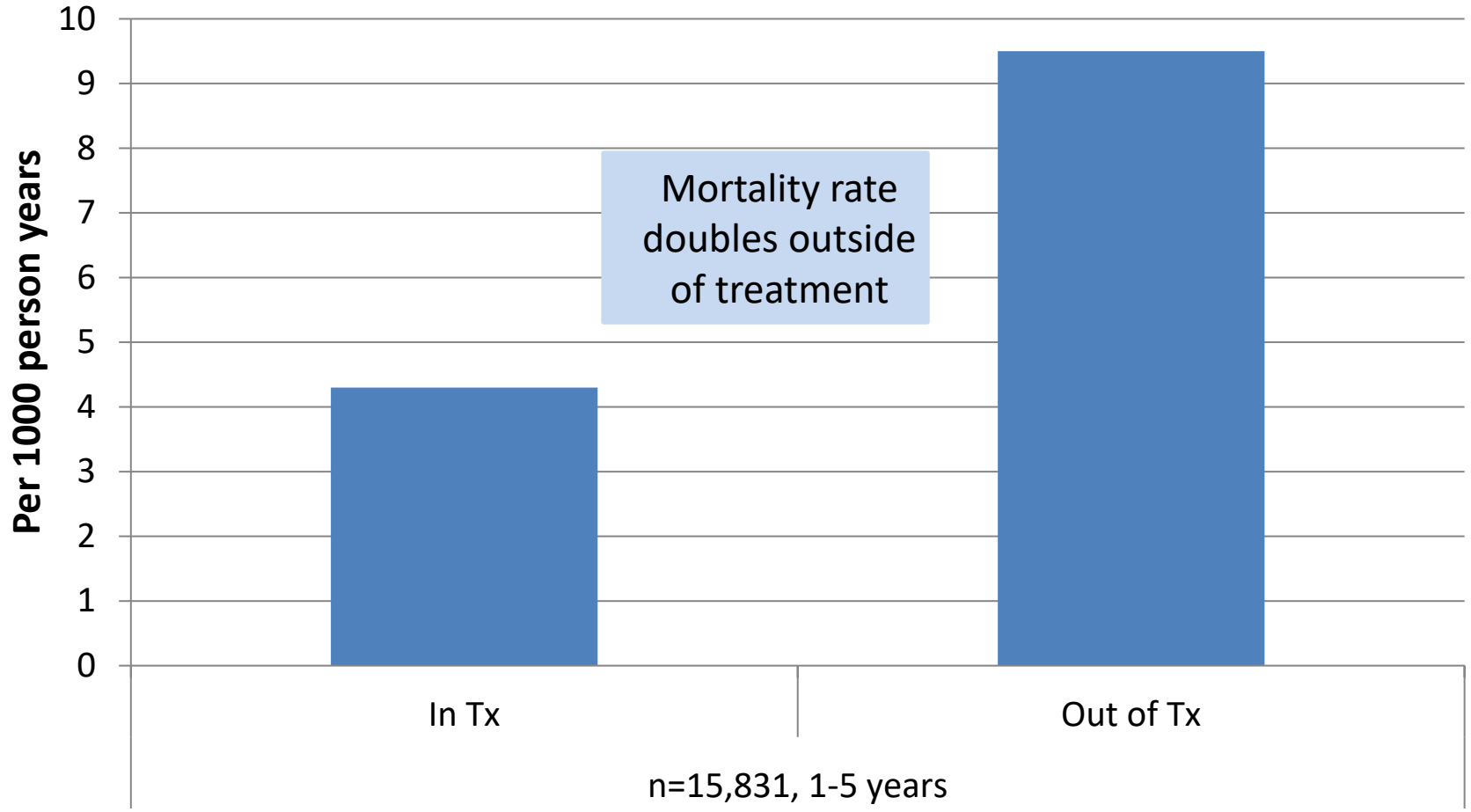
How can we fix this?

- Medication First Model of Care
  - Rapid access to medication
  - Prioritize Patient Choice
  - Psychosocial interventions offered but not mandated
  - High threshold for discontinuation of medication
    - Medical interventions should never be discontinued without clear evidence they are exacerbating the patient's condition.
    - Medications should not be withdrawn based on arbitrary timelines or protocols
- Is this person healthier and more likely to continue to improve in treatment or out of treatment?

Mortality Risk in and out Buprenorphine Treatment



Sordo, L., Barrio, G., Bravo, M. J., Indave, B. I., Degenhardt, L., Wiessing, L., Ferri, M., & Pastor-Barriuso, R. (2017). Mortality risk during and after opioid substitution treatment: systematic review and meta-analysis of cohort studies. *BMJ (Clinical research ed.)*, *357*, j1550. https://doi.org/10.1136/bmj.j1550

Rhode Island Example

- In July 2016, the Rhode Island Department of Corrections (RIDOC) instituted a program to address the overdose crisis
  - Increased risk of overdose death in recently incarcerated
  - Treatment initiated and maintained during incarceration
  - Care coordinated with 12 centers of excellence
  - Program was implemented as presence of fentanyl was increasing significantly

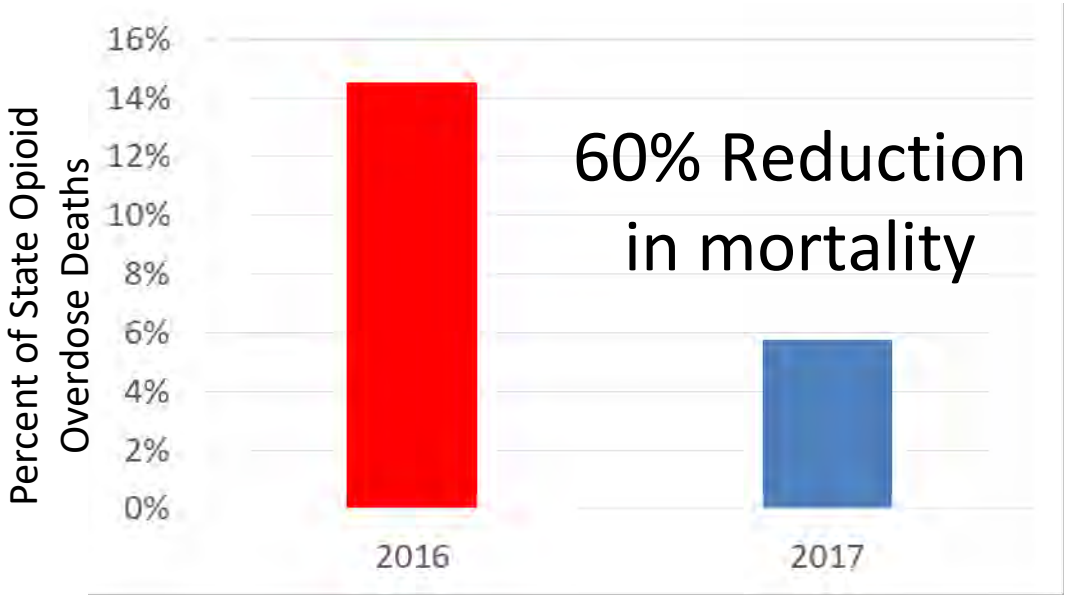
Green, T. C., Clarke, J., Brinkley-Rubinstein, L., Marshall, B., Alexander-Scott, N., Boss, R., & Rich, J. D. (2018). Postincarceration Fatal Overdoses After Implementing Medications for Addiction Treatment in a Statewide Correctional System. *JAMA psychiatry*, *75*(4), 405–407. https://doi.org/10.1001/jamapsychiatry.2017.4614

Characteristics

Table 2. Characteristics of Individuals Incarcerated in Rhode Island From January 1 to June 30, 2016, and From January 1 to June 30, 2017

Characteristic	First 6 mo of 2016	First 6 mo of 2017
Admission for incarceration, No.	4822	4512
Release from incarceration, No.	4005	3426
No. of inmates receiving MAT monthly, mean (SD)	80 (18)[a]	303 (39)
No. of inmates receiving a specific MAT drug monthly, mean (SD)		
Buprenorphine	4 (3)	119 (15)
Methadone	74 (16)	180 (25)
Naltrexone	2 (1)	4 (1)
Naloxone kits dispensed at release from incarceration, No.	72	35

The Impact



- NNT to Prevent one death: 11
- 12.3% reduction in in overdoses statewide

Green, T. C., Clarke, J., Brinkley-Rubinstein, L., Marshall, B., Alexander-Scott, N., Boss, R., & Rich, J. D. (2018). Postincarceration Fatal Overdoses After Implementing Medications for Addiction Treatment in a Statewide Correctional System. *JAMA psychiatry*, *75*(4), 405–407. https://doi.org/10.1001/jamapsychiatry.2017.4614

Dispelling Myths

- If you don’t require people to go to groups and counseling, they won’t do it

Buprenorphine and Psychosocial interventions

- 173 persons in office based treatment prescribed buprenorphine followed for 6 months.
  - No limit on duration of buprenorphine prescription
  - Not required to attend 12-step meetings as a condition of treatment

Parran, T. V., Mace, A. G., Dahan, Y. J., Adelman, C. A., & Kolganov, M. (2017). Buprenorphine/Naloxone Maintenance Therapy: an Observational Retrospective Report on the Effect of Dose on 18 months Retention in an Office-Based Treatment Program. *Substance abuse : research and treatment*, *11*, 1178221817731320. https://doi.org/10.1177/1178221817731320

At 18 months, the 76% of patients on continuous buprenorphine treatment

- Less likely to report
  - Using any substance
  - Using heroin
  - Damaging a close relationship
  - Doing regretful things
  - Hurting family
  - Negative personality changes
  - Failure to meet obligations
  - Taking foolish risks
  - Being unhappy
  - Having money problems
- More likely to report
  - Having a “home group”
  - Having a sponsor
  - Attending 3+ 12-step meetings per week
  - Attending Individual Therapy
  - Employment at follow up

Dispelling Myths

- If you don’t require people to go to groups and counseling, they won’t do it.
- You are just replacing one addiction for another addiction.

DSM- 5 Criteria for Opioid Use Disorder

- 2 or more of the following:
  - Failure to fulfill obligations at work, home or school
  - Recurrent use in hazardous situations
  - Continued use despite recurrent social or interpersonal problems
  - Tolerance
  - Withdrawal
  - Larger amounts/longer period than intended
  - Persistent desire to cut back/quit
  - “Great” deal of time using or recovering from use
  - Social, occupational, recreational activities given up
  - Continued use despite knowledge of physical, psychological consequences
  - Intense Cravings
- Severity based on number of symptoms (mild, moderate or severe)
- Active use, early full remission, full sustained remission, partial remission and in remission while in a controlled environment
- If opioids are prescribed, you don’t consider the tolerance and withdrawal criteria

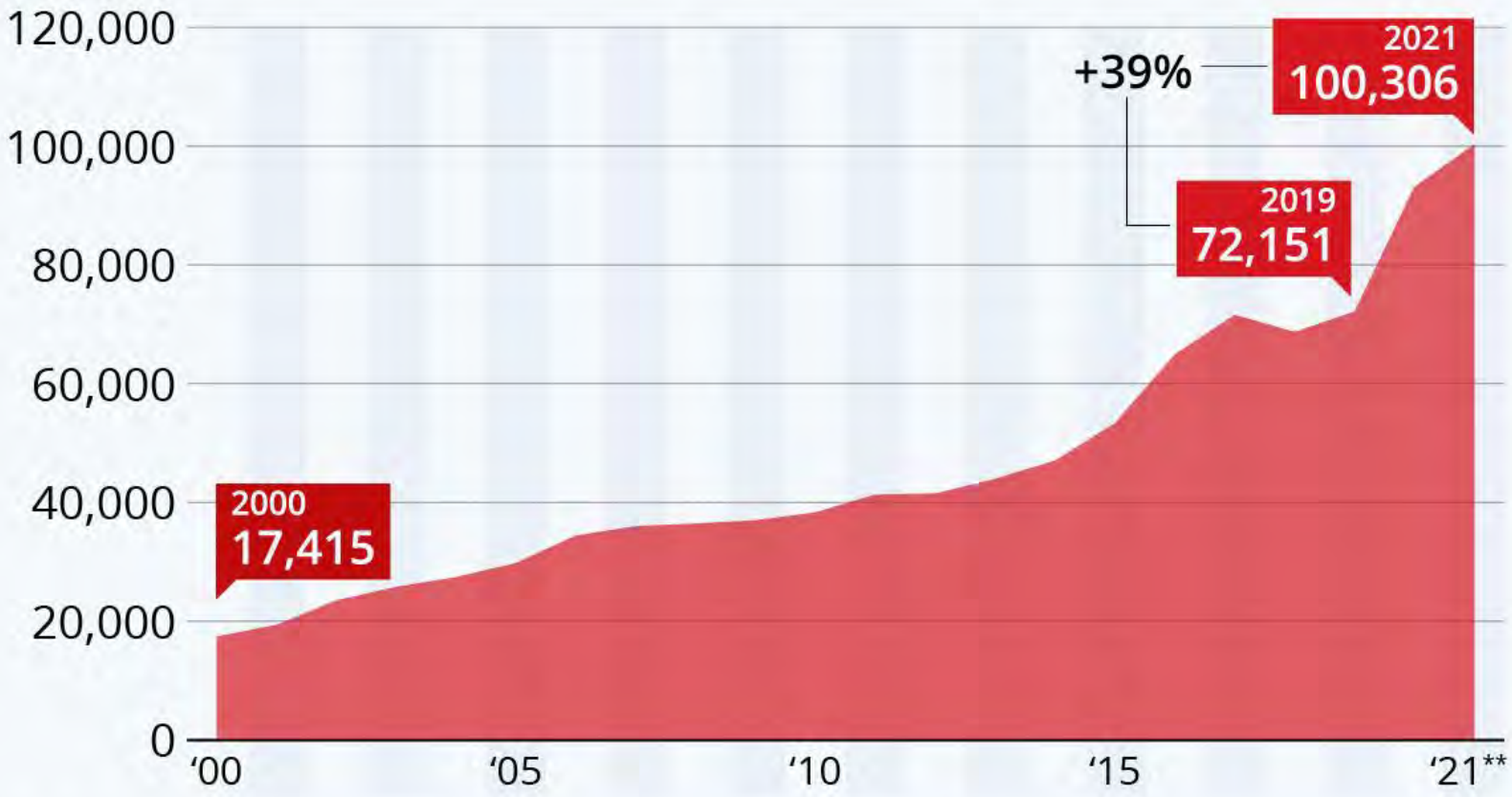
(American Psychiatric Association, 2013)

Dispelling Myths

- If you don’t require people to go to groups and counseling, they won’t do it.
- You are just replacing one addiction for another addiction.
- People need to hit rock bottom before they will be ready to change

U.S. Drug Overdose Deaths Spike Amid the Pandemic

Number of drug overdose deaths in the United States*



* Estimates for 2020 and 2021 are based on provisional data.
** 2021 estimate refers to 12-month period ending April 2021

Source: Centers for Disease Control and Prevention

Visual Representation of Lethal Dosages

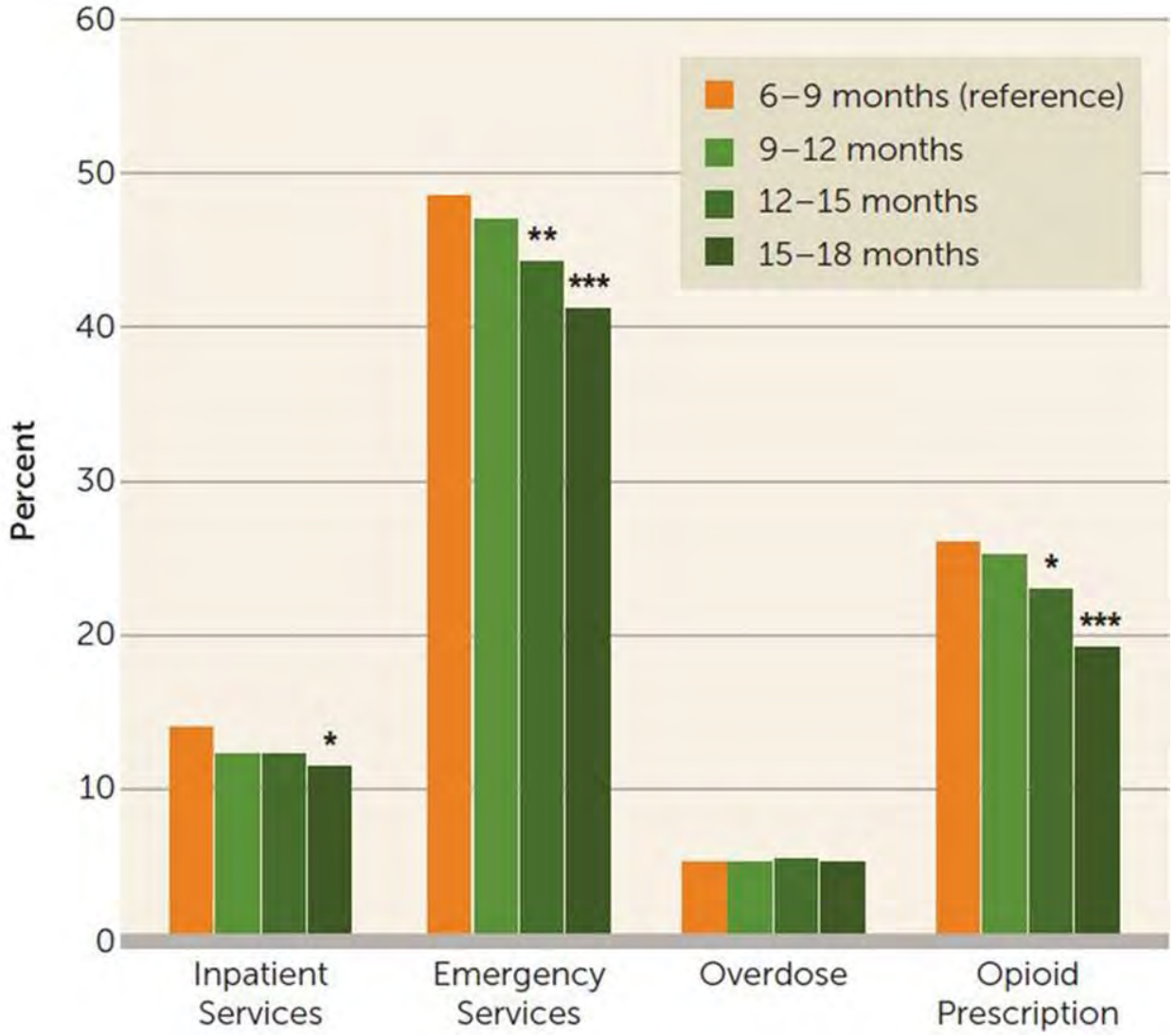
Lethal doses of heroin compared to "synthetic" opioids.

New Hampshire State Police Forensic Lab

Dispelling Myths

- If you don’t require people to go to groups and counseling, they won’t do it.
- You are just replacing one addiction for another addiction.
- People need to hit rock bottom before they will be ready to change
- People shouldn’t take medication long term

Duration of Treatment



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Dispelling Myths

- If you don’t require people to go to groups and counseling, they won’t do it.
- You are just replacing one addiction for another addiction.
- People need to hit rock bottom before they will be ready to change
- People shouldn’t take medication long term
- Addiction is just a consequence of bad choices

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Canstockphoto.com

Things to remember

- Access to care for substance use disorders is underfunded and not readily available
  - Early intervention for less severe disorders can prevent the need for specialty care.
- Unlike any other chronic disease, success or failure tends to be measured in terms of “abstinence”.
- Alcohol, nicotine and opioids are the only substances with FDA approved medications for treatment.
  - Medications for other conditions are often first line and the most effective intervention we have (particularly in advanced cases)
- Stigma remains a major barrier to asking for help and a major reason patients discontinue treatment with effective medications.

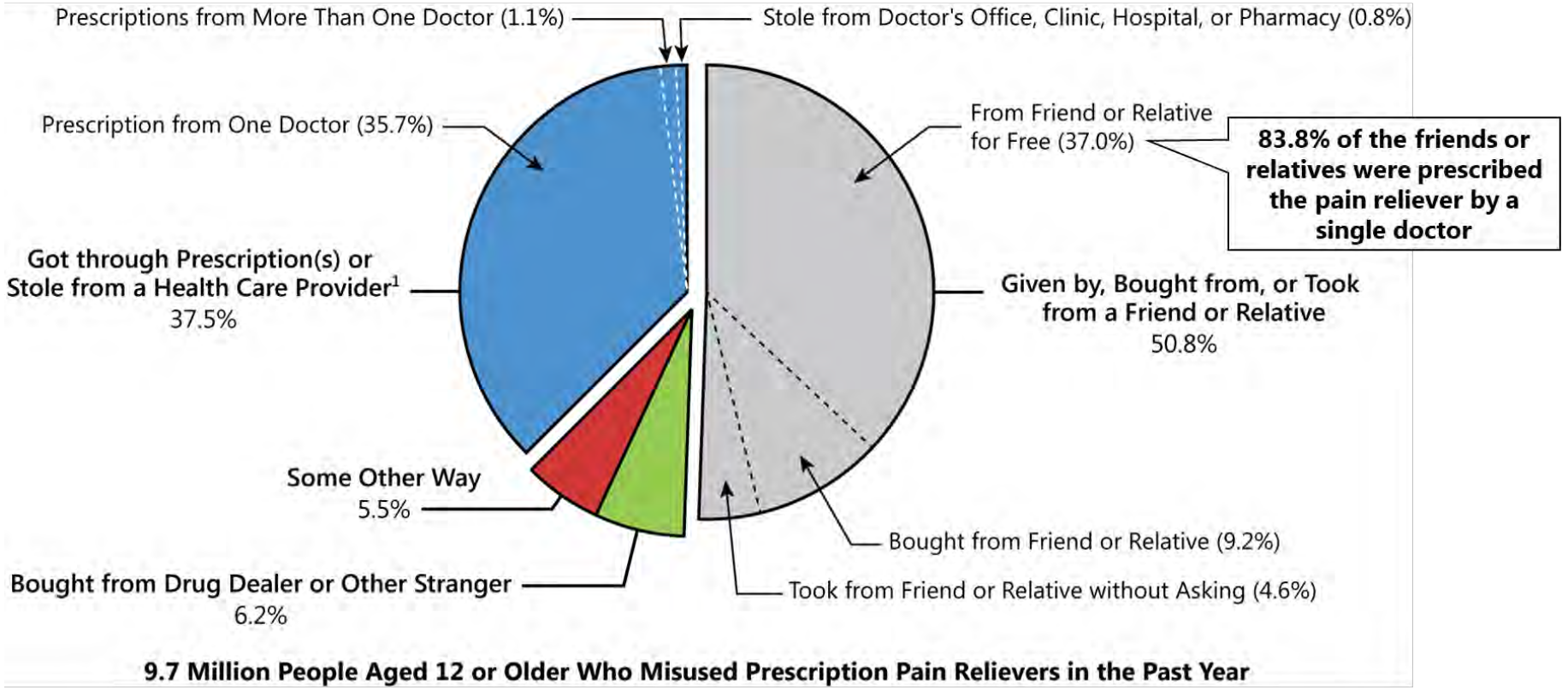
What can help with stigma?

- Training and education
- Embrace and approach this as a chronic disease
  - Normalize conversations around treatment
  - Treat individuals with dignity and respect
  - Increase support during times of struggle
- Language matters
  - Abuse, Detoxification, Habit, Drug of choice, Addict, Dirty Urine etc.
  - https://www.drugabuse.gov/nidamed-medical-health-professionals/health-professions-education/words-matter-terms-to-use-avoid-when-talking-about-addiction
- Identify and highlight successes
  - Measure success and outcomes in manner similar to other conditions we treat
  - Recognize and emphasize any improvement or attempt at change
  - Avoid framing recovery as all or nothing

Summary

- Substance use disorders are chronic conditions that stem from physical changes in the brain and nervous system.
- Genetics along with life experiences and other environmental factors can impact the likelihood that individuals will develop a substance use disorder.
- As with other chronic conditions, lifestyle modification can influence the prognosis but is often difficult to implement and sustain.
- For opioid use disorders, medication management is the most effective intervention.
- A low threshold medication first model of care is an effective approach to engaging patients in care and reducing the harm associated with opioid use disorder.

Opioid Use Disorder



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The Opioid and Addiction Crisis: A Primer

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Historical Perspective

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Some Key Milestones in U.S. Drug Policy

- Federal versus State laws
- 1914 - Harrison Narcotics Tax Act
- 1920s-1960s - Bureau of Narcotics
- 1937 Marijuana Tax Act
- 1950s Boggs Act and Narcotic Control Act
- 1970 - Controlled Substances Act
- 1973 – Creation of DEA
- 1984 – Crime Control Act of 1984
- 1986 - Anti-Drug Abuse Act of 1986
- 1988 – Omnibus Drug Abuse Act
- 1990s – Changing views on pain and Pain as the 5th Vital Sign
- 1990s-2000s – Opioid Prescribing Changes
- 2000 – Drug Addiction Treatment Act
- 2006 – Combat Methamphetamine Epidemic Act of 2005
- 2010s – Focus on decreasing opioid prescribing
- 2010s-2020s – Resurgence of heroin and emergence of illicit fentanyl
- 2020s – Various state laws related to decrim. and legalization of various substances
- 2022 – Removal of DEA DATA waiver

Consistent Themes Over Time: Criminalization; Stigma; Discrimination

Current Overdose Trends

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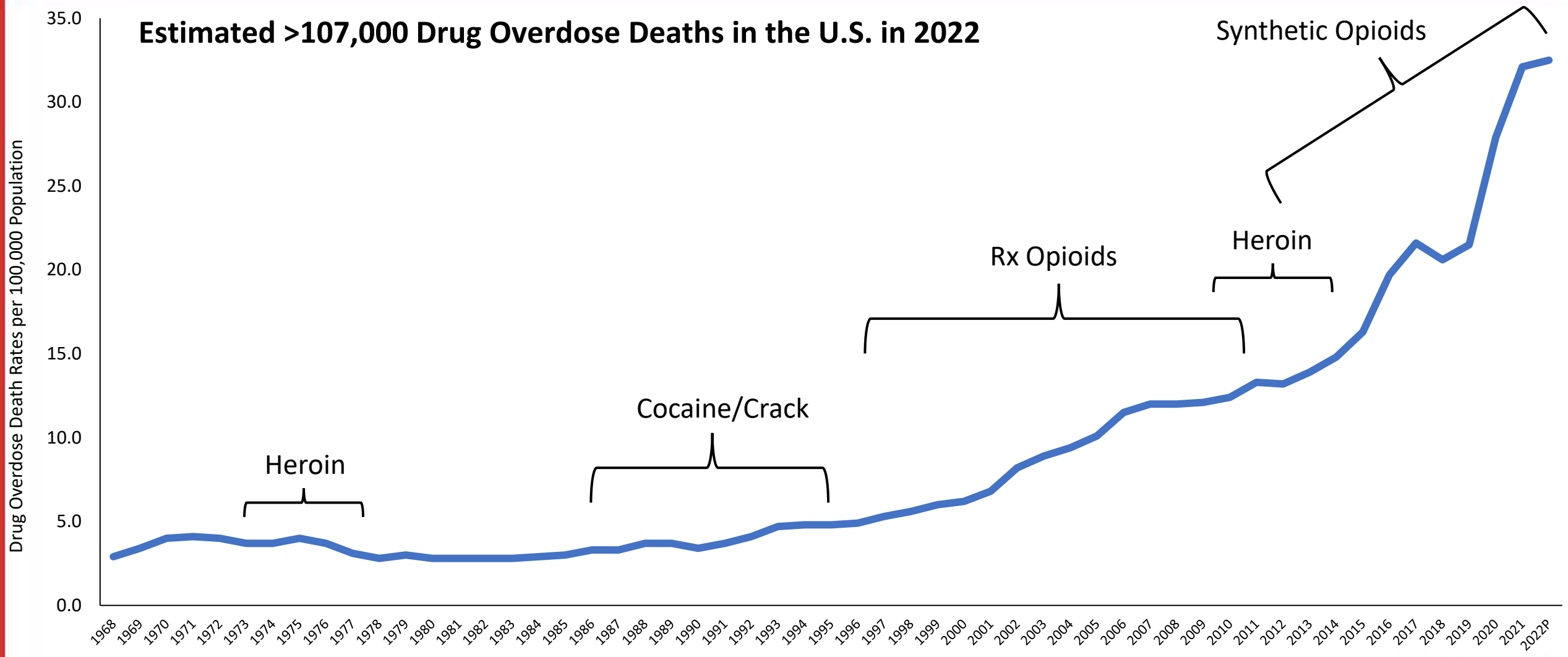
Historically High Levels of Overdose Deaths in the U.S.



Source: CDC NCHS. NVSS/WONDER, 2023. 2022 data are provisional as of 9/25/23

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Provisional Predicted Mortality Data Through April 2023

Figure 1a. 12 Month-ending Provisional Counts of Drug Overdose Deaths: United States

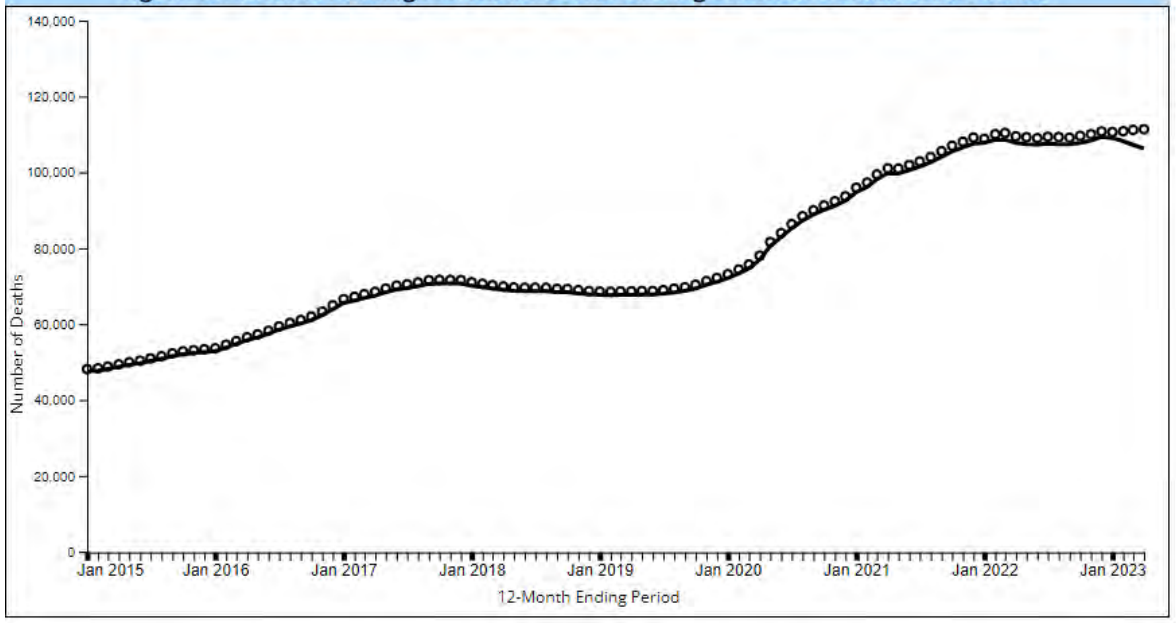
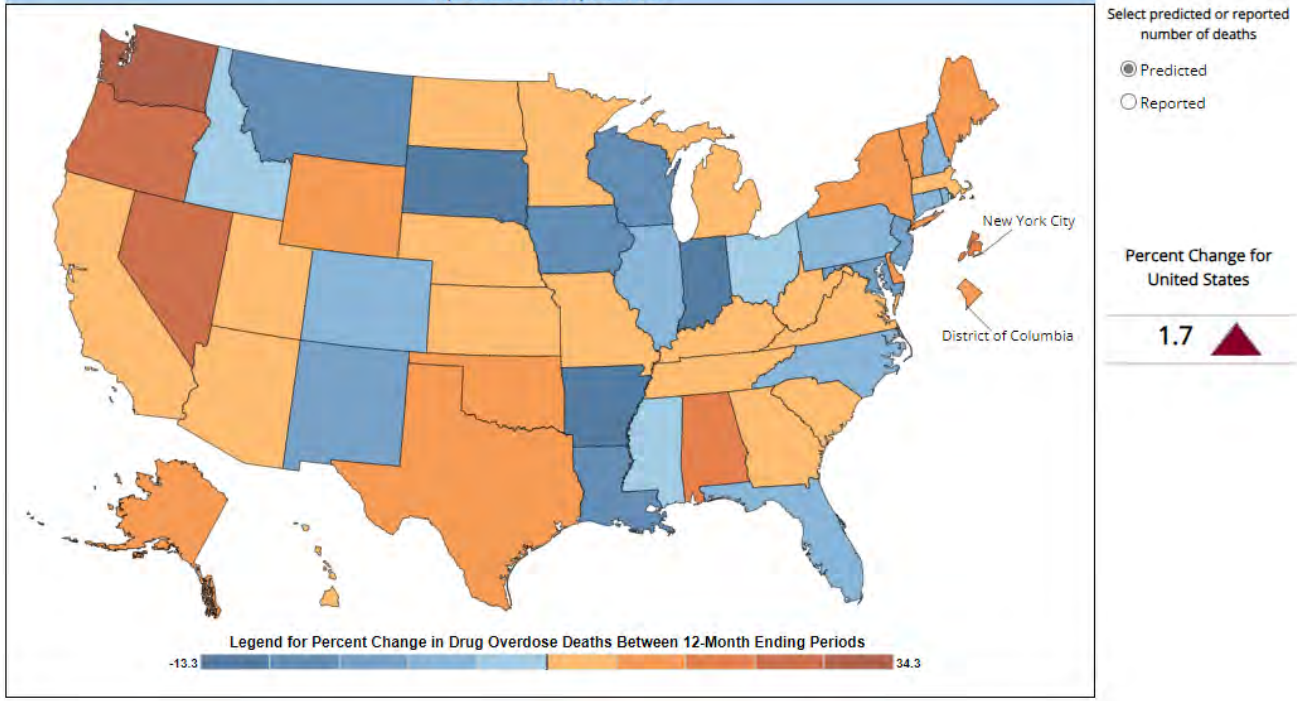


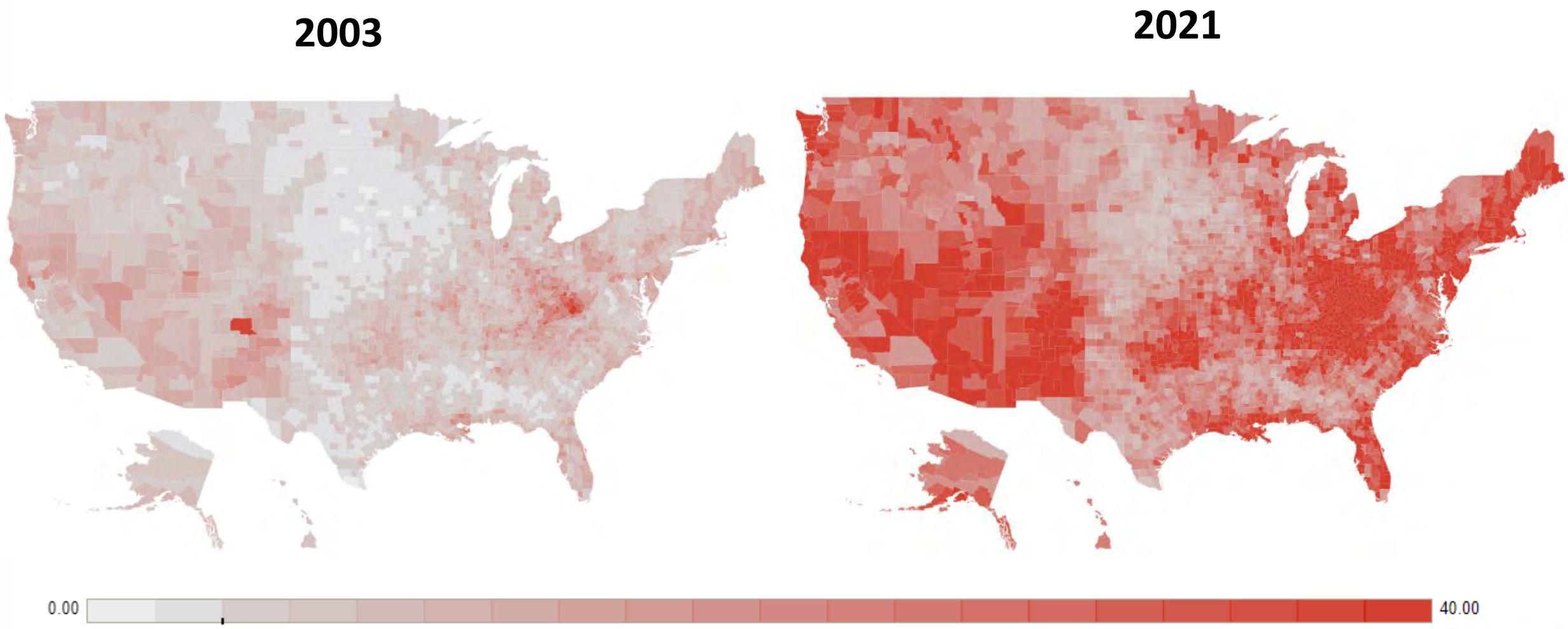
Figure 1b. Percent Change in Predicted 12 Month-ending Count of Drug Overdose Deaths, by Jurisdiction: April 2022 to April 2023



[Products - Vital Statistics Rapid Release - Provisional Drug Overdose Data (cdc.gov)]

Source: CDC WONDER National Vital Statistics System and NCHS Provisional Data, 2023.

The Impact on Communities – County Drug Overdose Death Rates – 2003 and 2020



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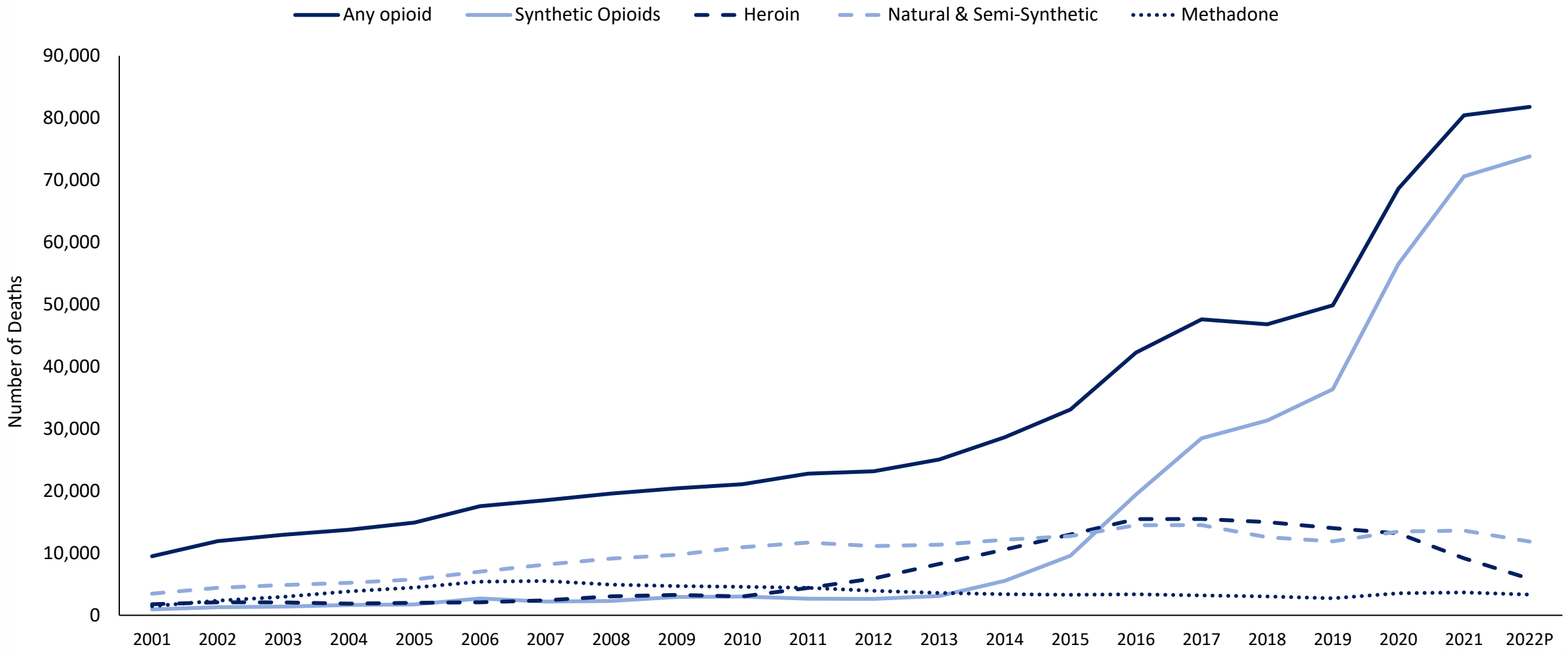
NCHS Data Visualization Gallery - Drug Poisoning Mortality (cdc.gov)

Long-term Trends in Opioid-Involved Overdose Deaths, by Opioid Type, 2001-2022P



Source: CDC NCHS. NVSS/WONDER, 2023. 2022 data are provisional as of 9/25/23

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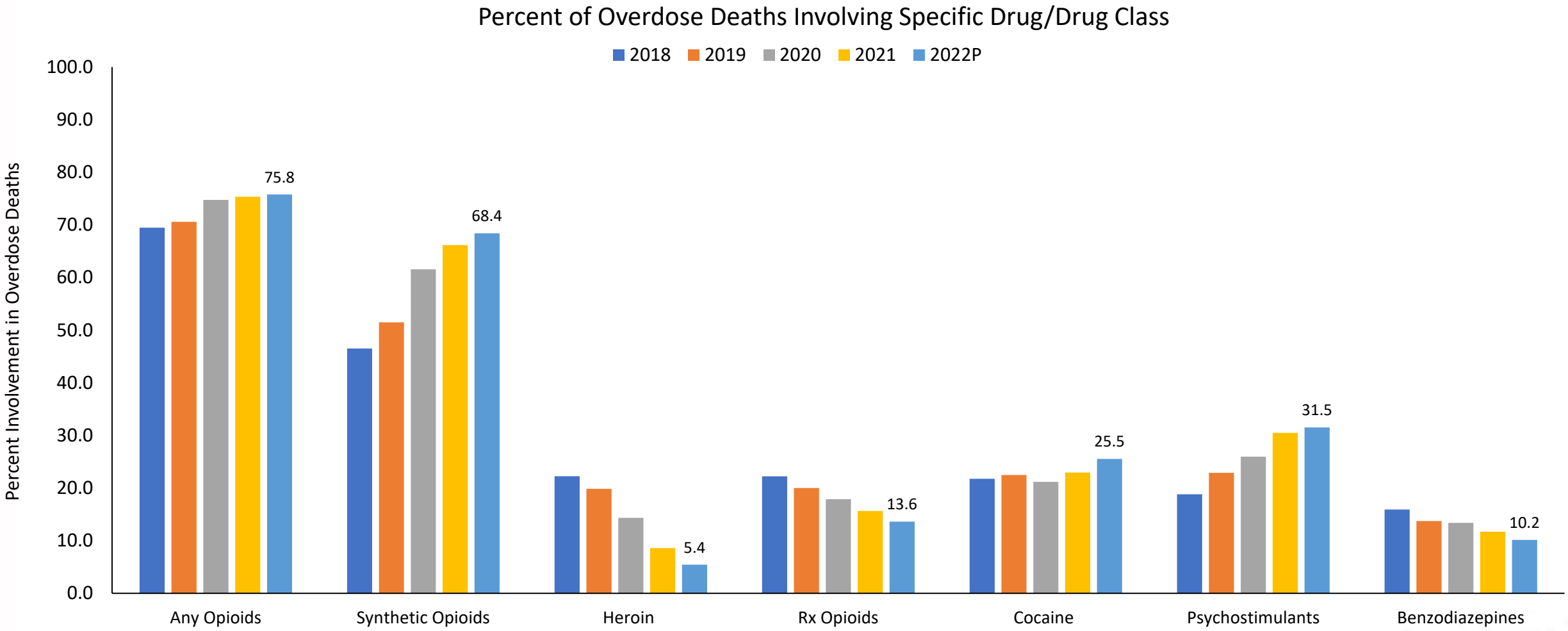
Substances Involved in Overdose Deaths, Percentages

Estimated >107,000 Drug Overdose Deaths in the U.S. in 2022



Source: CDC NCHS. NVSS/WONDER, 2023. 2022 data are provisional as of 9/25/23

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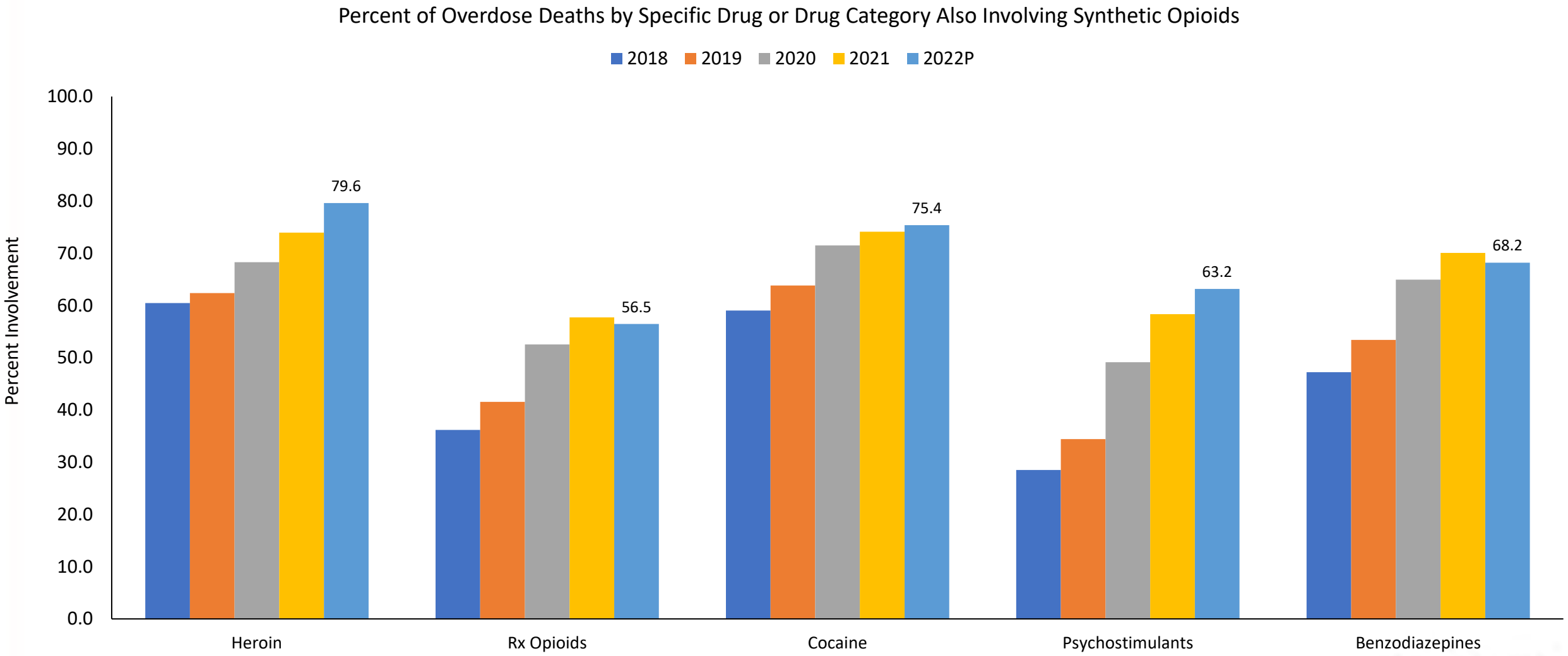
Synthetic Opioid Involvement in Overdose Deaths



Source: CDC NCHS. NVSS/WONDER, 2023. 2022 data are provisional as of 9/25/23

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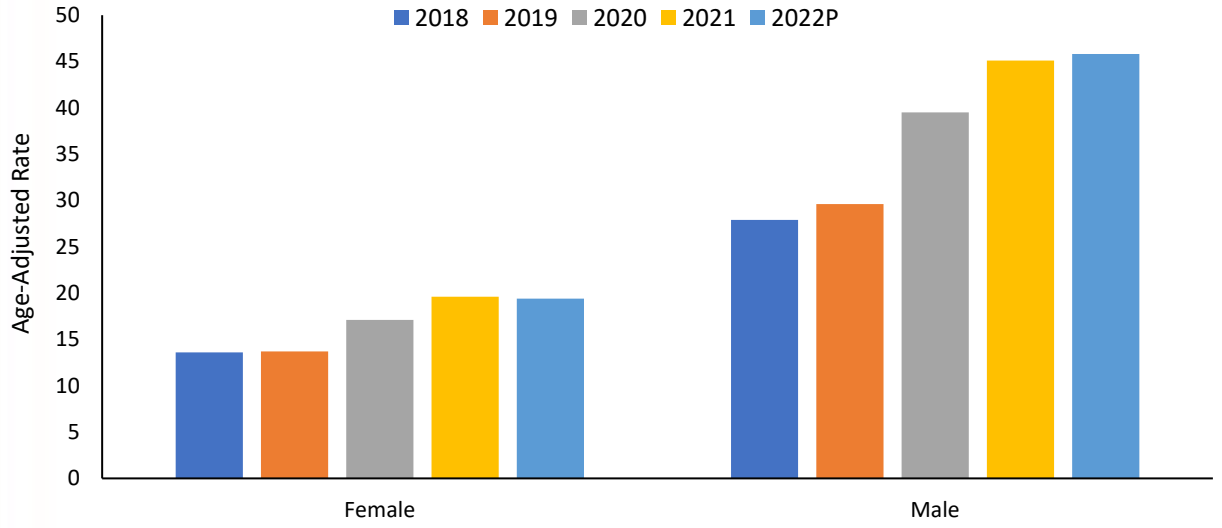
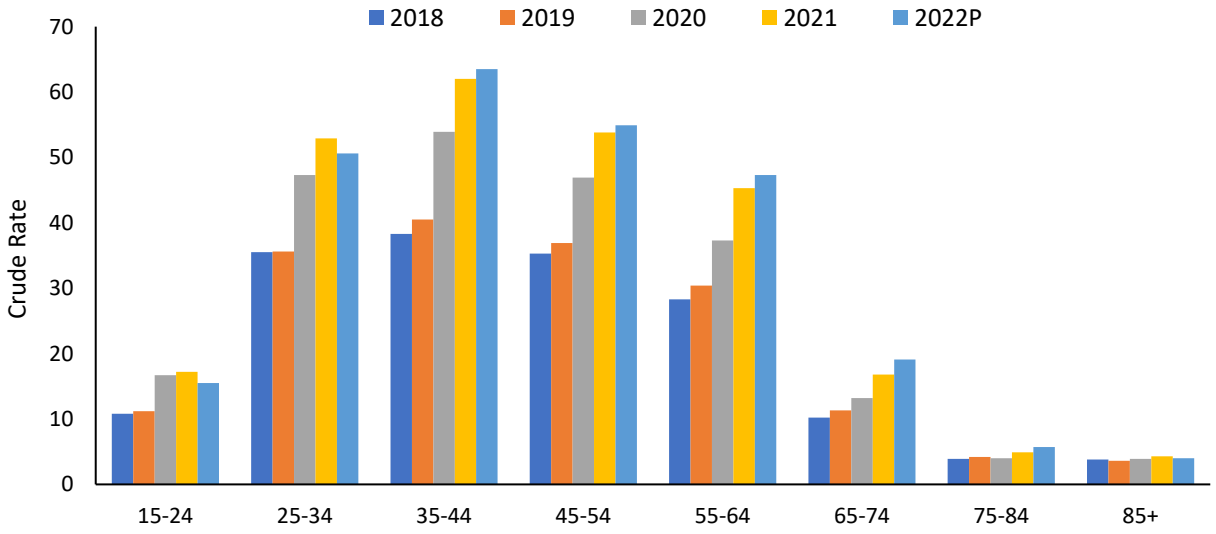
Drug Overdose Death Trends by Select Demographics, 2018-2022P

Source: CDC NCHS. NVSS/WONDER, 2023. 2022 data are provisional as of 9/25/23

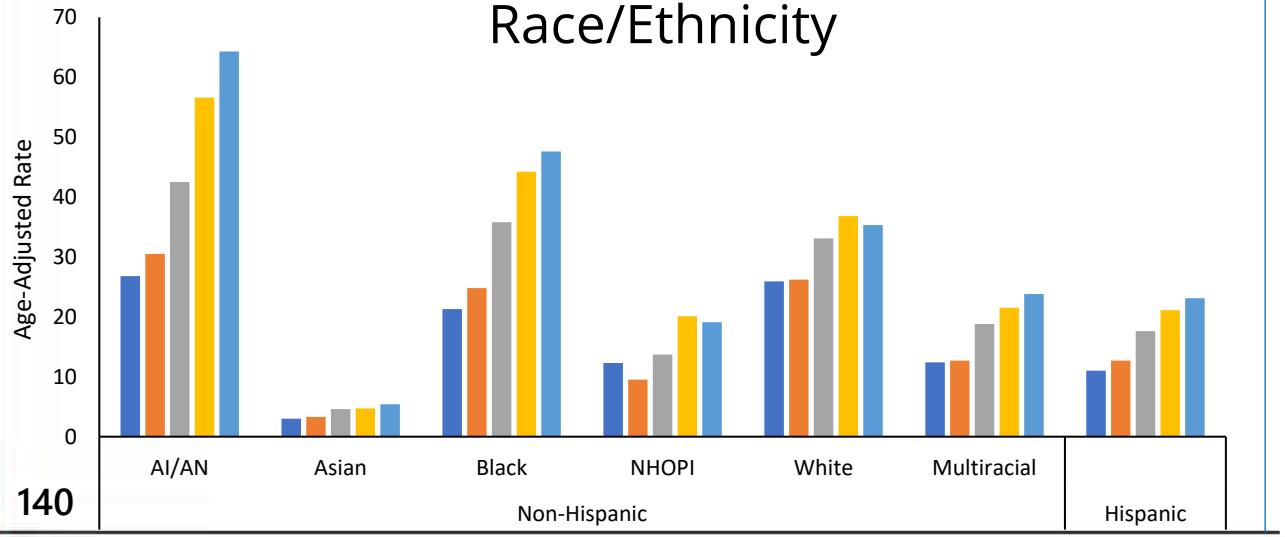
Gender



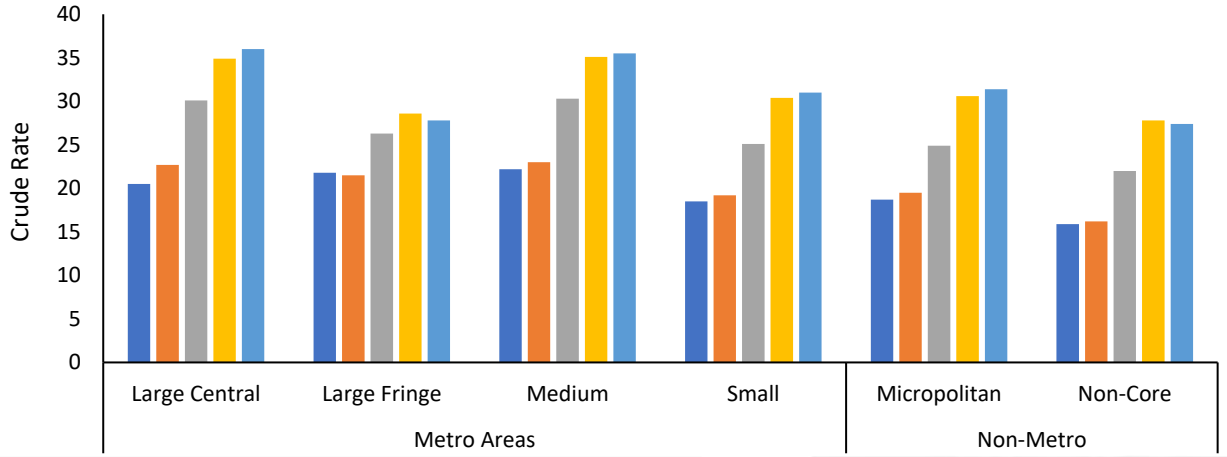
Age



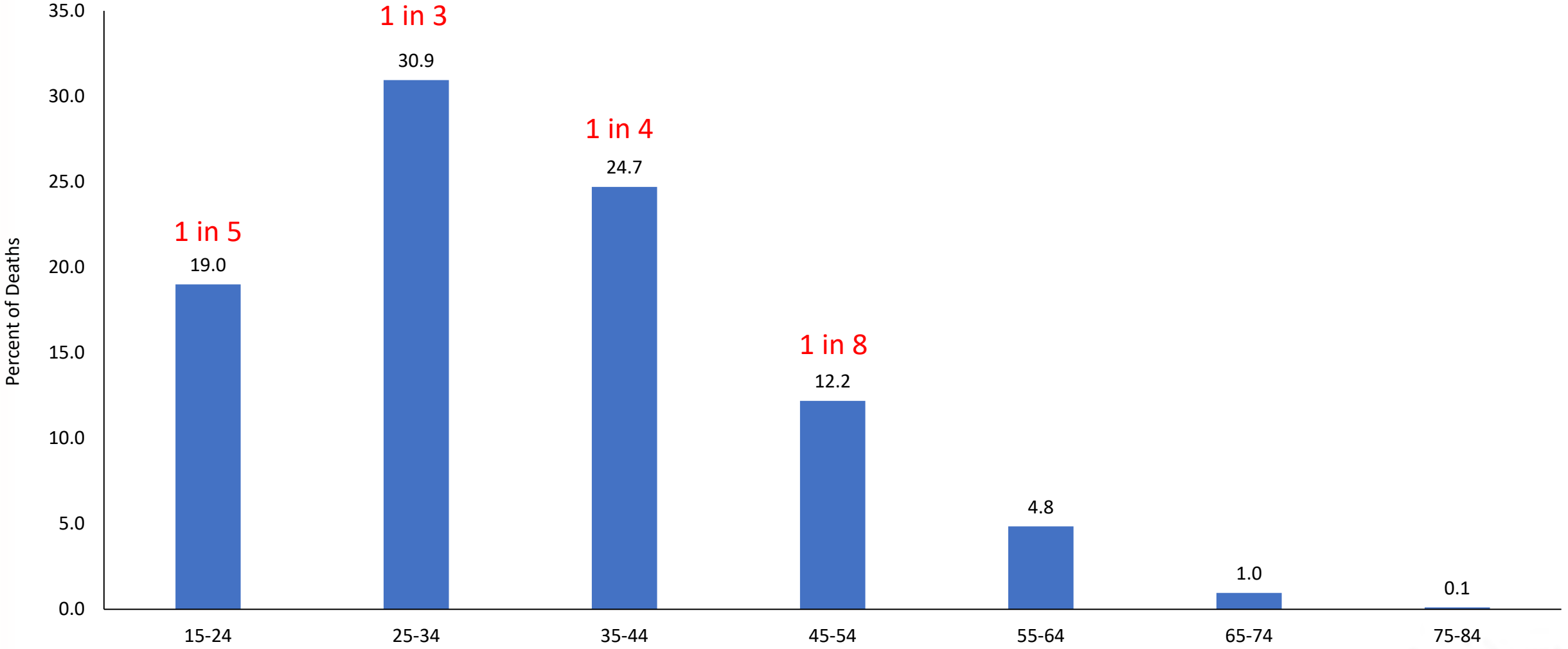
Race/Ethnicity



Urbanization



Percent of All Deaths by Age Group Due to Drug Overdose, 2022P



Source: CDC NCHS. NVSS/WONDER, 2023. 2022 data are provisional as of 9/25/23

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Current Substance Use Trends

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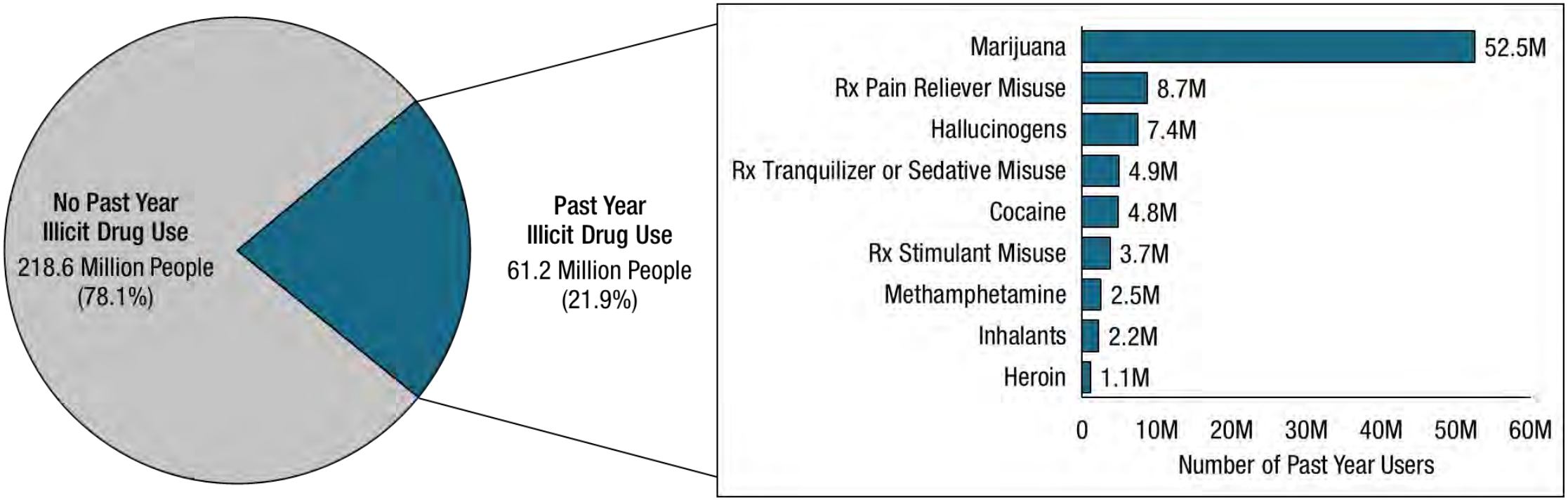
Past Year Illicit Drug Use: Among People Aged 12 or Older; 2021



- 61.6M Past-month tobacco or nicotine vaping
- 133.0M Past-month alcohol use
- 60.0M Past-month binge alcohol use
- 16.3M Past-month heavy alcohol use

Rx = prescription.

Note: The estimated numbers of past year users of different illicit drugs are not mutually exclusive because people could have used more than one type of illicit drug in the past year.

Source: SAMHSA, National Survey on Drug Use and Health, 2021

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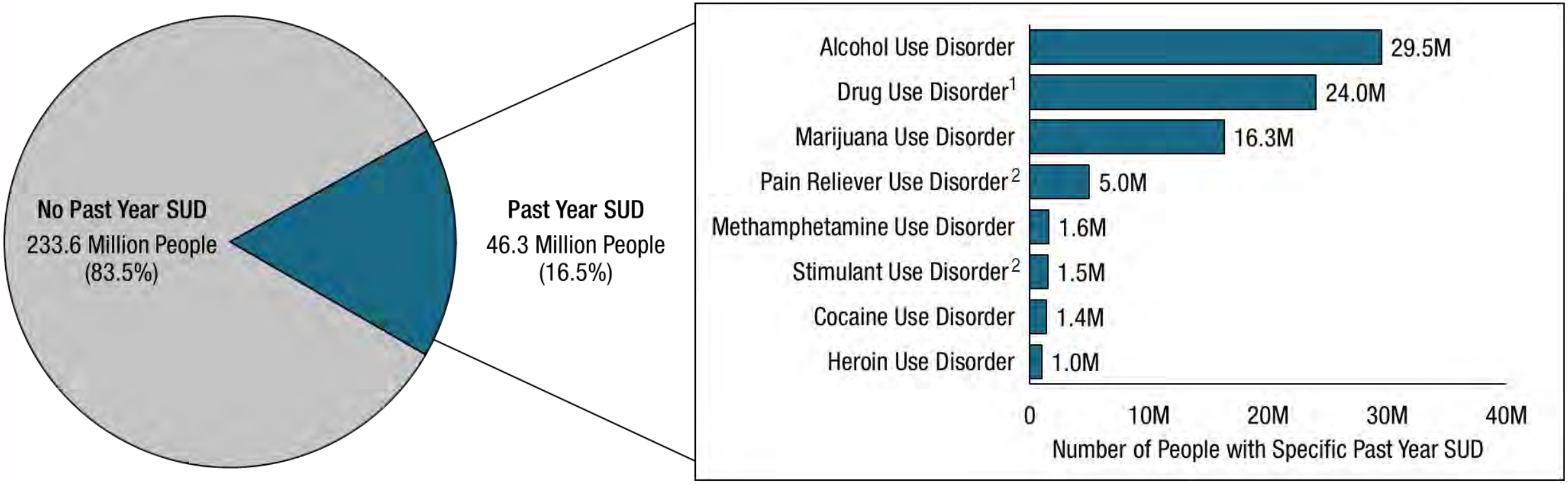
Past Year Substance Use Disorder (SUD): Among People Aged 12 or Older; 2021



Note: The estimated numbers of people with substance use disorders are not mutually exclusive because people could have use disorders for more than one substance.

[1] Includes data from all past year users of marijuana, cocaine, heroin, hallucinogens, inhalants, methamphetamine, and prescription psychotherapeutic drugs (i.e., pain relievers, tranquilizers, stimulants, or sedatives).

[2] Includes data from all past year users of the specific prescription drug.

Source: SAMHSA, National Survey on Drug Use and Health, 2021

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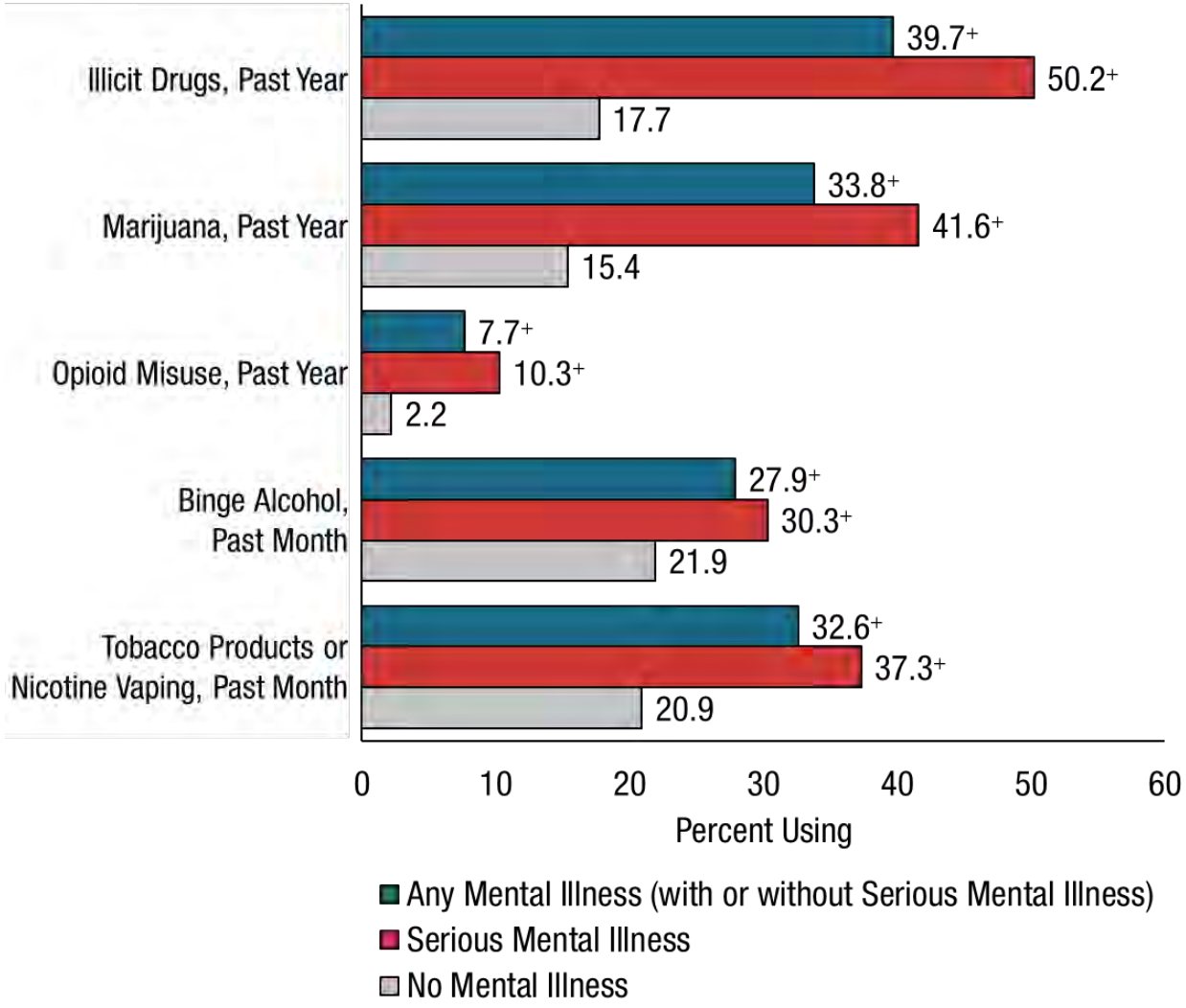
Substance Use: Among Adults Aged 18 or Older; by Mental Illness Status, 2021



+ Difference between this estimate and the estimate for adults aged 18 or older without mental illness is statistically significant at the .05 level.

Source: SAMHSA, National Survey on Drug Use and Health, 2021

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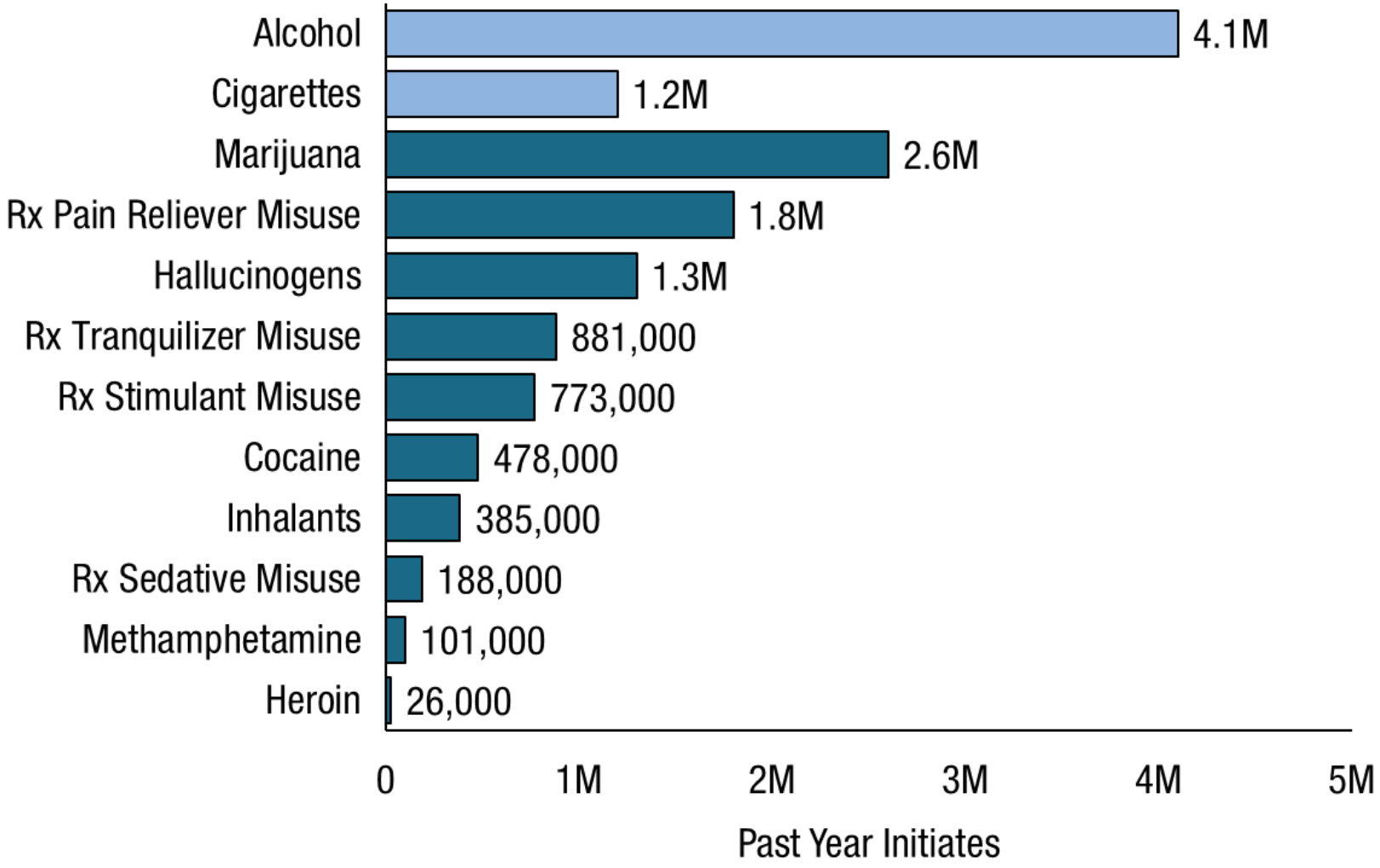
Past Year Initiates of Substances: Among People Aged 12 or Older; 2021



Rx = prescription.

Note: Estimates for prescription pain relievers, prescription tranquilizers, prescription stimulants, and prescription sedatives are for the initiation of misuse.

 Source: SAMHSA, National Survey on Drug Use and Health, 2021

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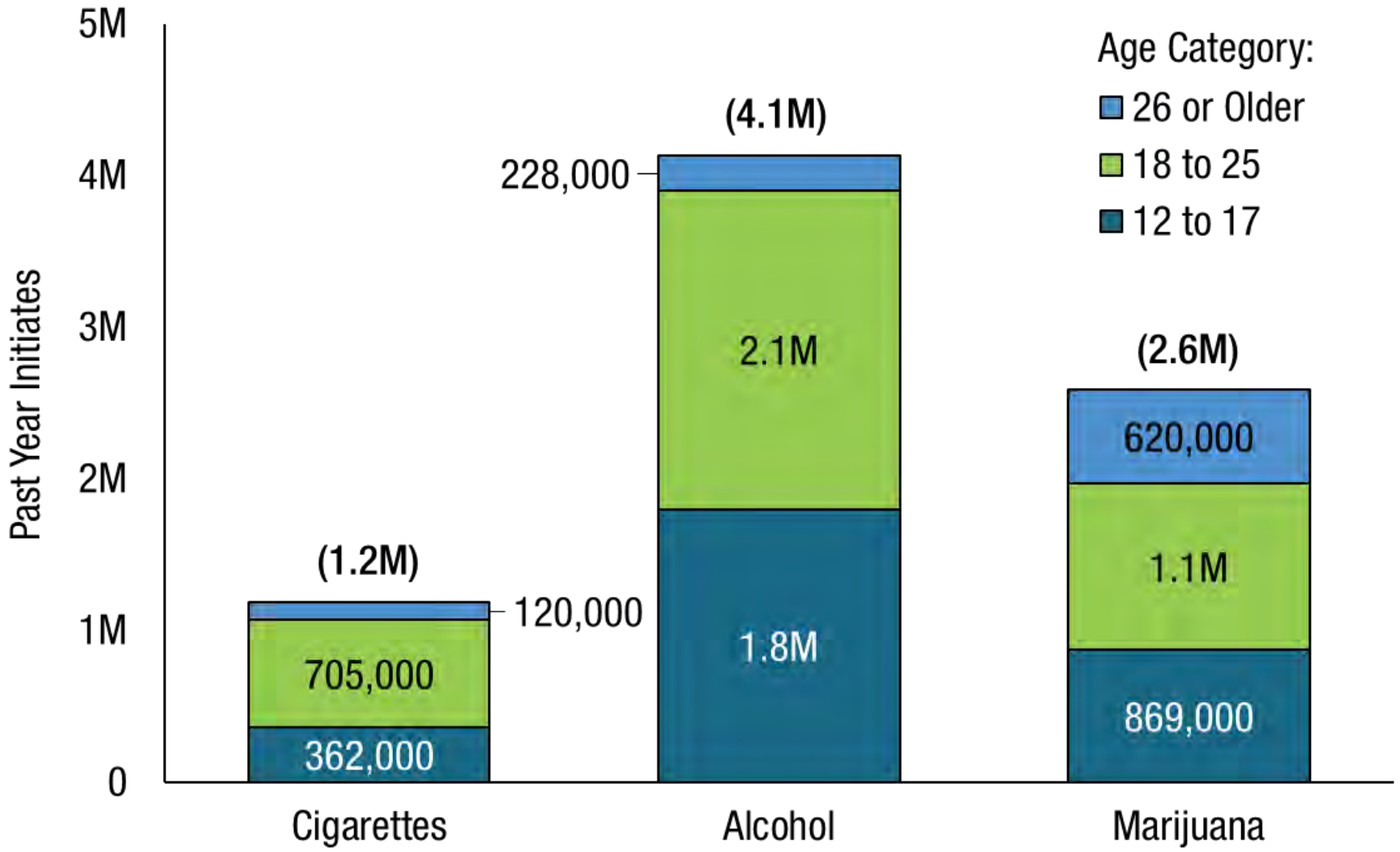
Past Year Cigarette, Alcohol, and Marijuana Initiates: Among People Aged 12 or Older; 2021



Note: The number in parentheses above each bar shows the total number of past year initiates aged 12 or older for that category.

 Source: SAMHSA, National Survey on Drug Use and Health, 2021

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Resurgent Methamphetamine

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Historically High Levels of Availability, Purity, Potency, and Low Cost

Figure A.3 National trend estimates for methamphetamine, cannabis/THC, and cocaine, January 2001–December 2021

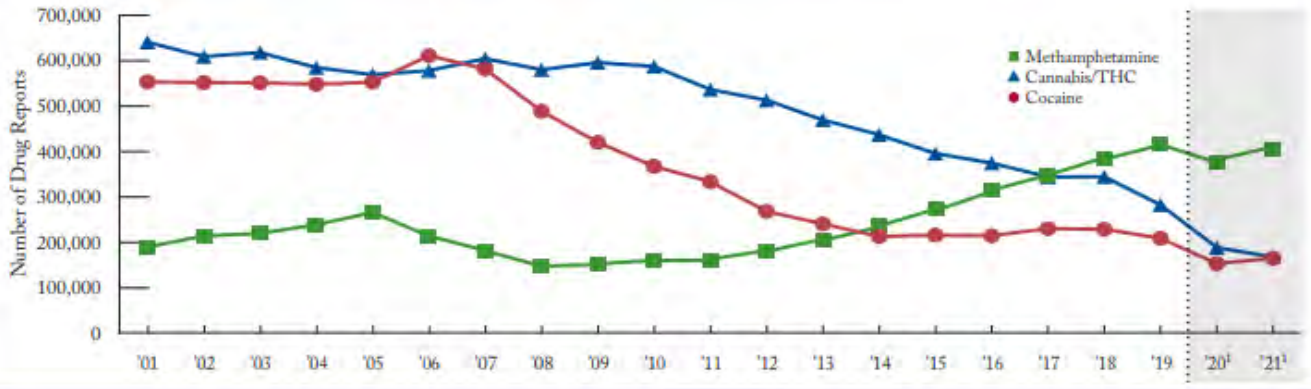
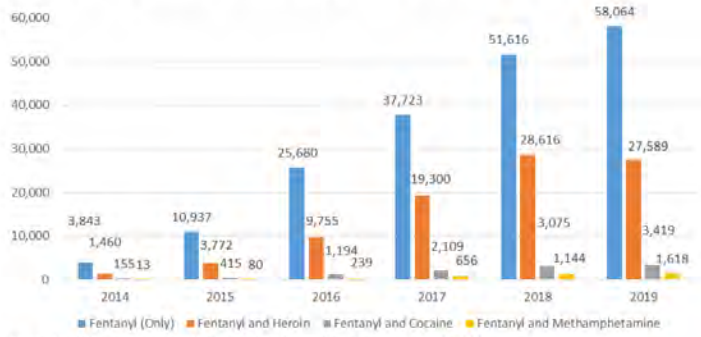


Figure 49. Counterfeit Adderall Tablets Containing Methamphetamine seized in Michigan

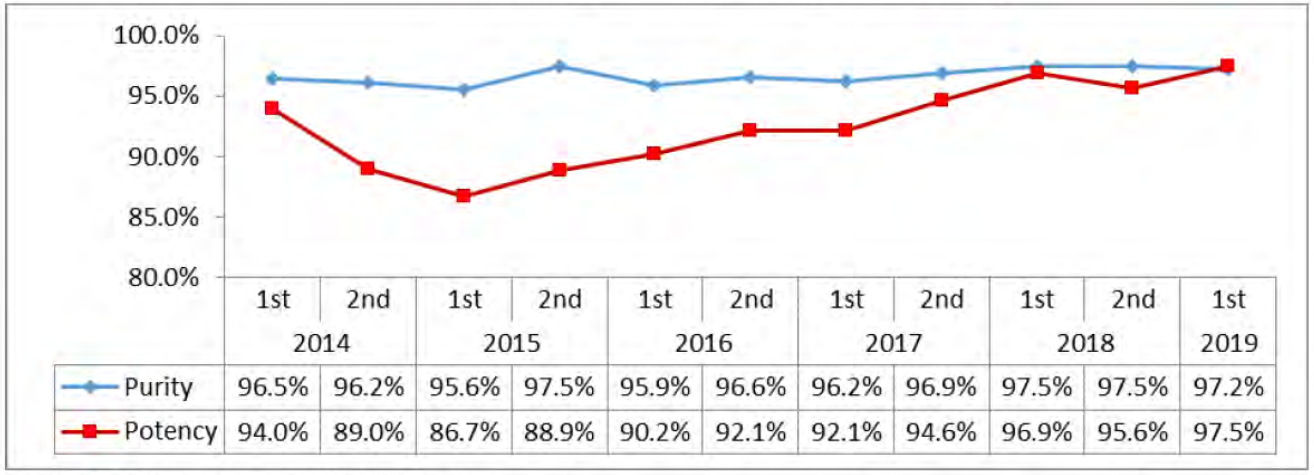
Source: Michigan State Police

Figure 4. Fentanyl Combination Reports to NFLIS-Drug, 2014 – 2019



Source: National Forensic Laboratory Information System-Drug Retrieved July 10, 2020

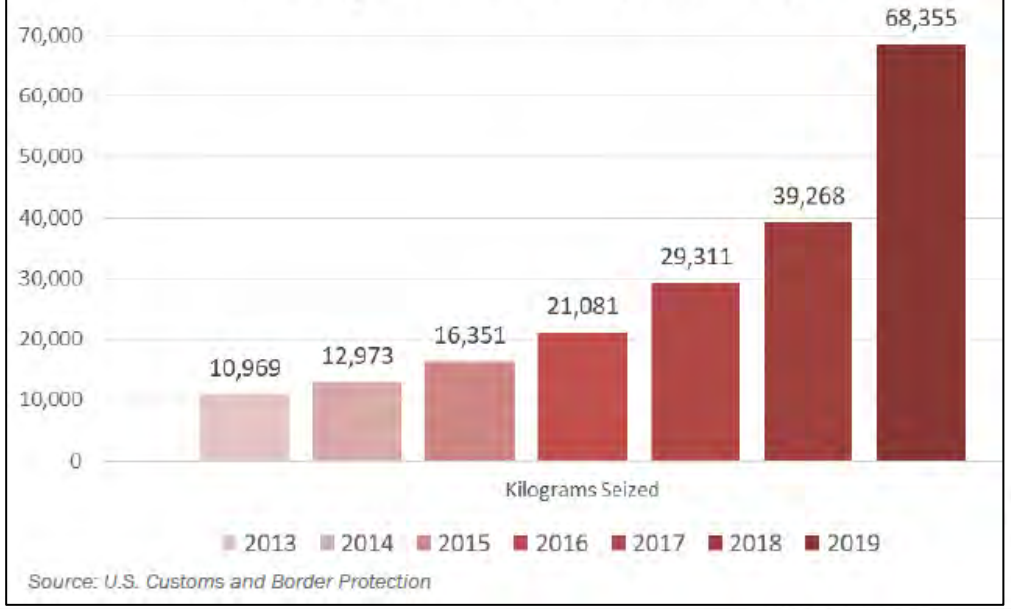
Methamphetamine Purity and Potency



	1st 2014	2nd 2014	1st 2015	2nd 2015	1st 2016	2nd 2016	1st 2017	2nd 2017	1st 2018	2nd 2018	1st 2019
Purity	96.5%	96.2%	95.6%	97.5%	95.9%	96.6%	96.2%	96.9%	97.5%	97.5%	97.2%
Potency	94.0%	89.0%	86.7%	88.9%	90.2%	92.1%	92.1%	94.6%	96.9%	95.6%	97.5%

Source: DEA Methamphetamine Profiling Program

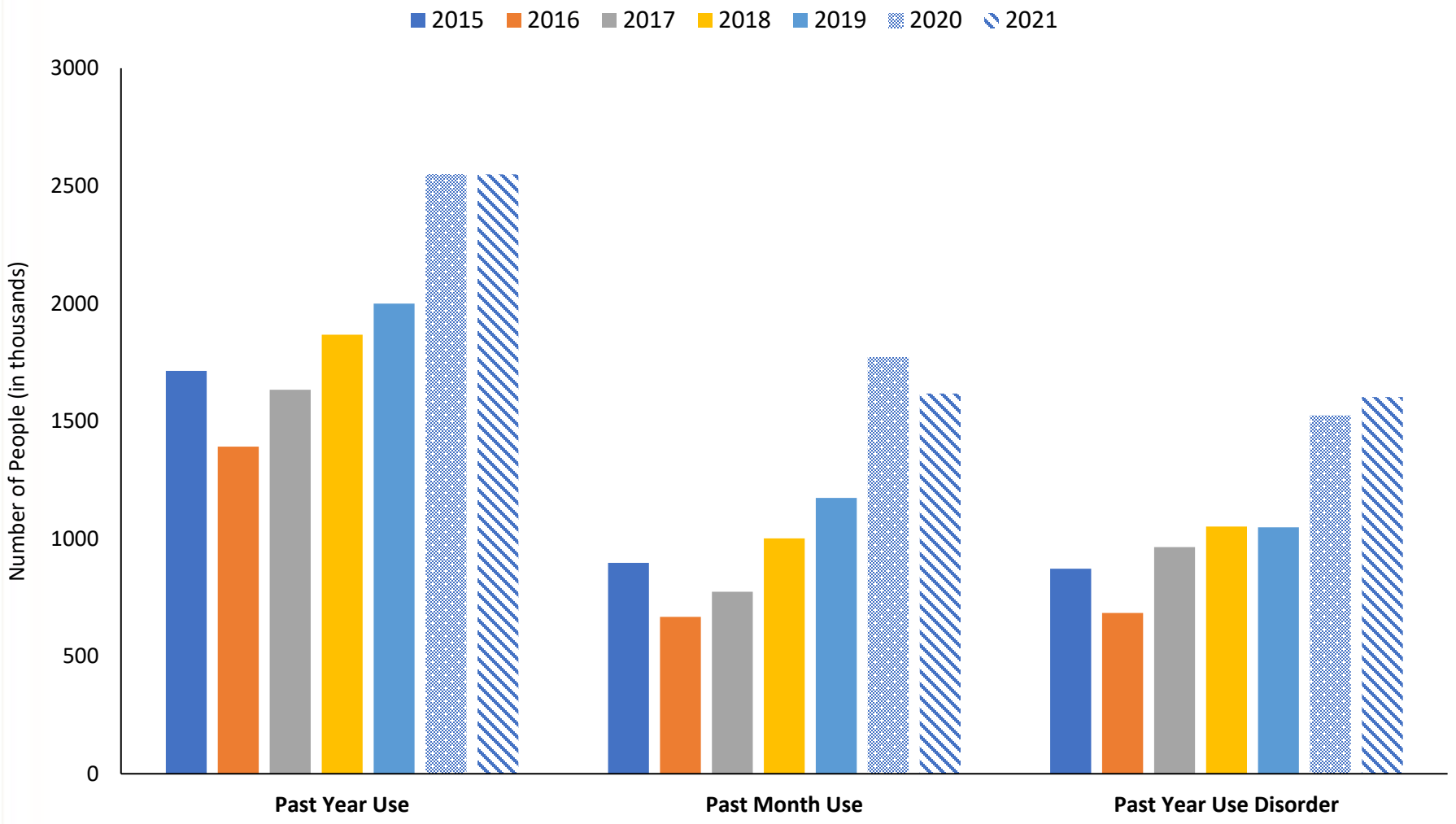
U.S. Customs and Border Protection Southwest Border Methamphetamine Seizures, 2013 – 2019



Source: U.S. Customs and Border Protection

 DEA. 2020 National Drug Threat Assessment; 2021 DEA NFLIS Report

Methamphetamine Trends – Community Data



Due to changes in data collection, directly comparing 2020 and 2021 to prior years is not possible

From 2015 to 2019

- 43% Increase in methamphetamine use
- 66% Increase in frequent use
- 105% Increase in use disorder without injection
- Use disorder or injection more common than use without use disorder or injection each year from 2017-2019
- Increases were seen among most demographic groups

 Source: SAMHSA, National Survey on Drug Use and Health, 2021; Han et al, 2021. JAMA Psychiatry

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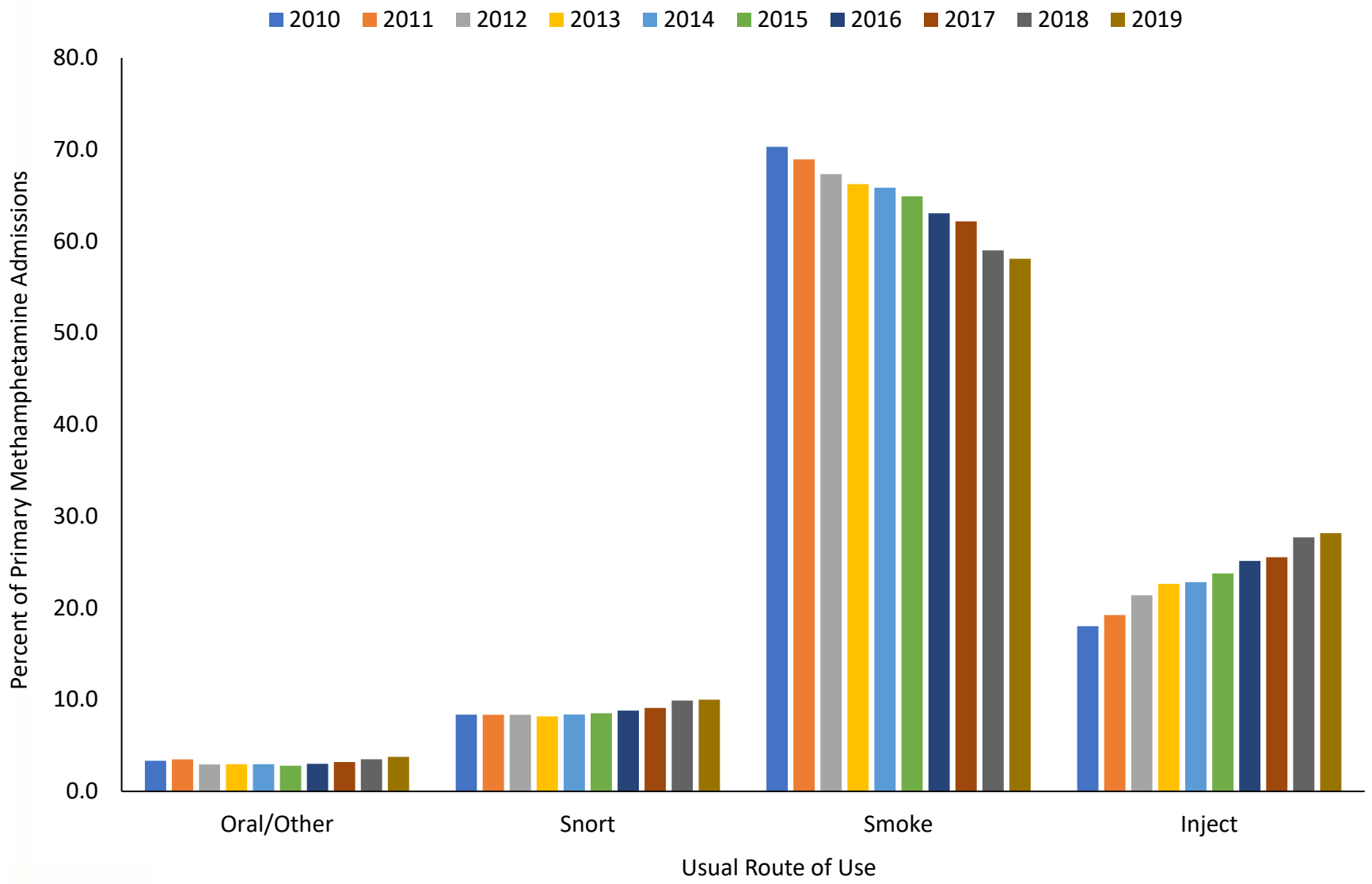
Methamphetamine Trends – Treatment Data



- Methamphetamine treatment admissions increased from 1 in 8 admissions in 2010 to 1 in 4 in 2019
- Increases seen among:
  - Men and women
  - All age groups
  - Most racial/ethnic groups
  - All census regions
- Injection increased ~60%
  - Increases seen among most demographic groups
- In 2019, among those injecting
  - 56.0% reported heroin use
  - 44.8% reported Rx opioid use
  - 43.7% reported benzo use
  - 31.2% reported cocaine use
  - 28.6% reported marijuana use
  - 27.5% reported alcohol use

Source: Jones CM et al – Increases in methamphetamine injection among treatment admissions in the U.S., Addictive Behaviors. 2022.

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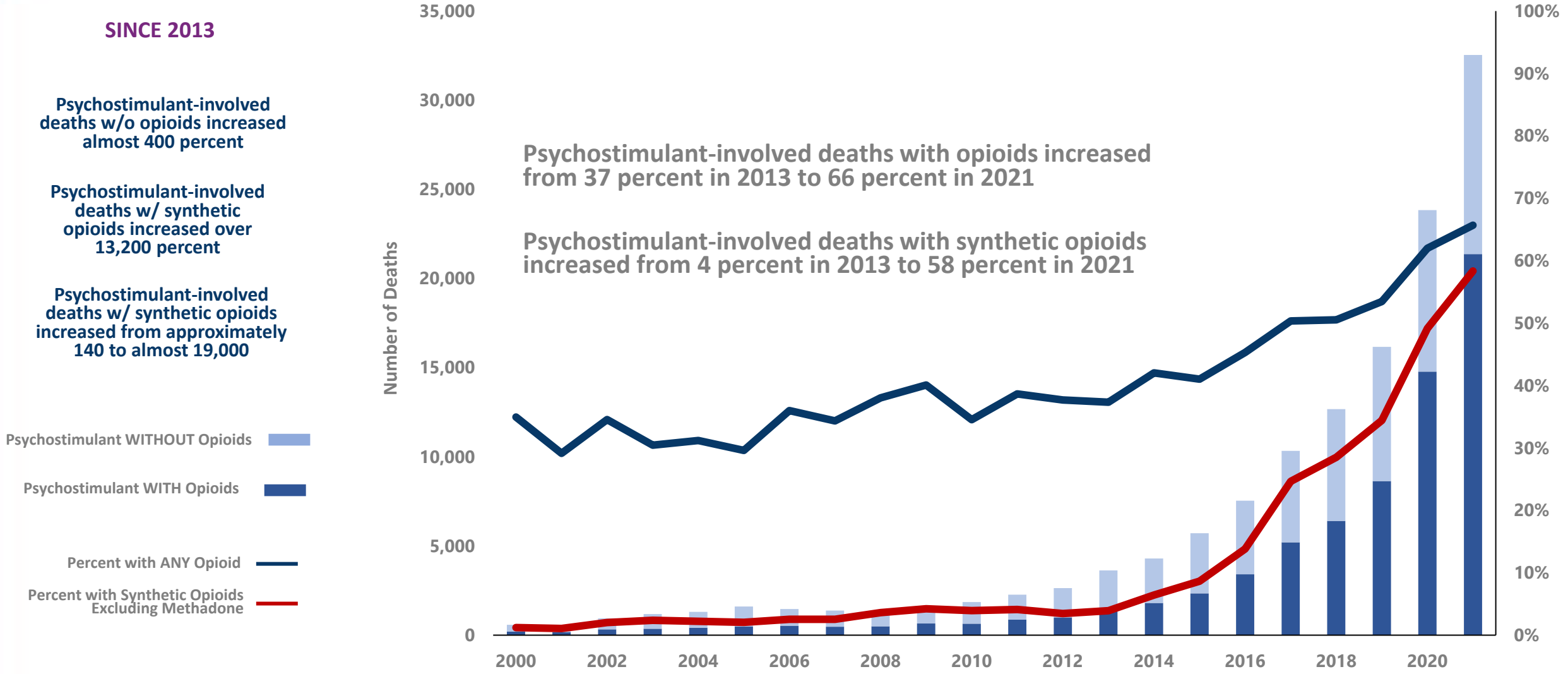
Trends in Psychostimulant-Involved Overdose Deaths

SINCE 2013

Psychostimulant-involved deaths w/o opioids increased almost 400 percent

Psychostimulant-involved deaths w/ synthetic opioids increased over 13,200 percent

Psychostimulant-involved deaths w/ synthetic opioids increased from approximately 140 to almost 19,000



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Youth Substance Use

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Prevalence of High School Student Substance Use Generally Trending in Right Direction

Alcohol and Other Substance Use Before and During the COVID-19 Pandemic Among High School Students — Youth Risk Behavior Survey, United States, 2021

Brooke E. Hoots, PhD[1]; Jingjing Li, PhD, MD[2]; Marci Feldman Hertz, MS[2]; Marissa B. Esser, PhD[3]; Adriana Rico, MPH[2]; Evelyn Y. Zavala, MPH[2]; Christopher M. Jones, PharmD, DrPH[4]

- **Approximately one third** of students (29%) reported current use of alcohol or marijuana or prescription opioid misuse
- Among those reporting current substance use, **approximately 34% used two or more substances** in 2021.

Behavior/Substance	Prevalence 2009 %	2011 %	2013 %	2015 %	2017 %	2019 %	2021 %	Linear change†
Current use¶								
Alcohol	41.8	38.7	34.9	32.8	29.8	29.2	22.7	Decreased 2009–2021
Marijuana	20.8	23.1	23.4	21.7	19.8	21.7	15.8	Decreased 2009–2021
Binge drinking	NA	NA	NA	NA	13.5	13.7	10.5	Decreased 2017–2021
Prescription opioid misuse	NA	NA	NA	NA	NA	7.2	6.0	—
Lifetime use								
Alcohol	68.4	66.7	63.4	60.9	56.5	56.5	47.4	Decreased 2009–2021
Marijuana	36.8	39.9	40.7	38.6	35.6	36.8	27.8	Decreased 2009–2021
Inhalants	11.7	11.4	8.9	7.0	6.2	6.4	8.1	Decreased 2009–2021
Ecstasy	6.7	8.2	6.6	5.0	4.0	3.6	2.9	Decreased 2009–2021
Cocaine	6.4	6.8	5.5	5.2	4.8	3.9	2.5	Decreased 2009–2021
Methamphetamine	4.1	3.8	3.2	3.0	2.5	2.1	1.8	Decreased 2009–2021
Heroin	2.5	2.9	2.2	2.1	1.7	1.8	1.3	Decreased 2009–2021
Injection drug use	2.1	2.3	1.7	1.8	1.5	1.6	1.4	Decreased 2009–2021
Synthetic marijuana	NA	NA	NA	9.2	6.9	7.3	6.5	Decreased 2015–2021
Prescription opioid misuse	NA	NA	NA	NA	14.0	14.3	12.2	Decreased 2017–2021

Source: Alcohol and Other Substance Use Before and During the COVID-19 Pandemic Among High School Students — Youth Risk Behavior Survey, United States, 2021 (nih.gov)

Youth Substance Use = Health Equity Issue

Alcohol and Other Substance Use Before and During the COVID-19 Pandemic Among High School Students — Youth Risk Behavior Survey, United States, 2021

Brooke E. Hoots, PhD[1]; Jingjing Li, PhD, MD[2]; Marci Feldman Hertz, MS[2]; Marissa B. Esser, PhD[3]; Adriana Rico, MPH[2]; Evelyn Y. Zavala, MPH[2]; Christopher M. Jones, PharmD, DrPH[4]

[1]Division of Overdose Prevention, National Center for Injury Prevention and Control, CDC; [2]Division of Adolescent and School Health, National Center for HIV, Viral Hepatitis, STD, and TB Prevention, CDC; [3]Division of Population Health, National Center for Chronic Disease Prevention and Health Promotion, CDC; [4]Office of the Director, National Center for Injury Prevention and Control, CDC

TABLE 3. Prevalence of and changes in prevalence of current and lifetime use of specific substances among high school students, by race and ethnicity — Youth Risk Behavior Survey, United States, 2019 and 2021*

	Race and ethnicity†											
	Black or African American				White				Hispanic or Latino			
Behavior/Substance	2019 %	2021 %	PD (95% CI)	PR (95% CI)	2019 %	2021 %	PD (95% CI)	PR (95% CI)	2019 %	2021 %	PD (95% CI)	PR (95% CI)
Current use§												
Alcohol	16.8	13.2¶	−3.6 (−7.7 to 0.5)	0.8 (0.6 to 1.0)	34.2	25.9	−8.3 (−11.4 to −5.3)**	0.8 (0.7 to 0.8)**	28.4	22.9¶,††	−5.5 (−9.5 to −1.6)**	0.8 (0.7 to 1.0)**
Marijuana	21.7	20.5¶	−1.2 (−5.4 to 2.9)	0.9 (0.8 to 1.2)	22.1	14.8	−7.3 (−10.2 to −4.5)**	0.7 (0.6 to 0.8)**	22.4	16.7††	-5.7 (−9.2 to −2.2)**	0.7 (0.6 to 0.9)**
Binge drinking	6.2	4.1¶	−2.2 (−4.8 to 0.5)	0.7 (0.4 to 1.0)	17.3	13.3	−4.0 (−6.6 to −1.4)**	0.8 (0.7 to 0.9)**	12.4	10.1¶,††	−2.3 (−4.8 to 0.1)	0.8 (0.7 to 1.0)
Prescription opioid misuse	8.7	8.6¶	−0.1 (−4.2 to 3.9)	1.0 (0.6 to 1.6)	5.5	4.6	−1.0 (−2.5 to 0.5)	0.8 (0.6 to 1.1)	9.8	8.3¶	−1.5 (−4.0 to 1.1)	0.9 (0.6 to 1.1)
Lifetime use												
Alcohol	47.2	39.4¶	−7.8 (−13.5 to −2.0)**	0.8 (0.7 to 1.0)**	58.8	50.0	−8.8 (−12.0 to −5.6)**	0.9 (0.8 to 0.9)**	60.4	50.4††	−10.0 (−14.5 to −5.5)**	0.8 (0.8 to 0.9)**
Marijuana	37.5	33.3¶	−4.2 (−10.5 to 2.2)	0.9 (0.7 to 1.1)	36.8	26.2	−10.7 (−14.1 to −7.2)**	0.7 (0.6 to 0.8)**	39.2	31.2¶	−7.9 (−12.5 to −3.4)**	0.8 (0.7 to 0.9)**
Inhalants	7.2	7.0	−0.2 (−2.5 to 2.1)	1.0 (0.7 to 1.3)	6.3	8.3	1.9 (0.3 to 3.6)**	1.3 (1.1 to 1.6)**	6.6	8.2	1.6 (−0.1 to 3.3)	1.2 (1.0 to 1.6)
Ecstasy	3.8	2.7	−1.1 (−2.9 to 0.7)	0.7 (0.4 to 1.2)	2.7	2.9	0.1 (−0.9 to 1.2)	1.1 (0.7 to 1.5)	4.4	2.7	-1.7 (−2.7 to −0.7)**	0.6 (0.5 to 0.8)**
Cocaine	4.0	1.9	−2.1 (−3.8 to −0.4)**	0.5 (0.3 to 0.8)**	2.9	2.4	−0.5 (−1.4 to 0.4)	0.8 (0.6 to 1.1)	5.6	2.9	−2.7 (−4.4 to −1.0)**	0.5 (0.3 to 0.8)**
Methamphetamine	3.8	2.0	−1.9 (−3.7 to 0.0)	0.5 (0.3 to 0.9)**	1.2	1.4	0.2 (−0.3 to 0.7)	1.2 (0.8 to 1.7)	2.7	2.3¶	−0.4 (−1.6 to 0.8)	0.9 (0.5 to 1.3)
Heroin	3.4	1.7	−1.7 (−3.4 to −0.1)**	0.5 (0.3 to 0.9)**	0.9	1.0	0.1 (−0.3 to 0.5)	1.2 (0.8 to 1.8)	2.4	1.6¶	−0.9 (−2.1 to 0.4)	0.7 (0.4 to 1.1)
Injection drug use	2.9	1.9	−0.9 (−3.0 to 1.1)	0.7 (0.3 to 1.5)	0.8	1.1	0.3 (−0.3 to 0.8)	1.4 (0.8 to 2.4)	2.5	1.8	−0.7 (−1.8 to 0.3)	0.7 (0.4 to 1.2)
Synthetic marijuana	5.7	6.8	1.1 (−1.2 to 3.3)	1.2 (0.8 to 1.7)	6.7	6.5	−0.2 (−1.6 to 1.3)	1.0 (0.8 to 1.2)	9.8	6.8	−3.1 (−4.9 to −1.3)**	0.7 (0.6 to 0.9)**
Prescription opioid misuse	15.3	13.6	−1.7 (−5.4 to 1.9)	0.9 (0.7 to 1.1)	12.7	11.2	−1.4 (−3.7 to 0.8)	0.9 (0.7 to 1.1)	16.0	13.8	−2.2 (−5.5 to 1.2)	0.9 (0.7 to 1.1)

TABLE 2. Prevalence of and changes in prevalence of current and lifetime use of specific substances among high school students, by sex — Youth Risk Behavior Survey, United States, 2019 and 2021*

	Sex							
	Male				Female			
Behavior/Substance	2019 %	2021 %	PD (95% CI)	PR (95% CI)	2019 %	2021 %	PD (95% CI)	PR (95% CI)
Current use†								
Alcohol	26.4	18.8	−7.7 (−0.3 to −5.1)§	0.7 (0.6 to 0.8)§	31.9	26.8¶	−5.1 (−8.3 to −1.9)§	0.8 (0.8 to 0.9)§
Marijuana	22.5	13.6	−8.9 (−1.3 to −6.4)§	0.6 (0.5 to 0.7)§	20.8	17.8¶	−3.0 (−6.0 to 0.0)	0.9 (0.7 to 1.0)
Binge drinking	12.7	9.0	−3.7 (−5.6 to −1.7)§	0.7 (0.6 to 0.8)§	14.6	12.2¶	−2.5 (−5.2 to 0.2)	0.8 (0.7 to 1.0)
Prescription opioid misuse	6.1	4.0	−2.1 (−3.5 to −0.8)§	0.7 (0.5 to 0.9)§	8.3	8.0¶	−0.3 (−2.2 to 1.6)	1.0 (0.8 to 1.2)
Lifetime use								
Alcohol	53.1	42.0	−11.1 (−14.2 to −8.0)§	0.8 (0.7 to 0.8)§	60.0	53.2¶	−6.9 (−10.2 to −3.5)§	0.9 (0.8 to 0.9)§
Marijuana	37.0	24.8	−12.3 (−15.9 to −8.7)§	0.7 (0.6 to 0.8)§	36.5	30.9¶	−5.6 (−9.3 to −1.9)§	0.9 (0.8 to 1.0)§
Inhalants	5.7	6.8	1.1 (−0.1 to 2.3)	1.2 (1.0 to 1.5)	6.9	9.4¶	2.5 (1.1 to 3.9)§	1.4 (1.1 to 1.6)§
Ecstasy	4.6	2.9	−1.7 (−2.8 to −0.7)§	0.6 (0.5 to 0.8)§	2.4	2.7	0.4 (−0.5 to 1.3)	1.2 (0.8 to 1.7)
Cocaine	4.9	2.6	−2.3 (−3.3 to −1.4)§	0.5 (0.4 to 0.7)§	2.7	2.2	−0.5 (−1.6 to 0.5)	0.8 (0.5 to 1.2)
Methamphetamine	2.7	1.9	−0.8 (−1.6 to 0.0)	0.7 (0.5 to 1.0)	1.5	1.4	−0.1 (−0.8 to 0.6)	1.0 (0.6 to 1.5)
Heroin	2.3	1.6	−0.7 (−1.5 to 0.1)	0.7 (0.5 to 1.0)	1.0	0.8¶	−0.3 (−0.9 to 0.4)	0.8 (0.4 to 1.5)
Injection drug use	2.1	1.7	−0.4 (−1.2 to 0.4)	0.8 (0.5 to 1.2)	1.1	0.9¶	−0.2 (−0.9 to 0.6)	0.9 (0.4 to 1.8)
Synthetic marijuana	7.2	5.8	−1.4 (−2.9 to 0.1)	0.8 (0.6 to 1.0)	7.4	7.1	−0.3 (−1.9 to 1.3)	1.0 (0.8 to 1.2)
Prescription opioid misuse	12.4	9.5	−2.9 (−4.7 to −1.2)§	0.8 (0.7 to 0.9)§	16.1	14.8¶	−1.4 (−3.9 to 1.1)	0.9 (0.8 to 1.1)

TABLE 4. Prevalence of current and lifetime use of specific substances among high school students, by sexual identity — Youth Risk Behavior Survey, United States, 2021*

Behavior/Substance	Heterosexual %	Lesbian, gay, or bisexual %	Questioning or other %
Current use†			
Alcohol	21.6	29.3§	20.9¶
Marijuana	14.0	25.6§	16.5§,¶
Binge drinking	10.3	13.6§	7.6§,¶
Prescription opioid misuse	4.3	11.7§	10.3§
Lifetime use			
Alcohol	45.8	58.0§	46.2¶
Marijuana	25.8	41.2§	27.5¶
Inhalants	6.0	15.1§	13.4§
Ecstasy	2.1	6.0§	3.9§,¶
Cocaine	1.8	4.4§	3.1§
Methamphetamine	1.1	3.4§	3.0§
Heroin	0.8	1.9§	2.4§
Injection drug use	1.0	1.9§	2.7§
Synthetic marijuana	5.9	9.7§	6.1¶
Prescription opioid misuse	9.4	21.5§	18.6§

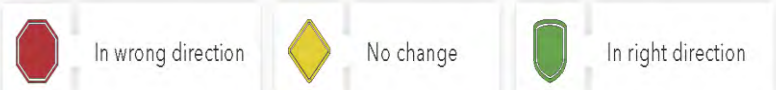
Source: Alcohol and Other Substance Use Before and During the COVID-19 Pandemic Among High School Students — Youth Risk Behavior Survey, United States, 2021 (nih.gov)

Nearly Every Indicator of Youth Mental Health is Getting Worse

IN 2021

- Nearly 60% of female students and nearly 70% of LGBQ+ students experienced persistent feelings of sadness or hopelessness.
- 10% of female students and more than 20% of LGBQ+ students attempted suicide.
- Hispanic and multiracial students were more likely than Asian, Black, and White students to have persistent feelings of sadness or hopelessness.

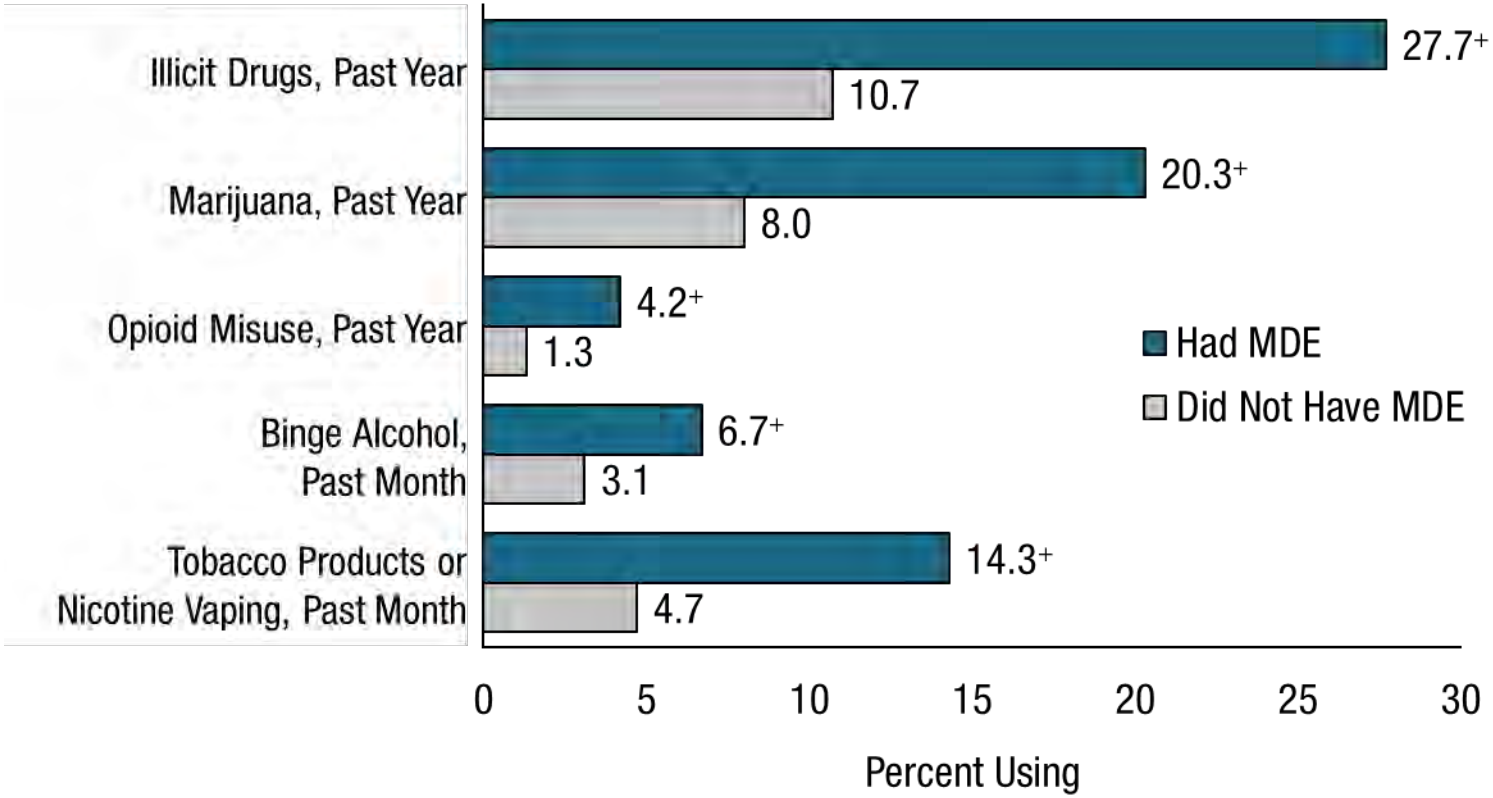
The Percentage of High School Students Who:*	2011 Total	2013 Total	2015 Total	2017 Total	2019 Total	2021 Total	Trend
Experienced persistent feelings of sadness or hopelessness	28	30	30	31	37	42	
Experienced poor mental health†	–	–	–	–	–	29	–
Seriously considered attempting suicide	16	17	18	17	19	22	
Made a suicide plan	13	14	15	14	16	18	
Attempted suicide	8	8	9	7	9	10	
Were injured in a suicide attempt that had to be treated by a doctor or nurse	2	3	3	2	3	3	



SOURCES: YRBS Trends Report

Connection Between Youth Mental Health and Substance Use

Substance use among people 12-17 years old is greater if you had a Major Depressive Episode (MDE)



\+ Difference between this estimate and the estimate for youths without MDE is statistically significant at the .05 level.
Note: Youth respondents with unknown MDE data were excluded.

SOURCE: National Survey on Drug Use and Health (NSDUH) – December 2022

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The Substance Use Landscape Is Changing

Illicitly Manufactured Fentanyl–Involved Overdose Deaths with Detected Xylazine — United States, January 2019–June 2022

Mbabazi Kariisa, PhD[1]; Julie O'Donnell, PhD[1]; Sagar Kumar, MPH[1]; Christine L. Mattson, PhD[1]; Bruce A. Goldberger, PhD[2]

Trends in Nonfatal and Fatal Overdoses Involving Benzodiazepines — 38 States and the District of Columbia, 2019–2020

Stephen Liu, PhD[1]; Julie O'Donnell, PhD[1]; R. Matt Gladden, PhD[1]; Londell McGlone, MPH[1]; Farnaz Chowdhury[2]

Illicit Benzodiazepines Detected in Patients Evaluated in Emergency Departments for Suspected Opioid Overdose — Four States, October 6, 2020–March 9, 2021

Kim Aldy, DO[1,2]; Desiree Mustaquim, PhD[3]; Sharan Campleman, PhD[1]; Alison Meyn, MPH[1]; Stephanie Abston[1]; Alex Krotulski, PhD[4]; Barry Logan, PhD[4,5]; Matthew R. Gladden, PhD[3]; Adrienne Hughes, MD[6]; Alexandra Amaducci, DO[7]; Joshua Shulman, MD[8]; Evan Schwarz, MD[9]; Paul Wax, MD[1,2]; Jeffrey Brent, MD, PhD[10]; Alex Manini, MD[11]; the Toxicology Investigators Consortium Fentalog Study Group

RESEARCH Open Access

Signals of increasing co-use of stimulants and opioids from online drug forum data

Abeed Sarker[1*], Mohammed Ali Al-Garadi[1], Yao Ge[1], Nisha Nataraj[2], Christopher M. Jones[2] and Steven A. Sumner[2]

Increases in Availability of Cannabis Products Containing Delta-8 THC and Reported Cases of Adverse Events

Print

HAN HEALTH ALERT NETWORK

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Substance Use Has Never Been Risker – Across the Spectrum

- The risk of drug overdose is elevated with any use of illicitly manufactured fentanyl, given its potency, lethality, and the variability in the illicit supply.
- Historically, risk for a non-fatal or fatal overdose grew as frequency of use grew.
- In a toxic and unpredictable drug environment facilitated by the continued proliferation of fake pills, the risk of death is elevated across the continuum – from those initiating to those with long-standing use disorders.
- The increases in deaths among youth and young adults as well as the increase in polydrug deaths involving fentanyl in all age groups are two markers of this elevated risk.

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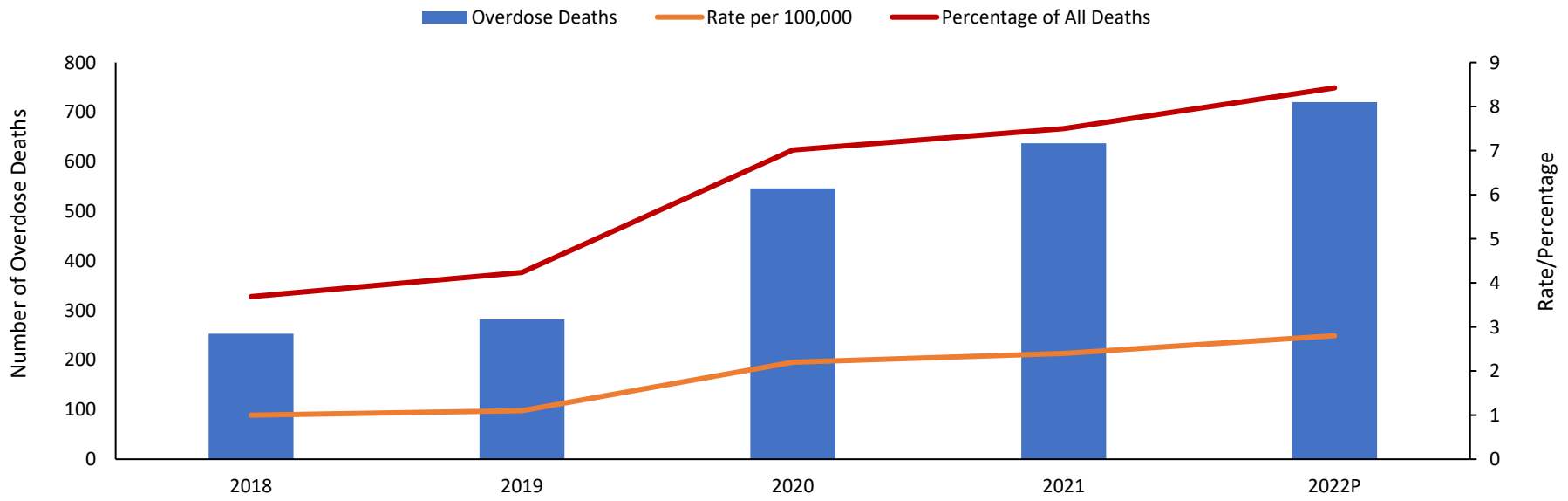
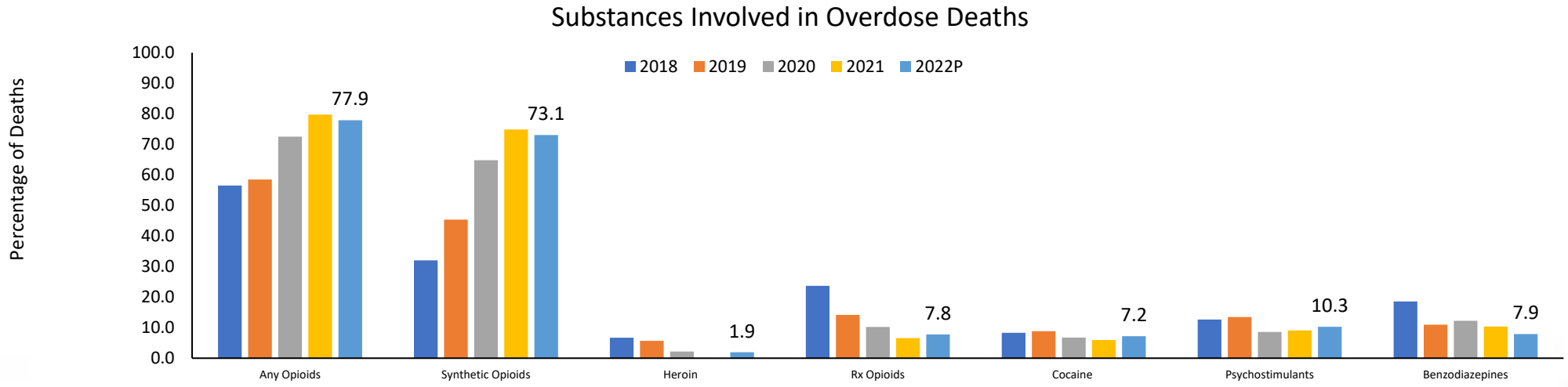
Overdose Deaths Among 12-17 Year Olds Increasing In Recent Years



185% increase in OD deaths between 2018 and 2022



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Expanding Prevention Efforts: Where do we go from here?

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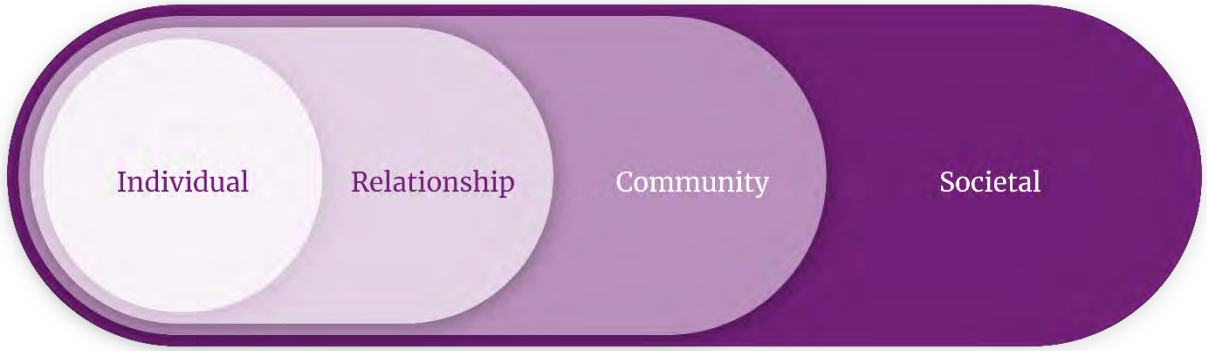
Expanding How We Think About Risk & Protective Factors

Ellis, W., Dietz, W. (2017) A New Framework for Addressing Adverse Childhood and Community Experiences: The Building Community Resilience (BCR) Model. Academic Pediatrics. 17 (2017) pp. S86-S93. DOI information: 10.1016/j.acap.2016.12.011



SAMHSA
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 Source: Healthy People 2030; Ellis et al; CDC DVP.

Substance Use Risk Factors – Socioecological Model

Individual

- Genetic factors
- Initiating substance use early
- Low risk perception of use
- Peers who use substances
- Perception that use of substances among peers is high
- Emotional distress or aggressiveness that starts early and is persistent
- Mental health challenges

Relationship

- Substance use in the family and home
- Parental mental health challenges
- Family conflict, abuse, or neglect
- Parents who favorably view or approve of substance use
- Lack of family connectedness

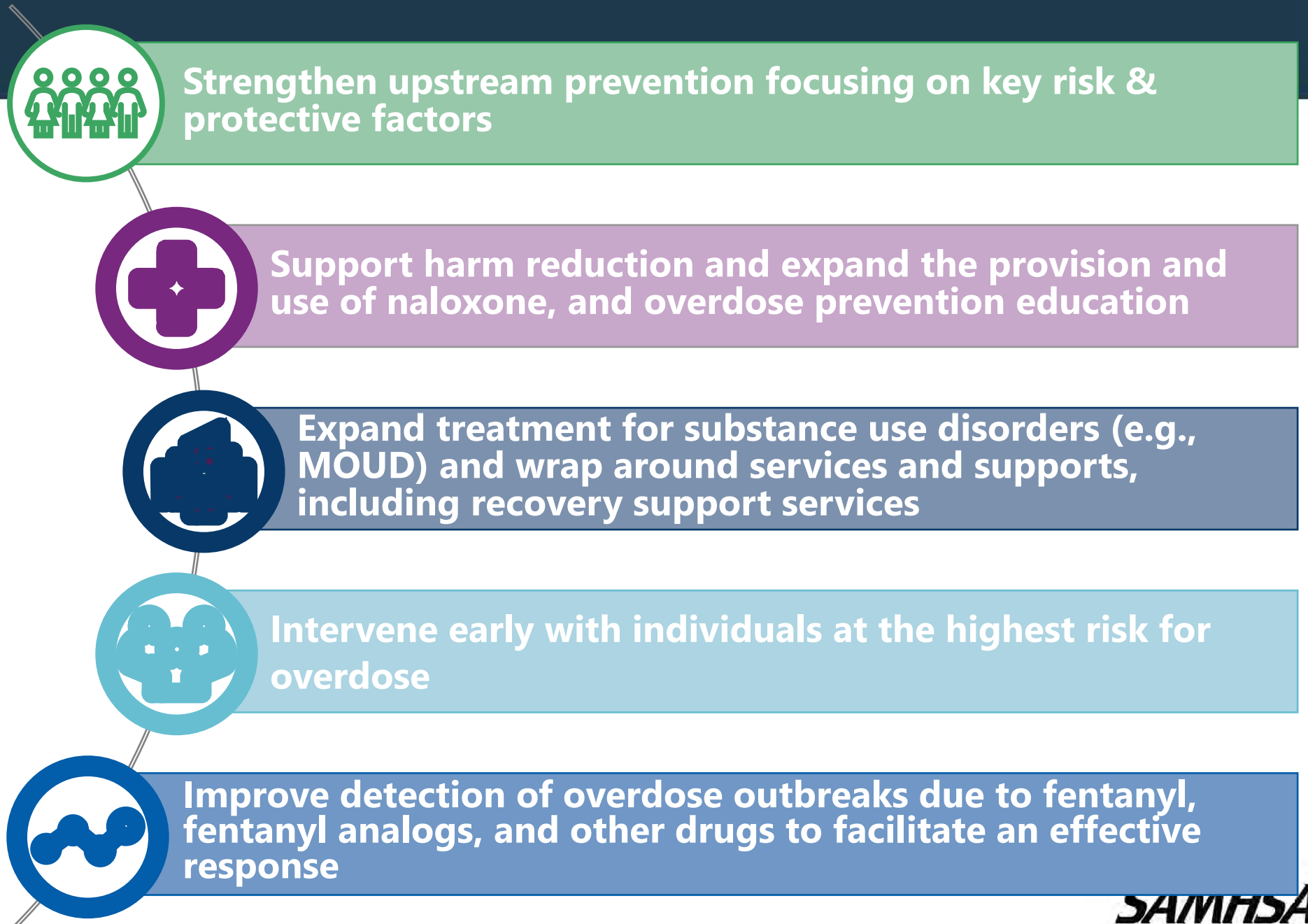
Community

- Lack of community connectedness and supports
- Community norms favorable toward alcohol and drugs
- Violence in schools or community
- Availability and costs of drugs and alcohol
- Poverty

Societal

- Lack of economic and educational opportunities
- Inadequate housing
- Disinvestment
- Discrimination
- Social norms
- Laws and policy environment

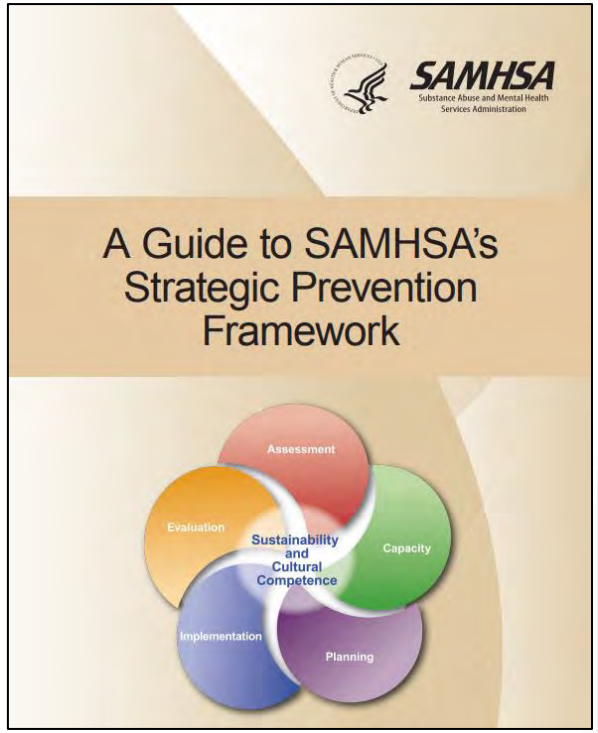
Where do we go from here?

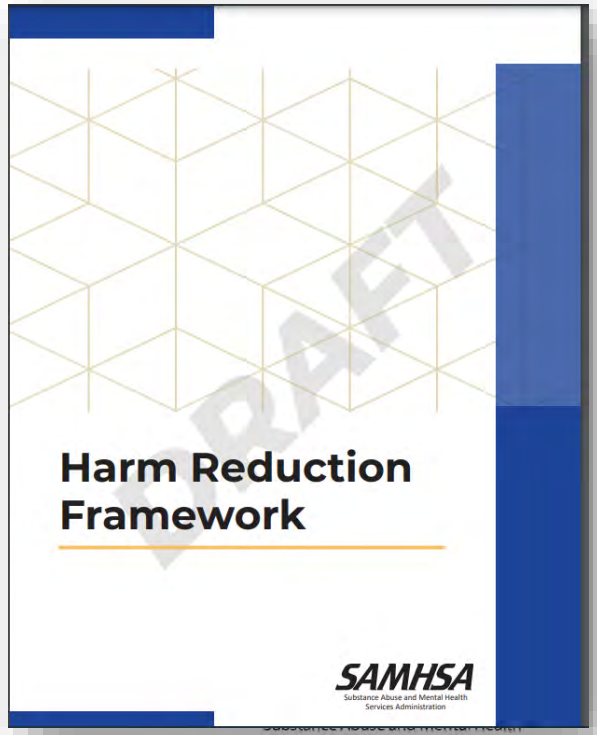


SOURCE: CDC. Health Alert Network (HAN) No. 438. 2020.

A Comprehensive Path Forward to Meet the Moment

- Data-driven incorporating the changing substance landscape
- Equity lens
  - Centered in the voices and experiences of the community(ies) being served
- Think comprehensively
  - Individual
  - Relationship
  - Community
  - Societal
- Evidence-based practice and practice-based evidence
- Broaden tent of partners
- Check assumptions and potential unintended consequences
- Evaluating, innovating, and continuing to build the evidence base are critical





Questions?

The Leading Provider of In-Home Addiction Treatment

AWARE
RECOVERY CARE

Brian Holzer MD, MBA | CEO

Company snapshot | 2023

At home with our clients since 2011

Our Mission

We treat addiction differently by bringing collaborative care with lived experience to the home, empowering individuals and their loved ones to thrive and make sustainable recovery possible

Our Vision

To relentlessly redefine addiction treatment in the home for truly lasting recovery

Our Values

Compassion, Collaboration, Connection, Commitment, Curiosity

1

The In-Home Addiction Treatment Leader.

The leading fully in-home addiction treatment provider of scale, pioneering a novel approach to substance use disorder (SUD) treatment

2

Unique Medical, Behavioral and Peer Model.

High touch, end-to-end program delivering fully integrated, longitudinal care model that connects levels of care across the spectrum of recovery services

3

Unparalleled Outcomes.

Clinically effective care model with market leading engagement rates, substantial utilization reductions and PMPM total-care savings validated by third-party claims data

4

Differentiated Payor Arrangements.

Deep relationships with national and large regional payors anchored by bundled payment contracts structured to transition to value- and risk-based models

5

Strong Growth with Near-Term Path to Profitability.

Highly attractive unit economics with numerous pathways for robust, sustained and profitable growth

6

Outstanding Leadership.

Experienced management team in place that possess profound experience across behavioral, payors, providers, home-care and broader healthcare services landscapes

SAMHSA
Substance Abuse and Mental Health Services Administration

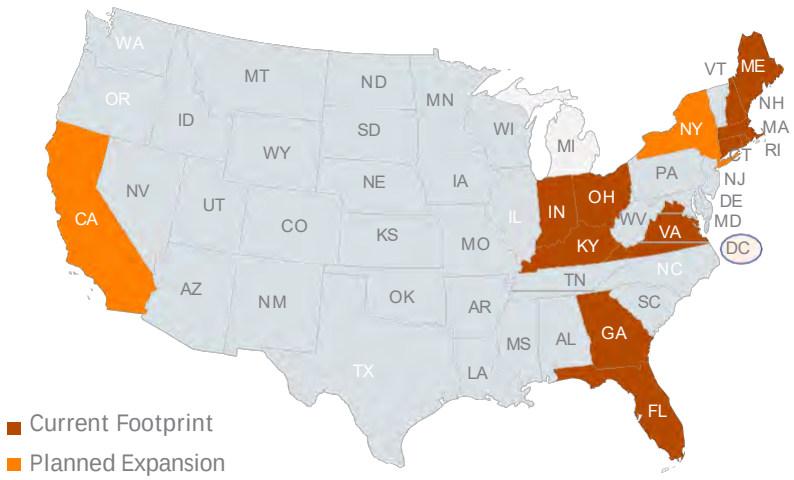
Only scaled provider of in-home addiction treatment services

Differentiated In-Home Care Model

- 52-week, high-touch, longitudinal model that transforms the home into a treatment center
- Minimizes disruptions to work / school / childcare; eliminates extended leaves / absences, reduces employee turnover and increases productivity
- Treats addiction as a chronic disease through an ASAM-based program; customized Medical, Behavioral and Peer Support care model
- Uniquely broad inclusion criteria across individuals with primary SUD, including those often not a fit for residential or community settings
- 24 / 7 admissions with bespoke, white glove client engagement model

Note: ASAM refers to the American Society of American Medicine

Geographic Roadmap

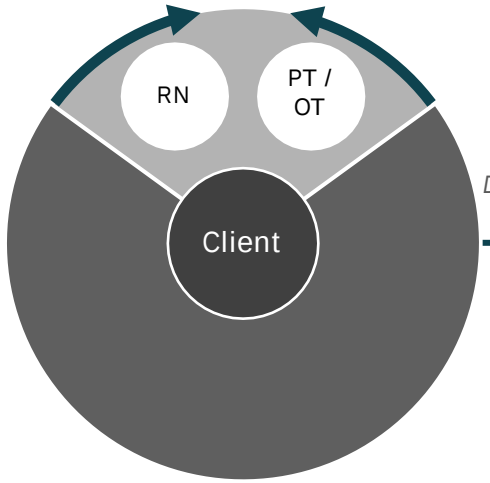


Aware Recovery Care - By the Numbers

~7,500 Total Admissions Since Jan-20	~1,800 Current Active Census	
11 Current States	16 Payor Contracts	~850 Employees
~70% Rev CAGR ('20-'22)		

Care model is distinct from traditional home health

Traditional Approach in Home Health



Disconnect

Primary Care Providers

Outpatient Providers

Community Pharmacy / Rx

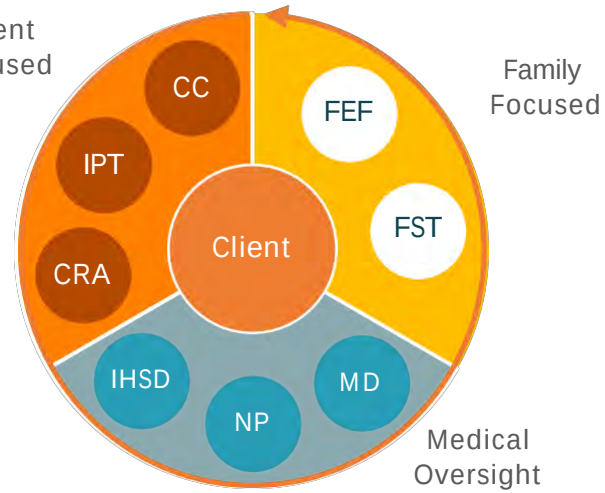
Payors

Home Health Model

- Narrow scope of care providers; can lead to disintegrated care
- Episodic and short-term; limited by reimbursement landscape
- Impact measured by short-term treatment for complex, long-term medical issues
- Emphasis on reducing visits can overshadow need to deliver holistic treatment

Connected Staff Enable Longitudinal Care

Aware's model coordinates with client's broader care team



AWARE

- Broad scope of team skills ensures continuous delivery of whole-person care
- Routine touchpoints over 52-weeks focused on proactive behavior change
- Impact measured by engagement in long-term recovery support systems
- True alignment across stakeholders, supported by validated payor claims that demonstrate quantitative, long-term and sustained cost and quality outcomes

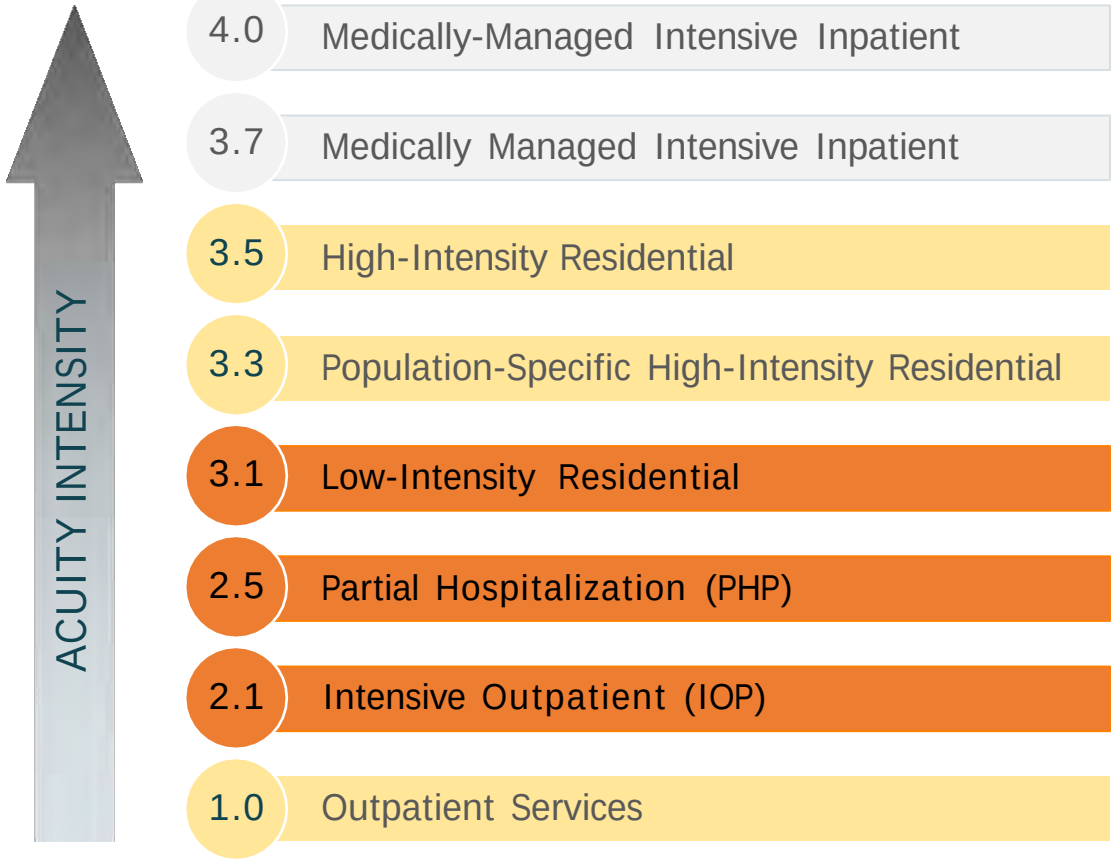
Care Legend

CRA = Certified Recovery Advisor
CC = Care Coordinators
FEF = Family Education Facilitators
IHSD = Integrated Health Service Director
IPT = Psychotherapist
NP = Nurse Practitioner
FST = Family Systems Therapist
MD = Medical Director

SAMHSA Substance Abuse and Mental Health Services Administration

Current client focus on 2.1-3.1 ASAM levels

American Society of Addiction Medicine (ASAM) Levels of Care



Aware's Client Focus

- Most clients enter Aware's 52-week program between ASAM 2.1 and 3.1 levels (IOP, PHP and low-intensity residential)
- Aware's intake process identifies clients that should (1) enroll directly into the flagship 52-week program or (2) first require detox treatment prior to enrollment, and initiate a ~1 to 2 week In-Home Medically Managed (IHMM) program for detox, prior to initiating into the 52-week program
- Aware seeks to discharge clients once they reach the 1.0 level, at program completion
- There are opportunities to build internal capabilities to serve adjacent levels of care, pending clinical delivery capacity

Current Service Footprint

Longer-Term Expansion Opportunity

Out of Scope

We're home

PHASE 1: Weeks 1 to 6

Intense

Clinical Intervention

- Biopsychosocial assessments
- In-Home detox (if needed)
- In-home clinical engagement with virtual support
- Primary Care Physician (PCP) collaboration

- "Residential without walls" -

PHASE 2: Weeks 7 to 12

Moderate

Clinical Intervention

- Prescribes / administers bridge, short and long-term medication-assisted treatment (MAT) for AUD and OUD
- In-home clinical engagement with virtual support
- Family therapy and wellness program
- Ongoing PCP collaboration

- "PHP/IOP without walls" -

PHASE 3: Months 4 to 6

Maintenance

Ongoing Support

- Psychotherapy, family and behavior stabilization
- In-home clinical engagement with virtual support
- Monitoring for relapse
- Ongoing PCP collaboration

- "IOP/OP without walls" -

PHASE 4: Months 7 to 12

Community Integration

Enhancement of Life Skills

- Community support
  - Psychotherapy providers
  - NA/AA, sponsor, etc.
  - MAT prescribers
- Vocational / educational re-engagement
- Monitoring for relapse
- Ongoing PCP collaboration

- "OP without walls" -

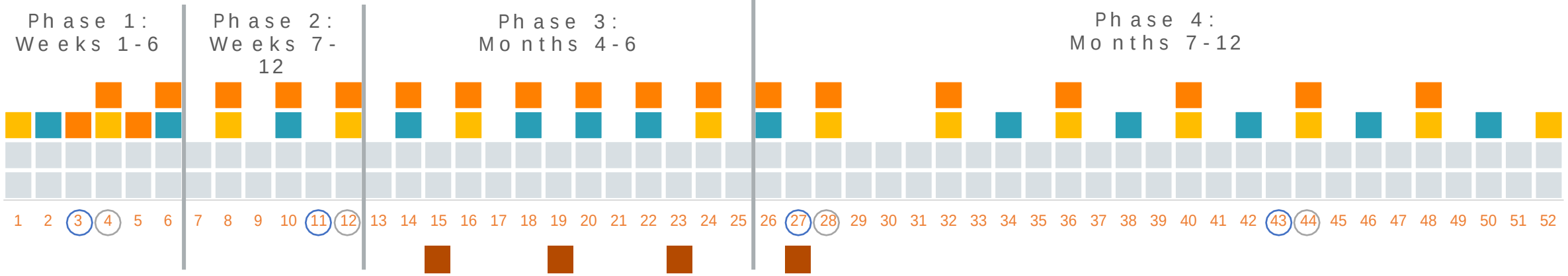
Note: PHP is defined as partial hospitalization program; IOP is defined as intensive outpatient program; OP is defined as outpatient program

Coordinated treatment through standardized four-phase cadence

~150 Total Visits
Over 52-week Program

2 to 4 visits weekly, typically 1 to 2 hours of client time per visit

Reduced visit count and tailored to client needs



	Client Focused			Family Focused	
Staff	Certified Recovery Advisor (CRA)	Care Coordinator (CC)	Psychotherapist (IPT)	Family Education Facilitators (FEF)	Family Systems Therapy (FST)
Visits	~100	~15	~20	~10	<5

Care Collaboration Meeting

Family Meeting

Medical Oversight Team Provides Incremental Care as Needed for Selected, Higher Needs Clients

SAMHSA
Substance Abuse and Mental Health Services Administration

Differentiated high-touch medical, behavioral & peer model

AWARE RECOVERY CARE

High-touch ✓
Longitudinal ✓
Fully Integrated ✓
Proven & Sustained Outcomes ✓
Broad Inclusion ✓
Client & Family Engagement ✓

Peer Group Lacks **Aware's** High-touch Longitudinal Model

	Selected Peers	Commentary
Residential	ACADIA HEALTHCARE; ARK Behavioral Health; PINNACLE TREATMENT CENTERS; SUMMIT BHC; Recovery Centers of America	• Mature universe largely sustained by inertia from established "traditional treatment" options • Highly disruptive to family, work, school commitments • Treats high acuity target population but for limited duration often without follow-up
Outpatient	BayMark HEALTH SERVICES; BHG behavioral health group; crossroads; Kolmac OUTPATIENT RECOVERY; NEW SEASON	• Wide array of outpatient providers delivering services with little standardization or integration over a limited duration • Relative to home-based models, limited clinical capabilities and client flexibility • Some individuals do not qualify for these settings
Virtual	Affect THERAPEUTICS; Bicycle Health; Boulder; Ophelia; MAP Health Management; Workit Health	• Over 15k apps for telehealth, virtual MAT clinics and digital therapeutics • Significant variability among models – many simply e-prescribe • Virtual touch-points result in reach and frequency; but low-touch human engagement limits impact for clients and family

SAMHSA Substance Abuse and Mental Health Services Administration

We know home: payor contracting framework

Value based - bundled payments

- ✓ Structured monthly case rate with a transition after first year to value-based contract
- ✓ Higher case rate in first 3 months (compared to last 9 months) reflects highest intensity of services provided

Sharing risk/reward

- ✓ If a member doesn't stay post 14 days – no billing for services
- ✓ Program cost spread over 12-month period – monthly billing
- ✓ Upside reward is shared savings in year 2

In network payors

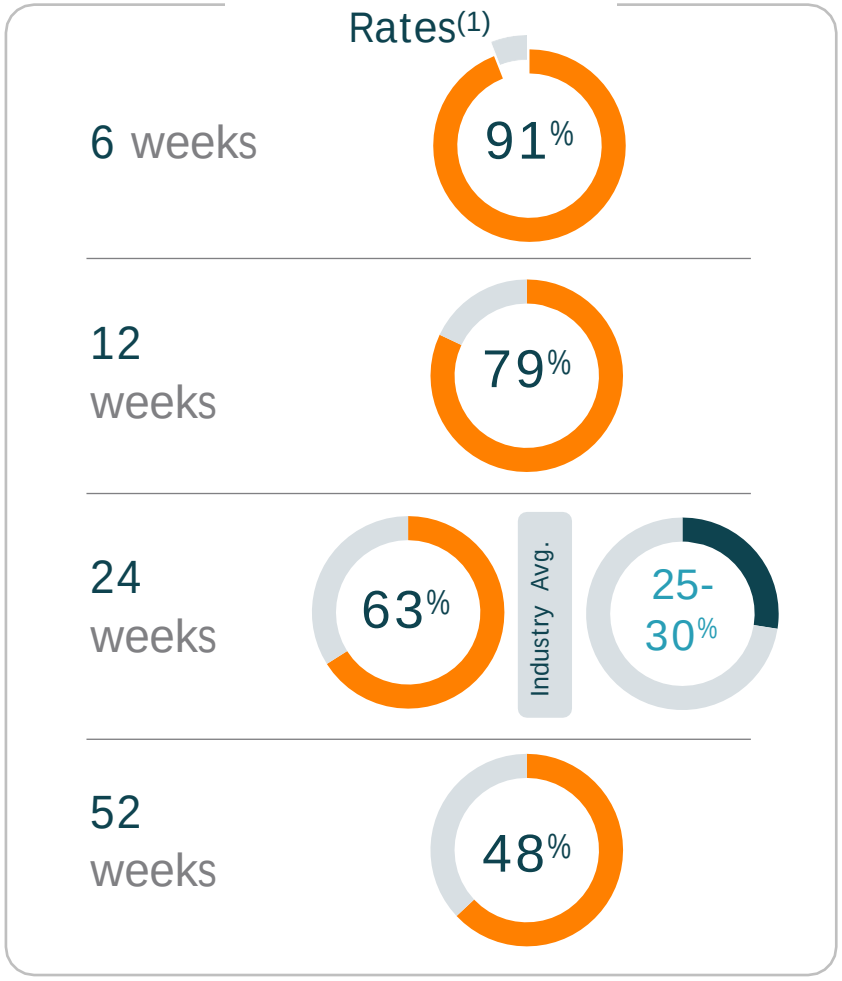
16 Value Based Agreement Contracts | 1 National Contracts Pending

Anthem BlueCross BlueShield · beacon health options · BlueCross BlueShield Federal Employee Program · Blue Cross Blue Shield of Rhode Island · Florida Blue · MaineHealth · BlueCross BlueShield Massachusetts · TUFTS Health Plan · UniCare · VA U.S. Department of Veterans Affairs · aetna

SAMHSA Substance Abuse and Mental Health Services Administration

Unparalleled outcomes from longitudinal care model

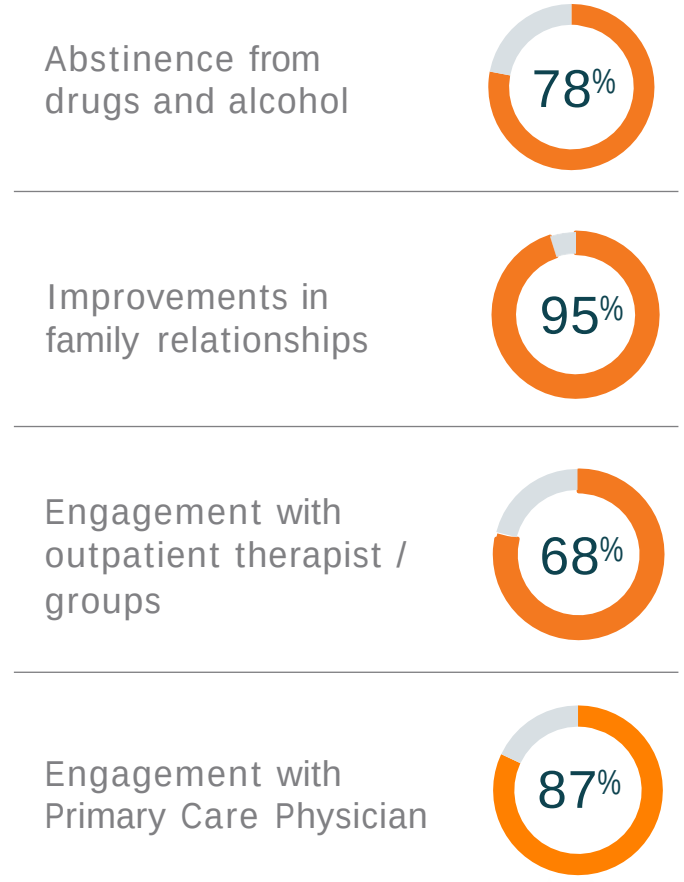
Retention Rates(1)



Average length of stay:

250 DAYS(1)

Post-Treatment Outcomes(2)

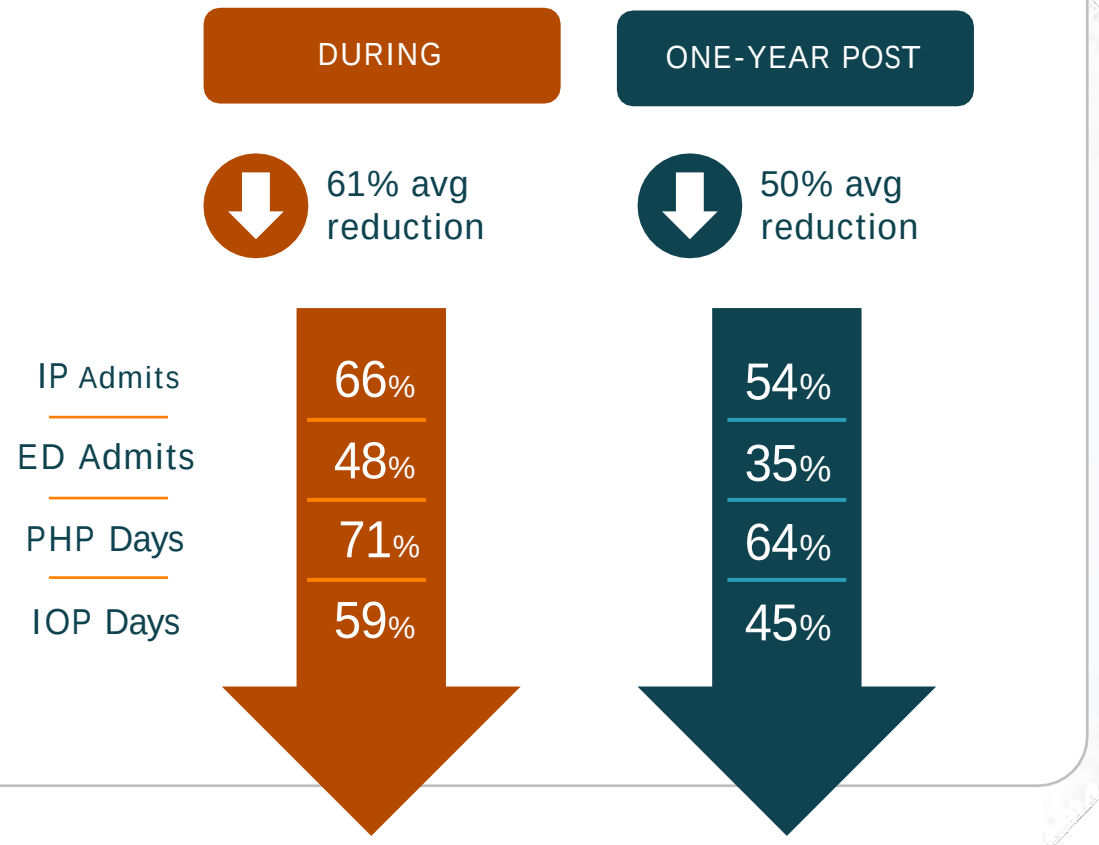


1) Internal data through Q4 '22; excludes clients not able to complete program due to financial issues, loss of insurance, death, incarceration and moving out of the state as these discharges are unavoidable. Retention rates without exclusions represent 91% after 6 weeks, 78% after 12 weeks, 59% after 24 weeks and 41% after 52 weeks; ALOS without exclusions is 236 days.
2) Client self-reported data 6 months post-treatment; based on internal '17-'19 study

SAMHSA Substance Abuse and Mental Health Services Administration

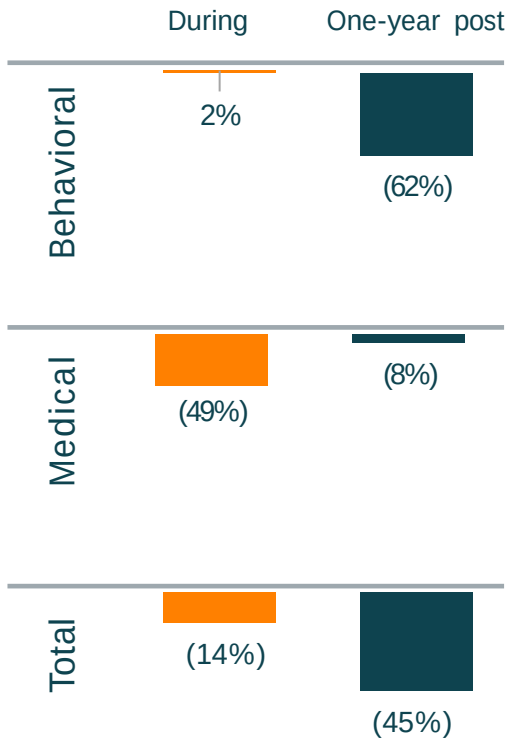
Unparalleled outcomes from third-party commercial payor claims

Utilization Reductions of Higher Levels of Care



Elevance Health

PMPM Total Care Cost Reductions



Note: Data source from 3rd-party claims data from Elevance (CT, NH, ME); IP is defined as inpatient program; ED is defined as emergency department.
Represents 3rd-party claims data (including spend on Aware's program) tracked by Elevance for members thru 2021; n=385.

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Proven outcomes in managing diverse populations

Utilization of Higher Levels of Care

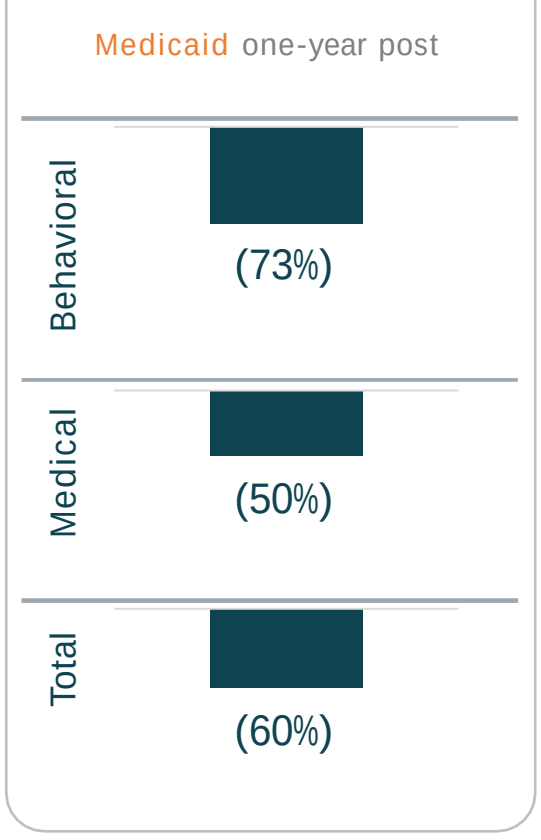
Commercial - reductions one year post treatment

- 73% reduction of IP admissions
- 59% reduction of ER admissions
- 82% reduction of PHP days
- 69% reduction of IOP days

Medicaid - reductions one year post treatment

- 76% reduction of IP admissions
- 64% reduction of ER admissions
- 81% reduction of PHP days
- 56% reduction of IOP days

PMPM Total Care Cost Reductions



Aware Historically Managed ~100 NH Medicaid Members with Significant TCOC Reductions and Outcomes Improvements

Note: Data source from 3rd-party claims data from Elevance (CT, NH, ME); IP is defined as inpatient program; ED is defined as emergency department.
Represents 3rd-party claims data (including spend on Aware's program) tracked by Elevance for members 2016-2018; commercial lives represents NH clients; Medicaid represents ~100 NH clients

SAMHSA Substance Abuse and Mental Health Services Administration

We are Aware: led by a highly experienced executive team

Brian Holzer, MD, MBA
Chief Executive Officer

20+
Years Experience

Diverse experience, including strategy, operations, marketing, and sales in large and small public and private healthcare companies

Martha Mather, FACHE
Chief Operating Officer

20+
Years Experience

Clinically trained with C-Suite, executive and operational leadership roles at leading systems and behavioral health institutions

Jenni Lohse, JD
Chief Legal & Administrative Officer

20+
Years Experience

Leadership across in-house legal, risk management and compliance departments as General Counsel and CCO

Mark Tumblin, MS
Chief Information Officer

40+
Years Experience

Significant prior C-Suite experience and an expert in AI, advanced analytics, clinical workflow and clinical decision support

Nina Underman, MBA
VP, Strategic Operations

10+
Years Experience

Diverse operational, go-to-market and strategic leadership roles at leading payor organizations

George Merhi
Chief Financial Officer

30+
Years Experience

Finance leadership experience in both public and private corporations with revenues ranging from $10M to $500M

Lauren Grawert, MD
Chief Medical Officer

20+
Years Experience

Double board-certified Addiction Psychiatrist with extensive clinical experience with patients across the behavioral continuum

Uneeta Palmer, MBA
Sr. Director, Marketing & Communications

20+
Years Experience

Seasoned corporate communicator with deep experience in content/brand strategy, marketing and crisis communications.

Open
Chief People Officer

Home IS WHERE *recovery* LIVES™

AWARE
RECOVERY CARE

State Policymakers can Help Increase Access to Opioid Use Disorder Treatment in Prisons and Jails

Alexandra Duncan

October 11, 2023

Pew

Agenda

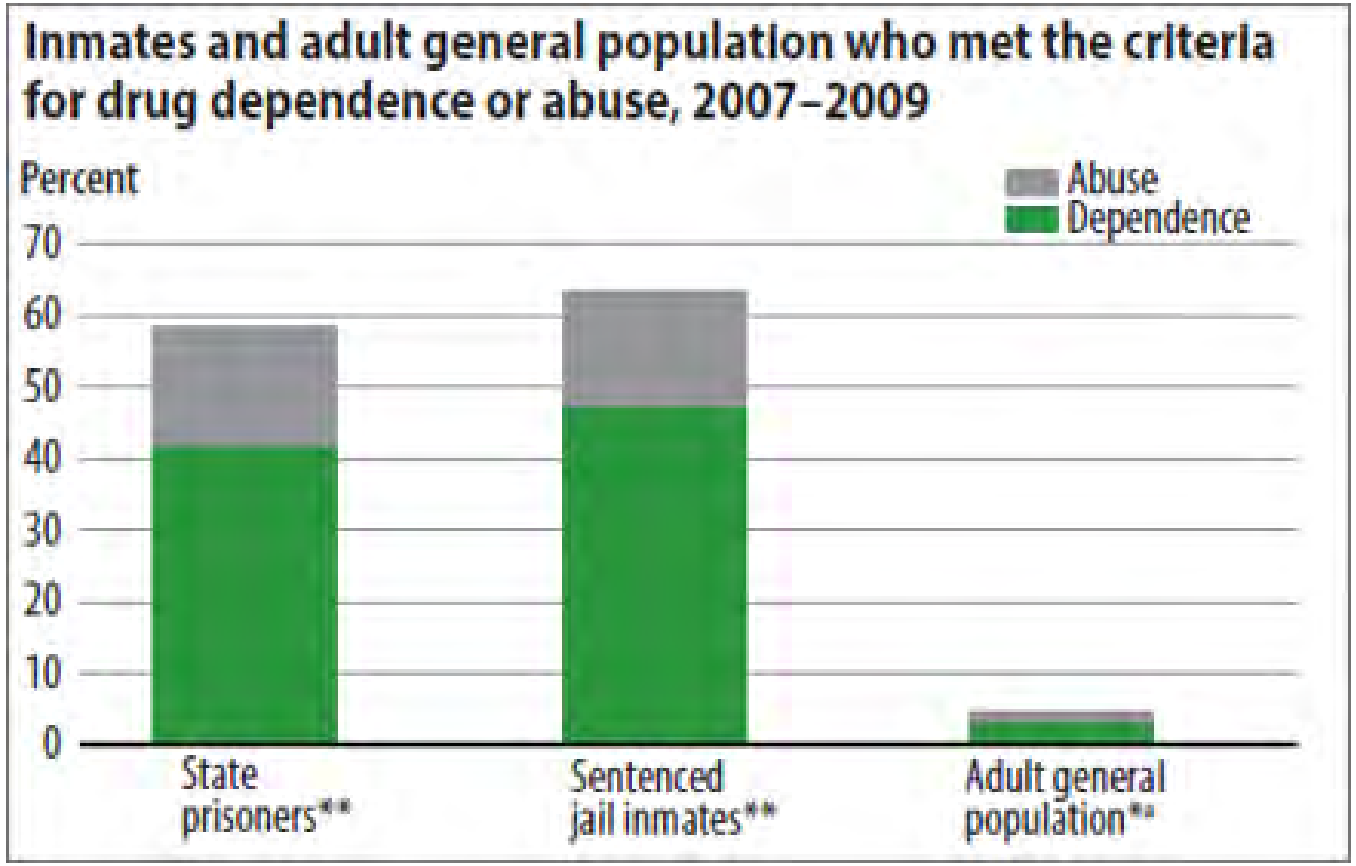
1. Brief background on SUD among people who are incarcerated
2. Examples of prison and jail MOUD programs
3. Successful prison and jail MOUD programs
4. Selected relevant state legislation
5. Q&A

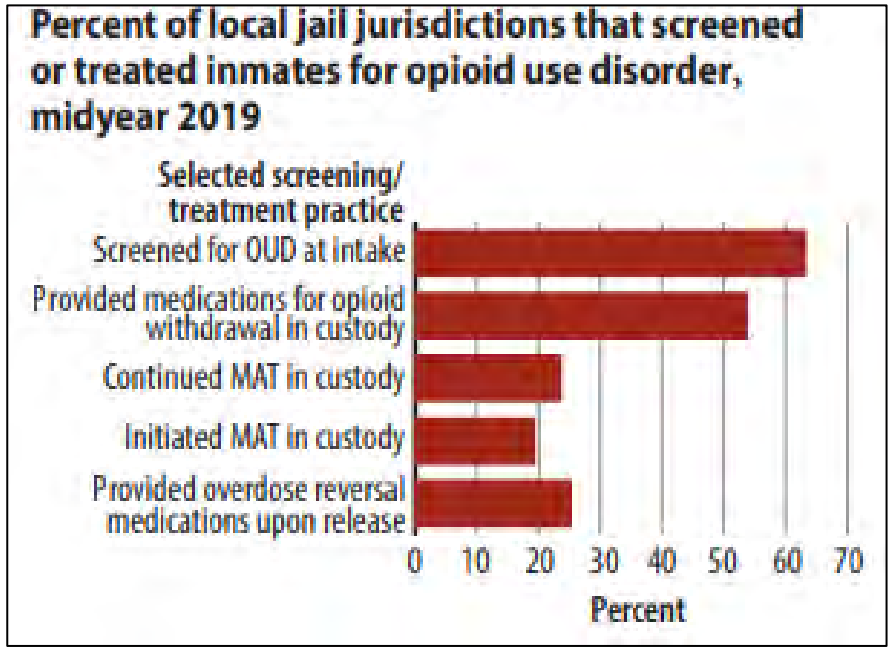
Nearly 5.5 million people are on probation, in jail, in prison, or on parole in the United States at any one time.

Compared to White Americans:
Black Americans are incarcerated in state prisons at nearly 5x the rate, &
Latino Americans are incarcerated at 1.3x

Figures: Incarceration: A Public Health Crisis (nihcm.org)

SUD among people who are incarcerated





Figures: https://www.ojp.gov/ncjrs/virtual-library/abstracts/drug-use-dependence-and-abuse-among-state-prisoners-and-jail; https://bjs.ojp.gov/document/oudstlj19.pdf

MAT receipt among people who are incarcerated

Percent of local jail jurisdictions that continued medication-assisted treatment for opioid use disorder in custody, by state, midyear 2019

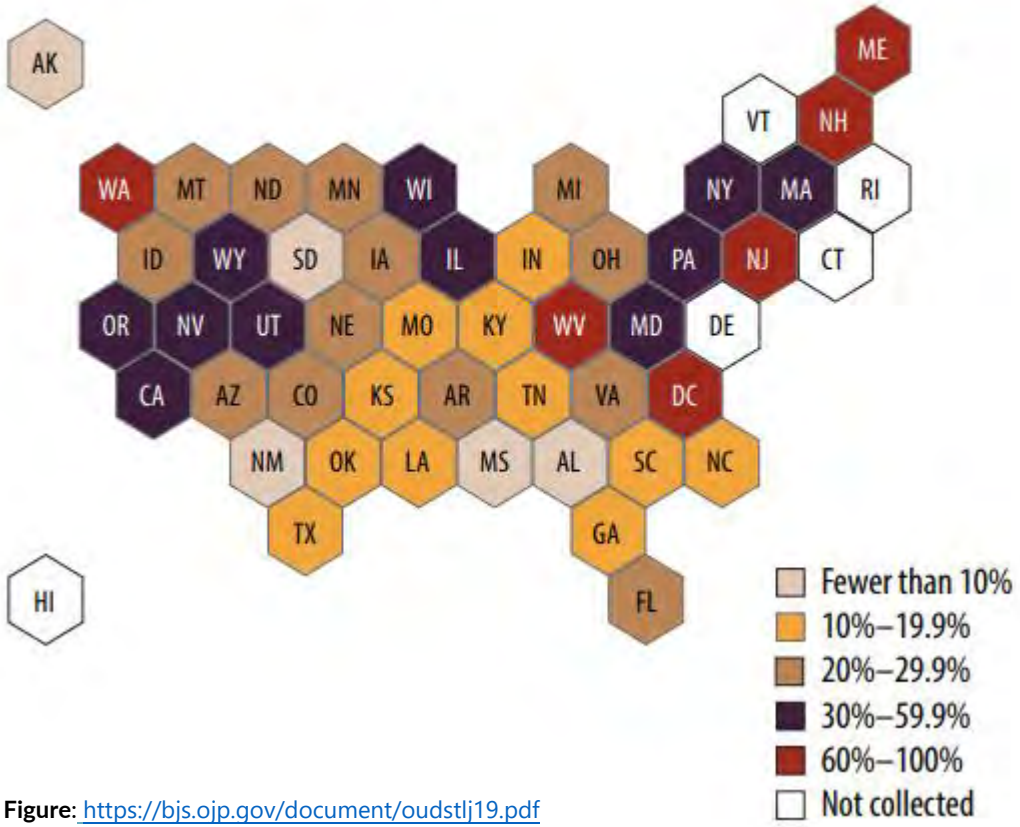


Figure: https://bjs.ojp.gov/document/oudstlj19.pdf

Location	Continued MAT	Initiated MAT
Alabama	7.5%	7.4%
Arkansas	21.5%	13.4%
Florida	26.2%	21.3%
Georgia	14.7%	14.4%
Kentucky	11.9%	13.4%
Louisiana	10.8%	9.7%
Mississippi	4.9%	6.4%
Missouri	17.9%	15.9%
N. Carolina	10.6%	10.8%
Oklahoma	10.1%	10.3%
S. Carolina	18.6%	15.9%
Tennessee	17.2%	16.2%
Texas	19.4%	13.2%
Virginia	20.1%	14.5%
W. Virginia	90.9%	0%

Jail & Prison Opioid Project

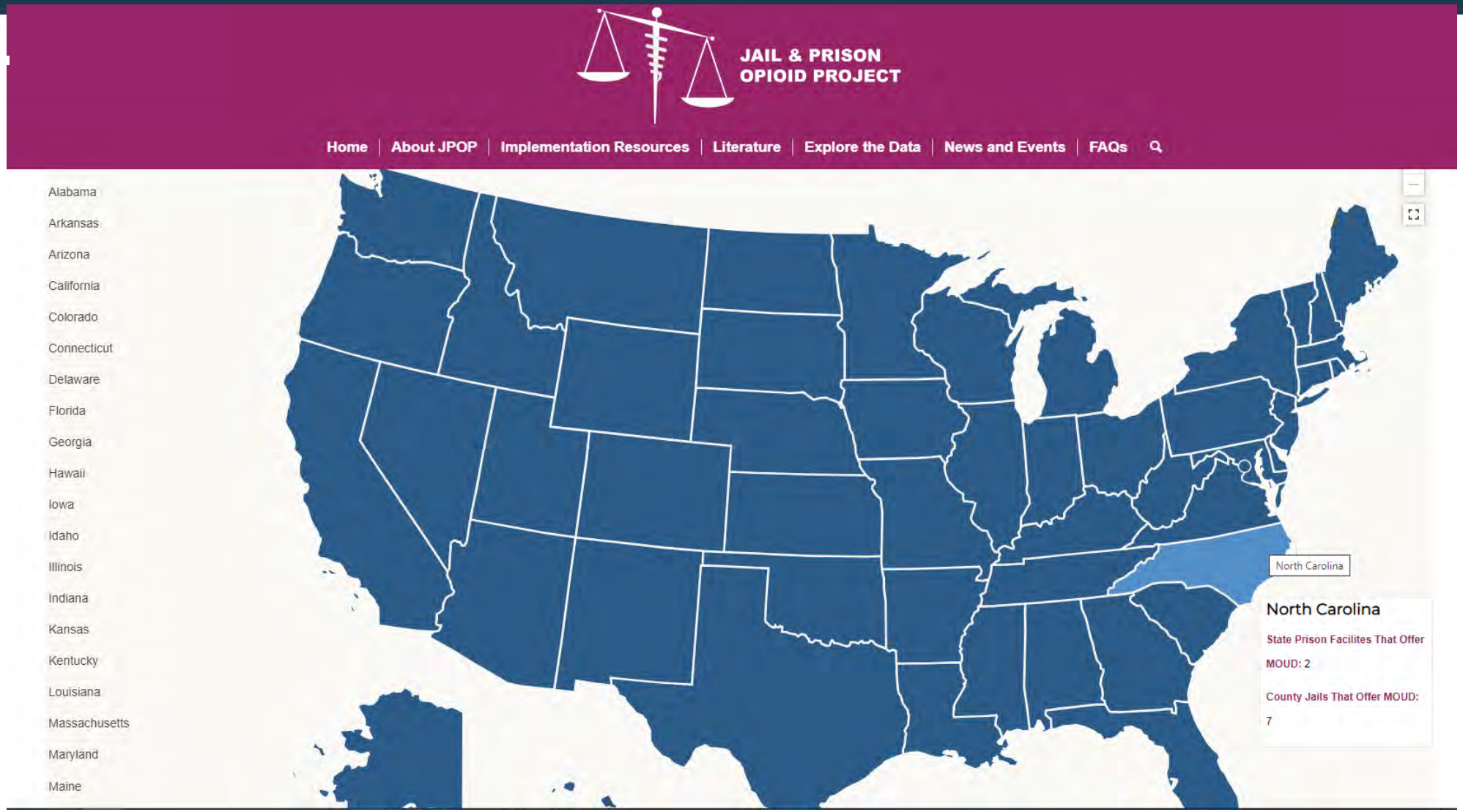


Figure: https://prisonopioidproject.org/ :

Jail & Prison Opioid Project: North Carolina

Population: 9,535,483

Age-Adjusted Rate Of Overdose Deaths (Per 100,000): 20

-

Total State Prison Facilites: 57

Number of State Prision Facilities That Offer MOUD: 2

-

Total County Jails: 97

Number of County Jails That Offer MOUD: 7

-

Name of known facilities that offer MOUD Buncombe County Jail, Durham Detention Center, Nash County Jail, NC Correctional Institution for Women in Raleigh, Orange County Jail, Rutherford County Jail, Orange Correctional Center in Hillsborough, Wake Correctional Center in Raleigh, Iredell County Detention Center, Wilkes County Jail

Learn More

https://prisonopioidproject.org/

Spotlight: Fairfax County, VA Jail

- Buprenorphine and limited methadone
- Therapeutic Community
- Referral to a pharmacy for 14 days of free medication at release
- Naloxone and fentanyl test strips at release

Photo credit: https://www.fairfaxcounty.gov/sheriff/jail-based-addiction-recovery-program-continues-release-through-community-partnerships#:~:text=In%20the%20operation%20of%20its,diabetes%2C%20heart%20disease%20or%20asthma.

Spotlight: Franklin County, MA Jail

- Offers all FDA-approved MOUD
- Licensed OTP
- Naloxone kit at release

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7708799/; https://www.fcso-ma.us/inmate-programs

Spotlight: Kentucky Department of Corrections

- Injectable naltrexone and buprenorphine
- Extensive program evaluation

Location of KY's corrections-based SUD Treatment Programs, 2022

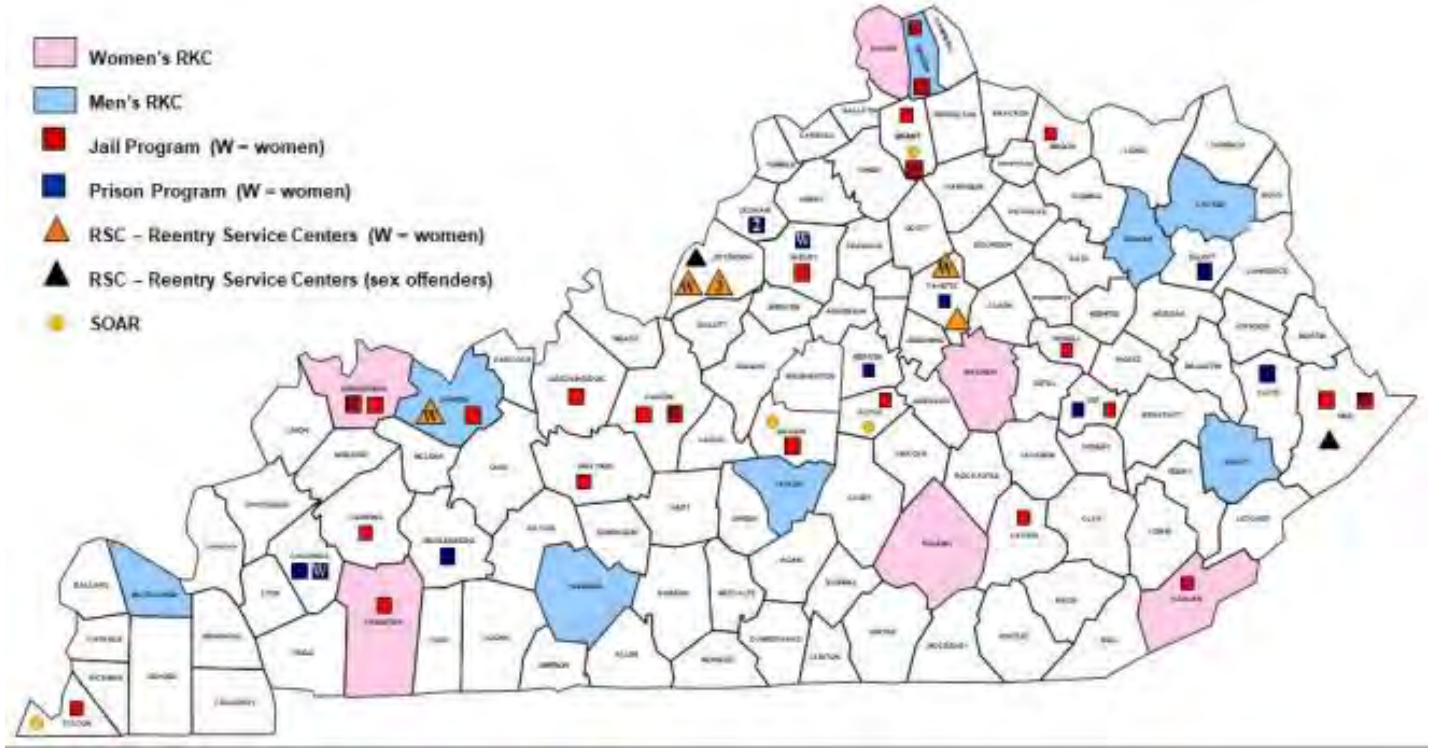
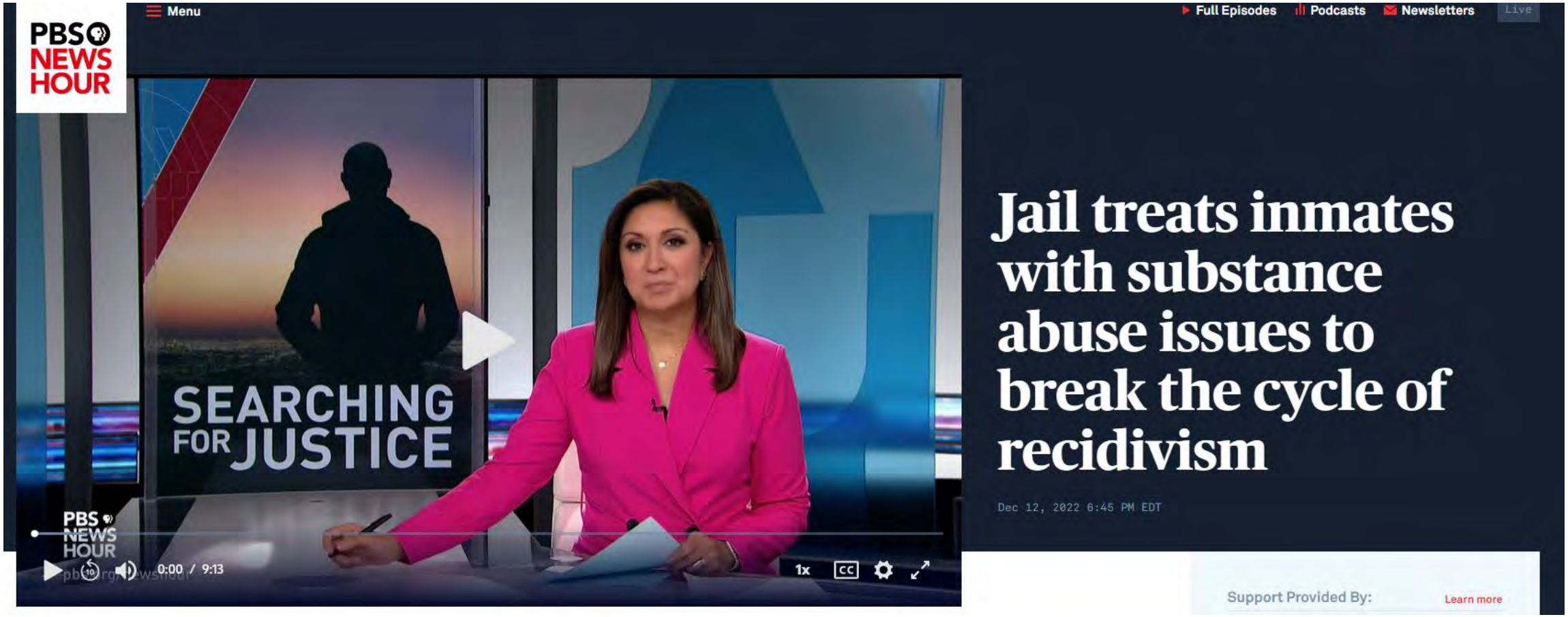


Figure: https://corrections.ky.gov/Divisions/ask/Documents/CJKTOS_FY2022%20Report_FINAL_2023-05-30.pdf; https://corrections.ky.gov/Divisions/ask/Documents/KORE%20SAMAT%20Expansion%20Final%20Report_FINAL%202022-04-12.pdf

Spotlight: Kenton County, KY Detention Center



https://www.pbs.org/newshour/show/jail-treats-inmates-with-substance-abuse-issues-to-break-the-cycle-of-recidivism

Successful prison and jail MOUD programs

Institutional champion

Staff buy-in

Medicaid suspension, not termination

Reach-in services & continuity of care

Funding prison and jail MOUD programs

ELSEVIER

Journal of Substance Use and Addiction Treatment

Volume 146, March 2023, 208943

JSAT

Budget impact tool for the incorporation of medications for opioid use disorder into jail/prison facilities

Danielle A. Ryan [a], Iván D. Montoya [b], Peter J. Koutoujian [c], Kashif Siddiqi [c], Edmond Hayes [d], Philip J. Jeng [a], Techna Cadet [a], Kathryn E. McCollister [b], Sean M. Murphy [a]

https://www.sciencedirect.com/science/article/pii/S2949875922000145; https://www.commonwealthfund.org/publications/issue-briefs/2019/jan/state-strategies-health-care-justice-involved-role-medicaid

Model Legislation

LAPPA Model Legislation: https://legislativeanalysis.org/model-access-to-medication-for-addiction-treatment-in-correctional-settings-act/ **O'Neill:** https://oneill.law.georgetown.edu/publications/a-national-snapshot-update-access-to-medications-for-opioid-use-disorder-in-u-s-jails-and-prisons

State legislation

State	Session Year	Bill/Act Number	Summary
MD	2019	HB 116	• Comprehensive MOUD program in local correctional facilities
MA	2018	H. 4742	• Pilot MOUD program in selected correctional facilities
NH	2020	HB 1639	• County correctional facilities to provide MOUD
NM	2023	SB 425	• Comprehensive MOUD program in state and county correctional facilities

MD: https://mgaleg.maryland.gov/2019RS/Chapters_noln/CH_532_hb0116e.pdf; **MA:** https://malegislature.gov/Laws/SessionLaws/Acts/2018/Chapter208; **NH:** https://www.gencourt.state.nh.us/legislation/2020/HB1639.html; **NM:** https://nmlegis.gov/Legislation/Legislation?Chamber=S&LegType=B&LegNo=425&year=23

State legislation

State	Session Year	Bill/Act Number	Summary
NY	2021	S. 1795	• Comprehensive MOUD program in state and county facilities
VT	2018	Act 176	• Continue and initiation MOUD in state facilities
WA	2023	SB 5187	• Budget allocation to expand MOUD in jails

NY : S1795 (nysenate.gov); **VT**: https://legislature.vermont.gov/bill/status/2018/S.166; **WA**: https://legiscan.com/WA/text/SB5187/id/2813810

State legislation

State	Session Year	Bill/Act Number	Summary
WI	2020	Act 119	• DHS and DOC to study the availability of MAT in prisons and jails • DHS in consultation with DOC to develop a proposal for a pilot MOUD program in at least 1 facility

WI: https://docs.legis.wisconsin.gov/2019/related/acts/119

Legislation best practices

1. Encourage prisons and jails to establish MOUD programs that include screening (New Hampshire), assessment, withdrawal management services, and initiation and continuation of MOUD.

2. Support prisons and jails to offer all Food and Drug Administration (FDA) approved MOUD to people who are incarcerated (New York).

3. Support continuity of care by suggesting the appropriate agencies assist with Medicaid applications and reinstatement of benefits; ensure facilities have the resources to establish relationships with community health and social service providers and community health insurers like Medicaid managed care organizations for ongoing treatment and services upon release; encourage facilities to provide take home medication (Texas. Proposed but not adopted), naloxone, and other harm reduction services at release.

NH: https://www.gencourt.state.nh.us/legislation/2020/HB1639.html; **NY**: https://legislation.nysenate.gov/pdf/bills/2021/S1795; **TX**: https://capitol.texas.gov/tlodocs/87R/billtext/pdf/HB01640I.pdf

Legislation best practices

4. Encourage the appropriate agencies to provide technical assistance to prisons and jails as they establish MOUD programs and collect and report data for evaluation.

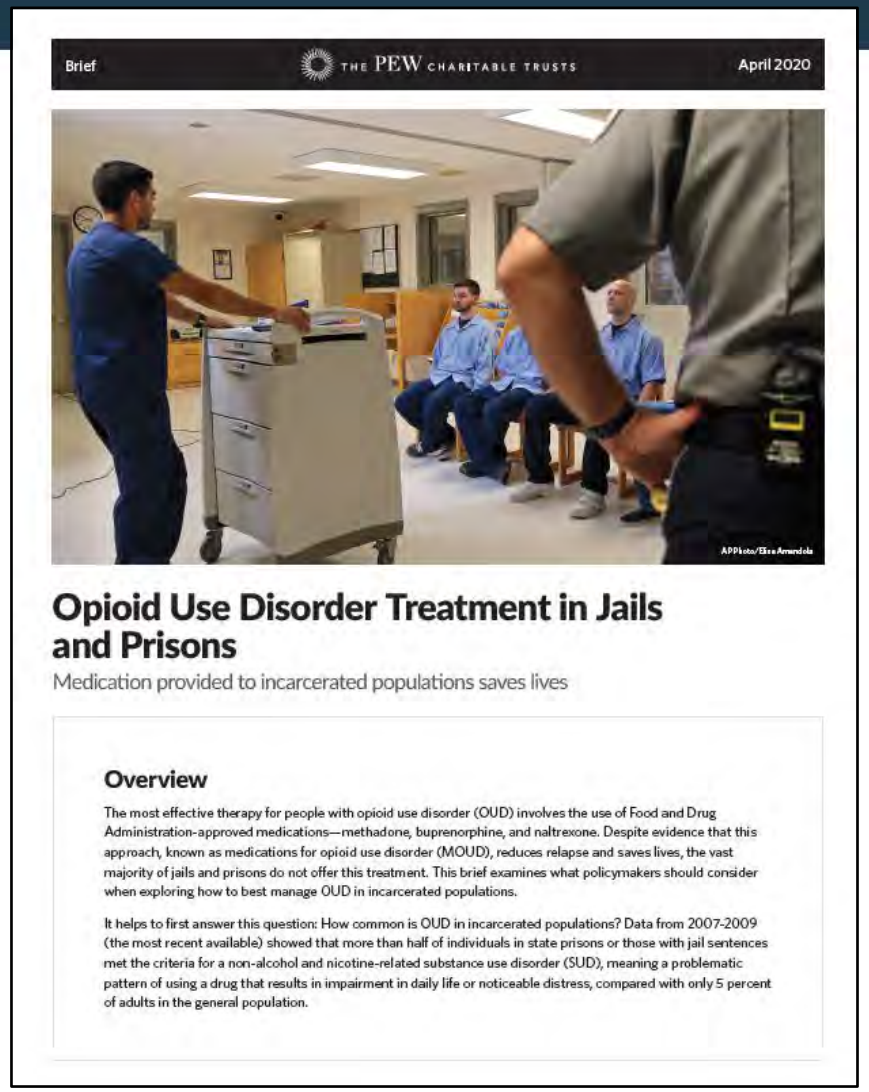
5. Ensure prisons and jails have adequate time to come into compliance with the law by considering benefits for compliance and consequences over time for non-compliance.

6. Encourage third-party evaluations of both the in-facility MOUD program, and health and other outcomes of individuals once back in the community.

7. Consider an ongoing legislative appropriation or include in the state budget funds for prison and jail MOUD programs (Maryland), technical assistance, and evaluation.

MD: https://mgaleg.maryland.gov/2019RS/Chapters_noln/CH_532_hb0116e.pdf

Pew Resources



Brief THE PEW CHARITABLE TRUSTS April 2020

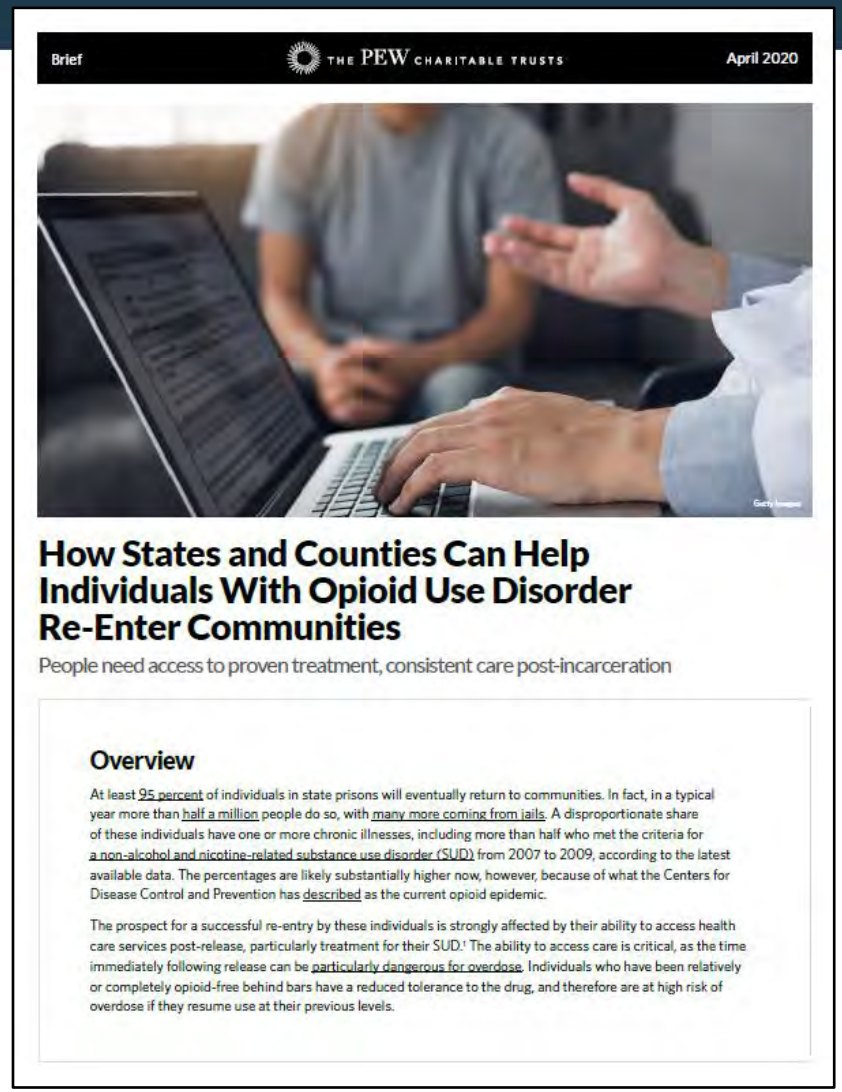
Opioid Use Disorder Treatment in Jails and Prisons

Medication provided to incarcerated populations saves lives

Overview

The most effective therapy for people with opioid use disorder (OUD) involves the use of Food and Drug Administration-approved medications—methadone, buprenorphine, and naltrexone. Despite evidence that this approach, known as medications for opioid use disorder (MOUD), reduces relapse and saves lives, the vast majority of jails and prisons do not offer this treatment. This brief examines what policymakers should consider when exploring how to best manage OUD in incarcerated populations.

It helps to first answer this question: How common is OUD in incarcerated populations? Data from 2007-2009 (the most recent available) showed that more than half of individuals in state prisons or those with jail sentences met the criteria for a non-alcohol and nicotine-related substance use disorder (SUD), meaning a problematic pattern of using a drug that results in impairment in daily life or noticeable distress, compared with only 5 percent of adults in the general population.



Brief THE PEW CHARITABLE TRUSTS April 2020

How States and Counties Can Help Individuals With Opioid Use Disorder Re-Enter Communities

People need access to proven treatment, consistent care post-incarceration

Overview

At least 95 percent of individuals in state prisons will eventually return to communities. In fact, in a typical year more than half a million people do so, with many more coming from jails. A disproportionate share of these individuals have one or more chronic illnesses, including more than half who met the criteria for a non-alcohol and nicotine-related substance use disorder (SUD) from 2007 to 2009, according to the latest available data. The percentages are likely substantially higher now, however, because of what the Centers for Disease Control and Prevention has described as the current opioid epidemic.

The prospect for a successful re-entry by these individuals is strongly affected by their ability to access health care services post-release, particularly treatment for their SUD.[1] The ability to access care is critical, as the time immediately following release can be particularly dangerous for overdose. Individuals who have been relatively or completely opioid-free behind bars have a reduced tolerance to the drug, and therefore are at high risk of overdose if they resume use at their previous levels.

https://www.pewtrusts.org/en/research-and-analysis/issue-briefs/2020/04/opioid-use-disorder-treatment-in-jails-and-prisons; https://www.pewtrusts.org/en/research-and-analysis/issue-briefs/2020/04/how-states-and-counties-can-help-individuals-with-opioid-use-disorder-re-enter-communities

aduncan@pewtrusts.org

October 11, 2023

Pew

Overdose crisis: National

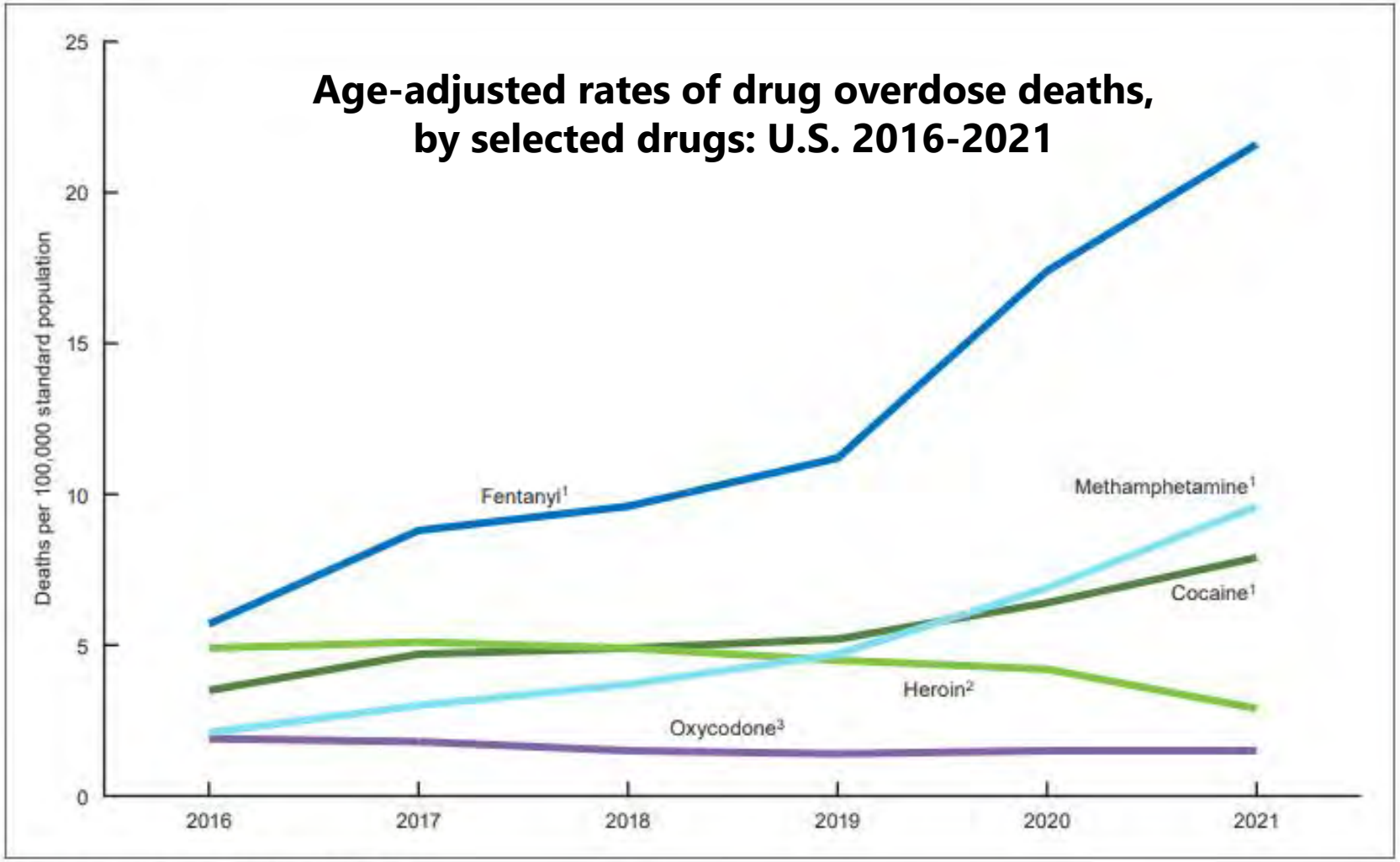


Figure: https://www.cdc.gov/nchs/data/vsrr/vsrr027.pdf

Overdose crisis: States

Number and Age-adjusted Rates of Drug Overdose Deaths by State, U.S. 2020

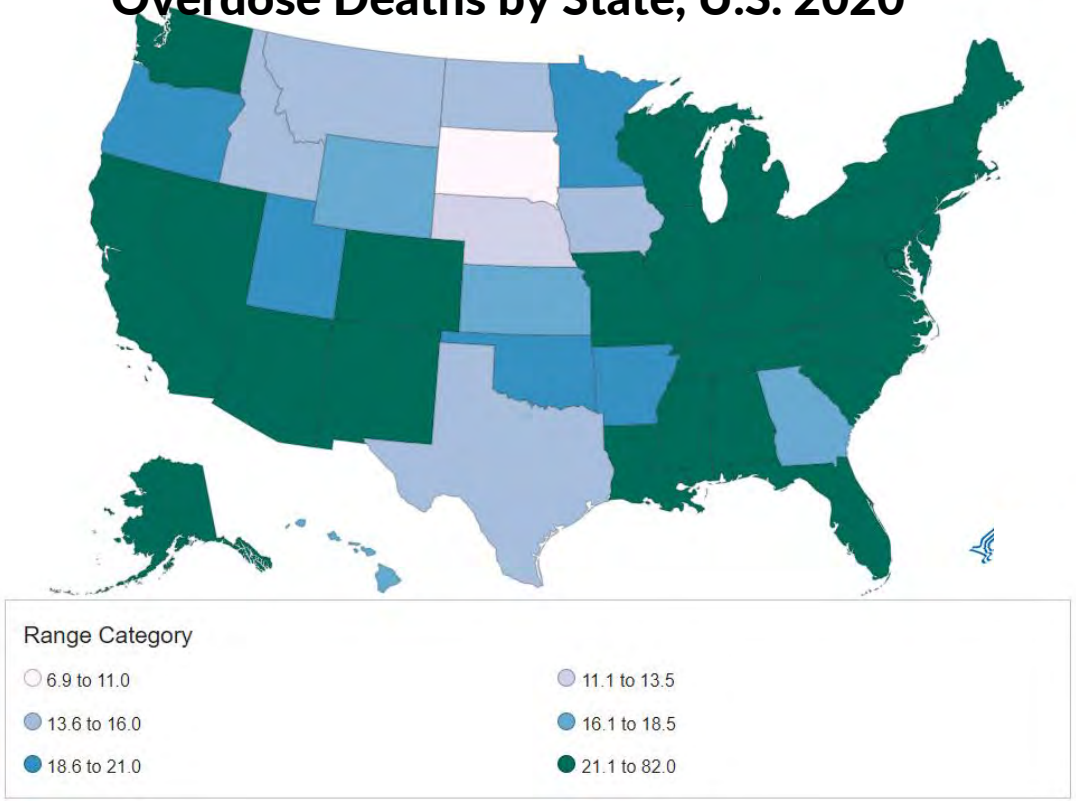
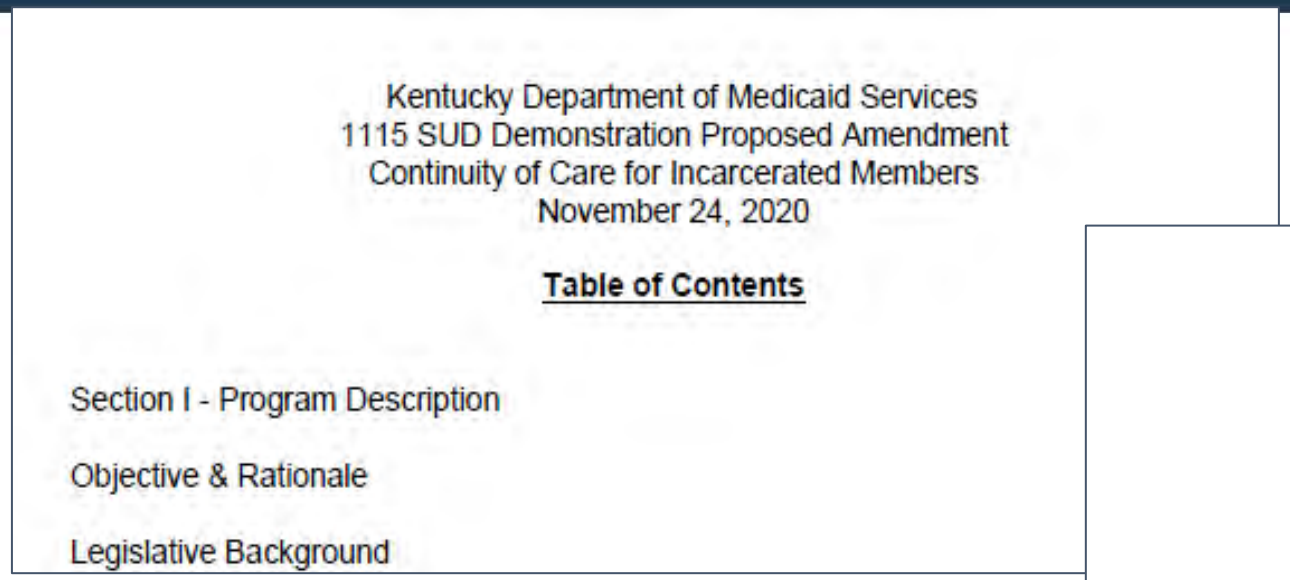


Figure: https://www.cdc.gov/drugoverdose/deaths/2020.html

Location	Range	2020 Age-adjusted Rate	2020 Number of Deaths
Alabama	21.1 to 82.0	22.3	1029
Arkansas	18.6 to 21.0	19.1	546
Florida	21.1 to 82.0	35.0	7231
Georgia	16.1 to 18.5	18.0	1916
Kentucky	21.1 to 82.0	49.2	2083
Louisiana	21.1 to 82.0	42.7	1896
Mississippi	21.1 to 82.0	21.1	586
Missouri	21.1 to 82.0	32.1	1875
N. Carolina	21.1 to 82.0	30.9	3146
Oklahoma	18.6 to 21.0	19.4	762
S. Carolina	21.1 to 82.0	34.9	1739
Tennessee	21.1 to 82.0	45.6	3034
Texas	13.6 to	14.1	4172

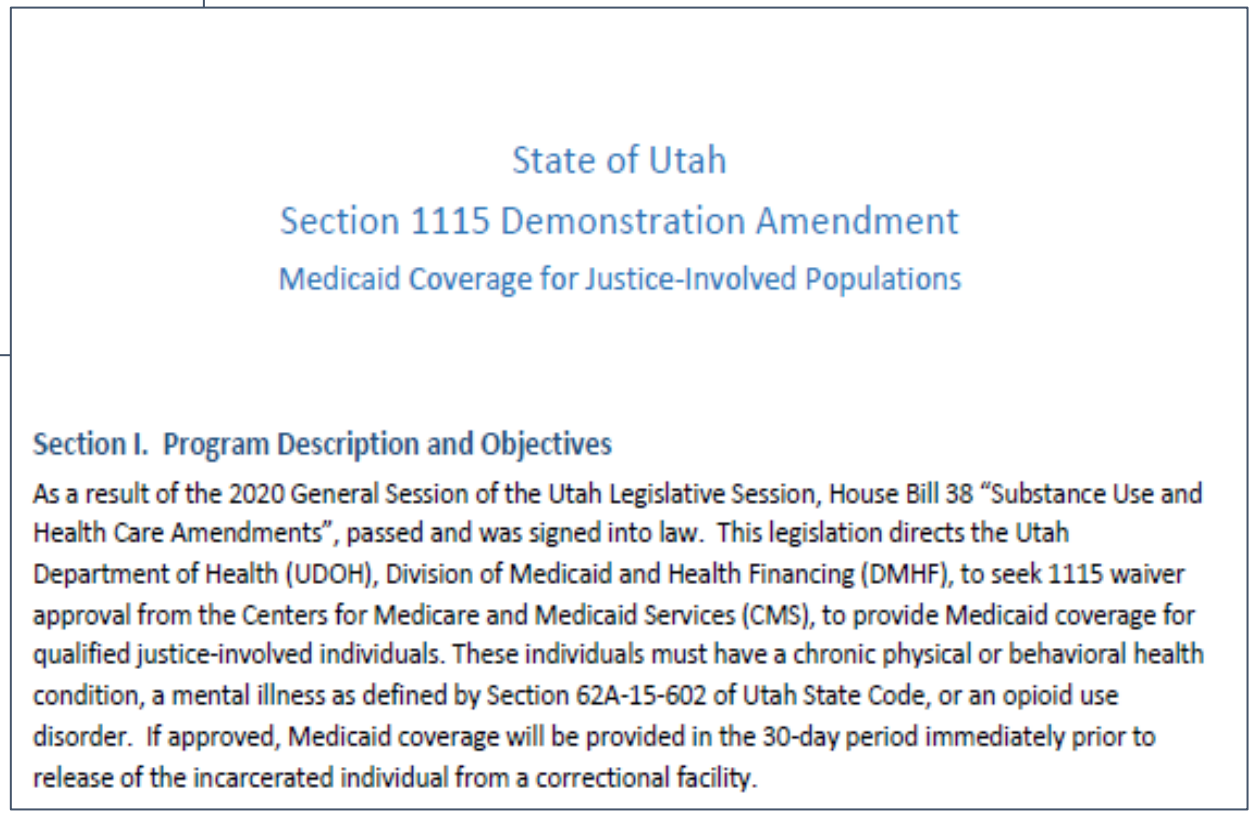
Pew

Medicaid 1115 Demonstration Waivers



Kentucky Department of Medicaid Services
1115 SUD Demonstration Proposed Amendment
Continuity of Care for Incarcerated Members
November 24, 2020

Table of Contents



State of Utah

Section 1115 Demonstration Amendment

Medicaid Coverage for Justice-Involved Populations

Section I. Program Description and Objectives

As a result of the 2020 General Session of the Utah Legislative Session, House Bill 38 "Substance Use and Health Care Amendments", passed and was signed into law. This legislation directs the Utah Department of Health (UDOH), Division of Medicaid and Health Financing (DMHF), to seek 1115 waiver approval from the Centers for Medicare and Medicaid Services (CMS), to provide Medicaid coverage for qualified justice-involved individuals. These individuals must have a chronic physical or behavioral health condition, a mental illness as defined by Section 62A-15-602 of Utah State Code, or an opioid use disorder. If approved, Medicaid coverage will be provided in the 30-day period immediately prior to release of the incarcerated individual from a correctional facility.

UT: https://medicaid.utah.gov/1115-waiver/; **KY**: https://www.medicaid.gov/medicaid/section-1115-demo/demonstration-and-waiver-list/81806

Federal legislation

Not allow “any such payments with respect to care or services for any individual who is an inmate of a public institution (except as a patient in a medical institution)”

H.R. 2400, The Reentry Act (Tonko)

S.971, Due Process of Continuity of Care Act (Cassidy)

Social Security Act: https://www.ssa.gov/OP_Home/ssact/title19/1905.htm; **NACo**: https://www.naco.org/resources/featured/naco-nsa-joint-task-force-report-addressing-federal-medicaid-inmate-exclusion-policy#go **H.R. 2400** : https://www.congress.gov/bill/118th-congress/house-bill/2400/actions?s=2&r=1&q=%7B%22search%22%3A%5B%22Tonko%22%5D%7D; **S.971**: https://www.congress.gov/bill/118th-congress/senate-bill/971?s=1&r=33#:~:text=This%20bill%20allows%20an%20otherwise,the%20provision%20of%20such%20benefits

Omnibus Bill

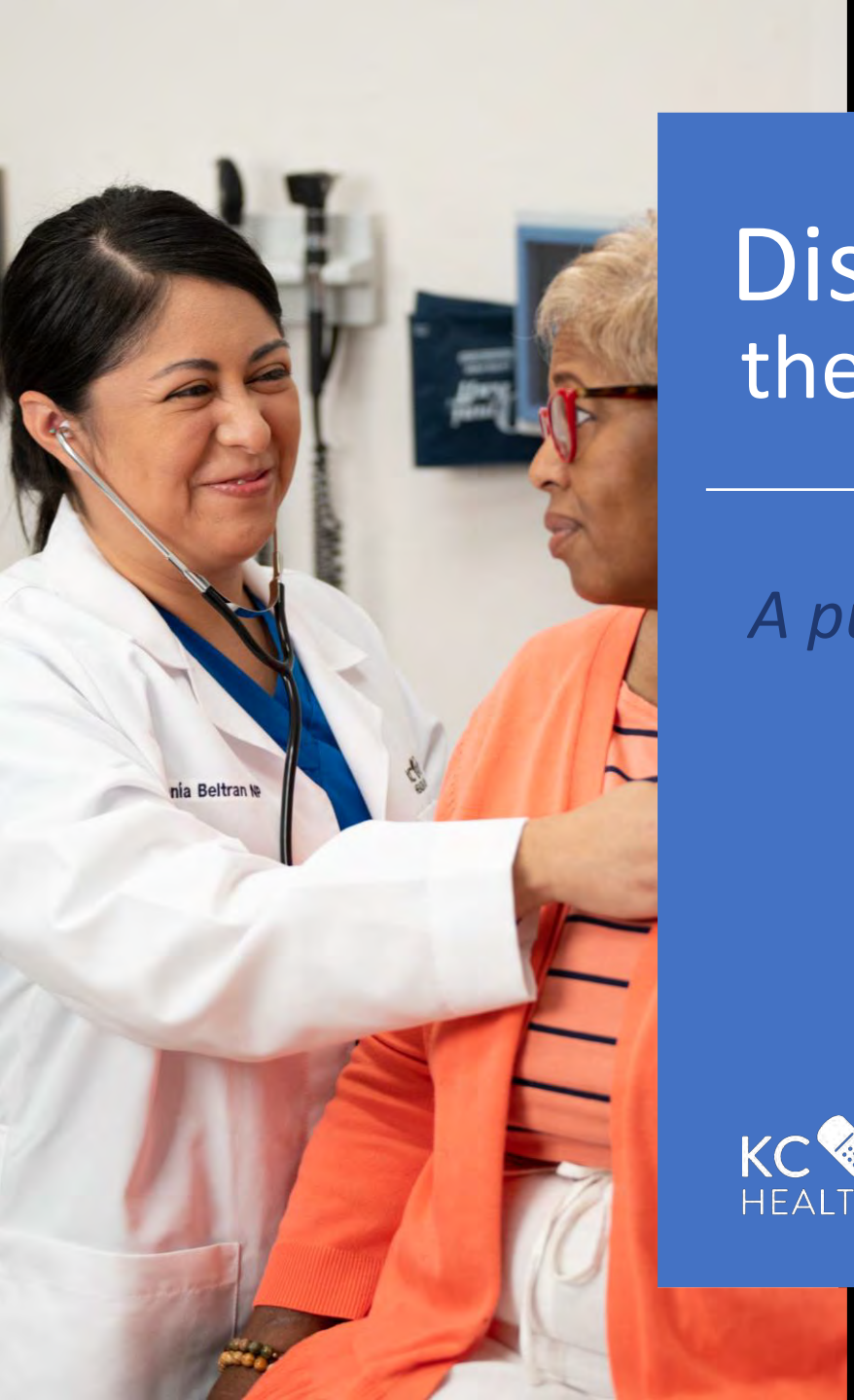
H.R.2617 - Consolidated Appropriations Act, 2023

117th Congress (2021-2022)

LAW Hide Overview ✕

Sponsor:	Rep. Connolly, Gerald E. [D-VA-11] (Introduced 04/16/2021)
Committees:	House - Oversight and Reform | Senate - Homeland Security and Governmental Affairs
Committee Meetings:	11/03/21 10:30AM 05/25/21 2:00PM
Committee Reports:	S. Rept. 117-164
Committee Prints:	H.Prt. 117-73
Latest Action:	12/29/2022 Became Public Law No: 117-328. (All Actions)
Roll Call Votes:	There have been 18 roll call votes
Notes:	Explanatory statements: Pages S7819-8551, Pages S8553-9323, Pages S9325-9591 (from Congressional Records 12/20/2022)
Tracker:	Introduced > Passed House > Passed Senate > Resolving Differences > To President > **Became Law**

Text - H.R.2617 - 117th Congress (2021-2022): Consolidated Appropriations Act, 2023 | Congress.gov | Library of Congress



Discover KC CARE Health Center
the heart of community healthcare

A public health approach to Harm Reduction

KC CARE HEALTH CENTER

Speaker bios

Wil Franklin

- **CEO at KC CARE**
- **Behavioral Health Clinician**
- **Vice Chair of MPCA Government Affairs Committee**
- **Fan and supporter of Melissa Smith and Morgan Brinker**

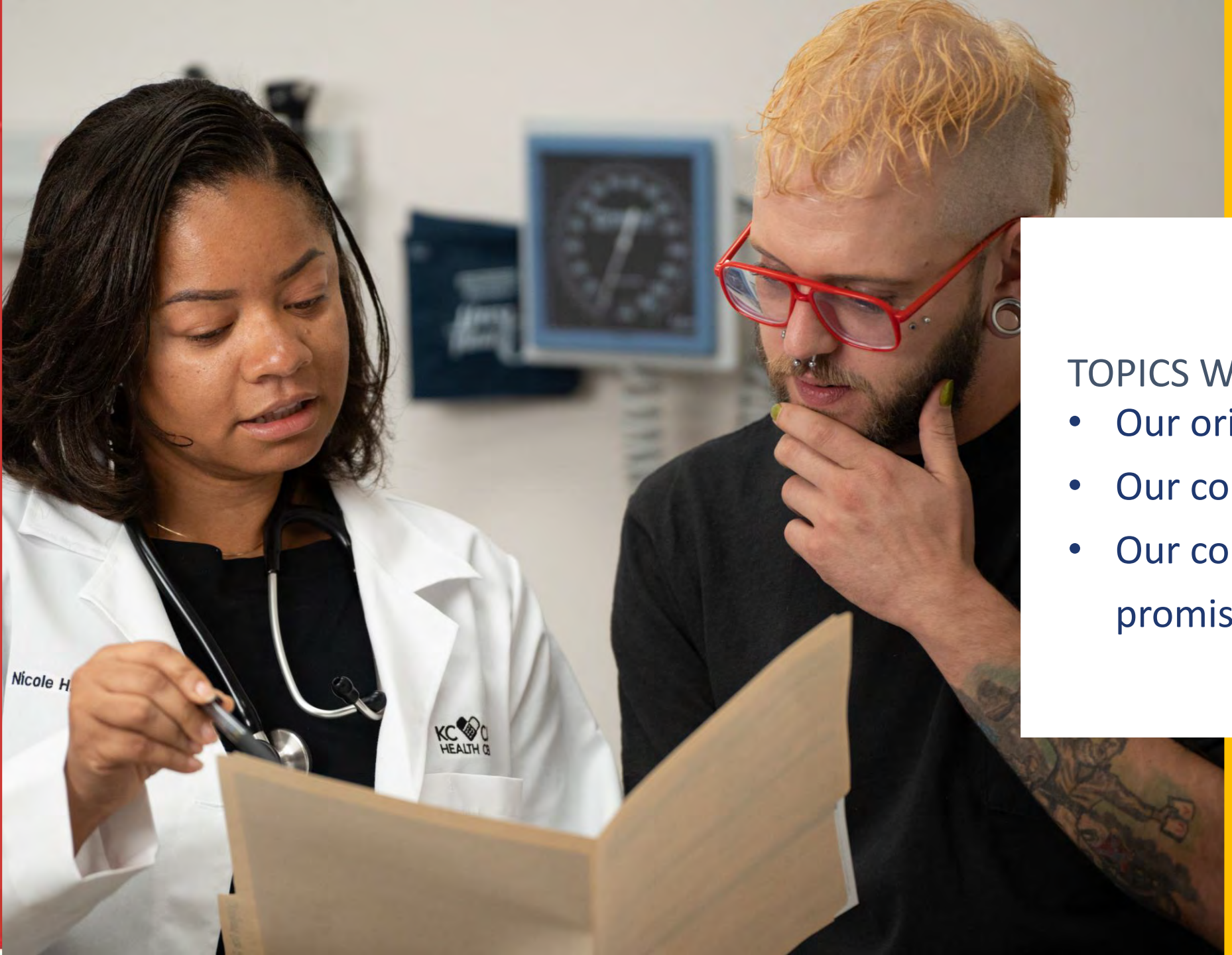
Melissa Smith

- **Licensed Clinical Social Worker**
- **Director of Population Health at KC CARE Health Center**
- **Project Director for HRSA Ryan White and SAMHSA Harm Reduction Awards**

Morgan Brinker

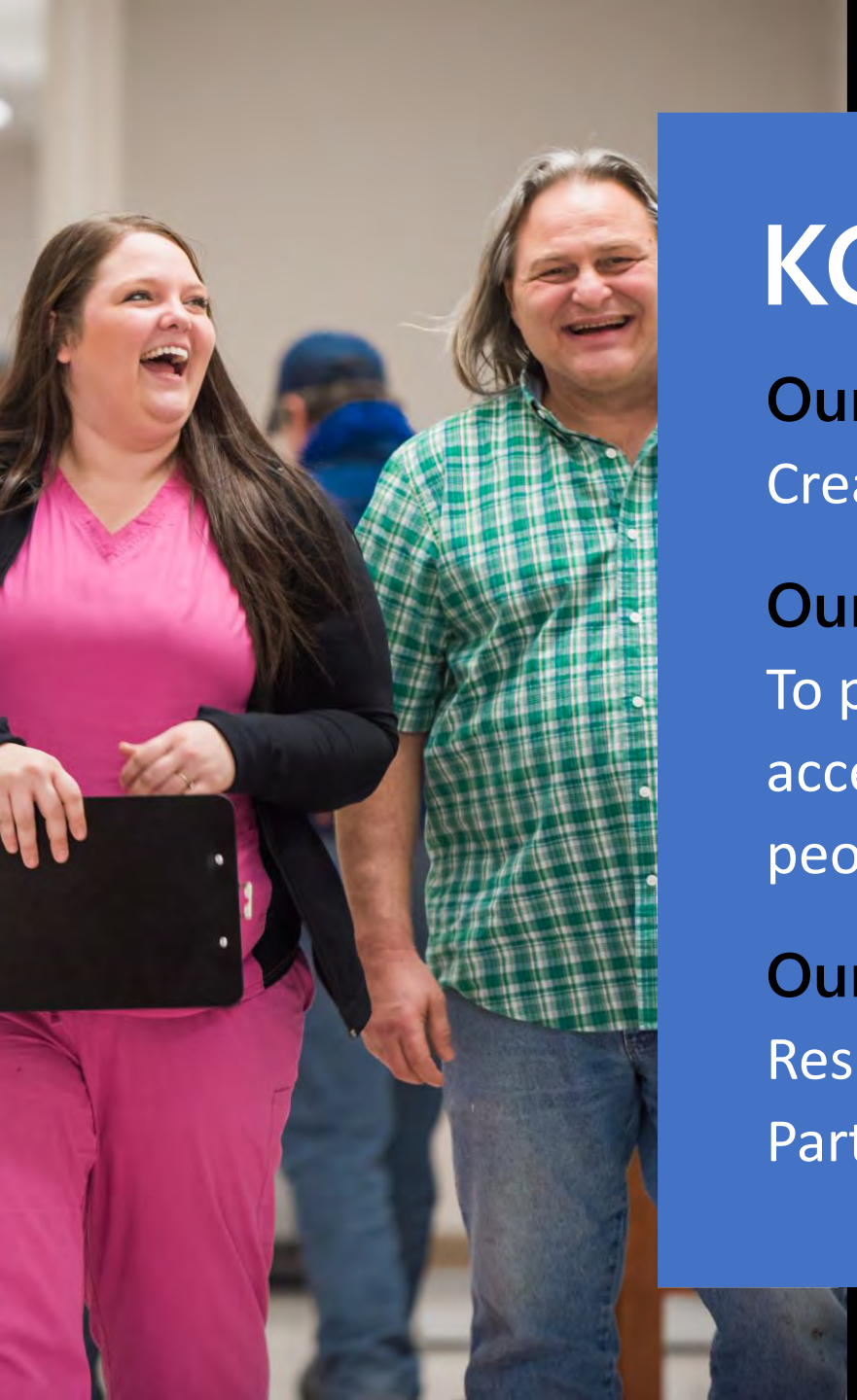
- Harm Reduction Coordinator at KC CARE Health Center
- 2+ years experience volunteering and managing a Syringe Service Program (SSP)
- Certified Phlebotomy Te

KC CARE HEALTH CENTER



TOPICS WE'LL COVER

- Our origins
- Our contribution
- Our community promises



KC CARE Health Center

Our Vision:

Creating solutions for a healthy community.

Our Mission:

To promote health and wellness by providing quality care, access, research and education to the underserved and all people in our community

Our Values:

Respect, Service, Cultural Competence, Collaboration, Partnership, Adapting, Innovation and Learning

OUR COMMUNITY PROMISES

KC CARE offers unconditional whole person care to everyone with the promise of a personalized and affirming experience.

KC CARE connects families and children to medical, dental and behavioral healthcare – regardless of insurance status and ability to pay.

Our Contribution

Accessible healthcare is vital for thriving communities

- School attendance
- Work absenteeism
- Poverty

Our Contribution

KC CARE is an excellent choice for accessible healthcare

- Integrated services
- Affordable
- Quality
- Nearby

OUR ORIGINS

Federally Qualified Health Center serving the KC metro area for more than 50 years from three locations

Treat 23,000 patients annually through dental, behavioral health, primary care, and supporting services

Most patients come from communities experiencing health inequities due to a variety of Social Determinants of Health

Accept Medicaid, Medicare and private insurance; no one is turned away due to their ability to pay


Primary Care
Dental Health
Behavioral Health
Pediatrics
Women's Health
Hep C
Pharmacy
Laboratory
Specialty Care
Walk-in
Clinical Services
Prevention & Education
PrEP & PEP
Syringe Exchange
MATEC
Hep C
Get Tested KC
State Supported Programs
Community
Support Services
HIV Services
Community Health Workers
Health Insurance Navigators
Financial Counselors
Outreach Events
Testing
Linkage to Care
HIV Primary Care
Case Management
Peer Support
Clinical Trials

- National Committee for Quality Assurance
- CARF Accreditation
- Certified Provider – HIV Prevention
- Memberships
  - Missouri Primary Care Association
  - National Association of Community Health Centers
  - KC Health Equity Learning & Action Network

Ryan White Services at KC CARE

- KC CARE is direct recipient of Ryan White Part C and D funds.
- Subrecipient of A, B, and F funds
- Serve over 1,300 people with HIV annually
- Most of these individuals have a Ryan White Case Manager, as well as access to an HIV Peer Educator, medication/insurance assistance for HIV, receive annual biopsychosocial assessments inclusive of care plans
  - As a part of these assessments and medical services provided through Ryan White, participants are screened for STIs, substance use/abuse, housing instability, and multiple other social drivers of health.

- **Though Ryan White funding only provides financial support for people with HIV, many of the assessments and services offered to our patients with HIV are replicated throughout KC CARE**
- **Behavioral Health and Substance Use screenings are integrated into a part of our general medicine clinic**
- **We've embedded general medicine care coordinators into our practice locations to help patients respond to episodic and chronic SDoH needs**
- **We're working to implement Same Day Start PrEP (mirroring our Same Day Start program for people who test reactive for HIV)**

KC CARE's Harm Reduction Model

- For a long time at KC CARE, if someone mentioned the words 'Harm Reduction', you immediately thought of our SSP (more to come on this)
- KC CARE has provided naloxone free of cost for multiple years
- Prevention Specialists are skilled in counseling individuals who test for HIV and other STIs on ways to reduce risk for various things based on patient's reported risk activities
- BHCs offer tobacco cessation
- Offer safer sex kits free of charge
- Have condom drop sites throughout the city
- Expanding how we can test for HIV, including home test kits for folx hesitant to come into the Health Center
- PrEP prescriptions and PrEP navigation

- **It's hard!**
- **Because SSPs are technically in a 'gray' area in MO, we cannot allocate any federal or statewide funds to our SSP.**
- **Where we're able to, we incorporate Harm Reduction methods into existing grants (ex: condoms, safer sex kits, etc).**
- **Anything for our SSP, including the staff who work there, must come from private donations or specialized grants.**

KC CARE HEALTH CENTER

- In 2021, SAMSHA announced an unprecedented Harm Reduction Grant Program, $400,000/year for three years to 25 organizations.
- National media began reporting critical stories shortly after the application deadline, causing SAMHSA to carefully monitor funds.
- The Harm Reduction Coalition of Kansas City was selected as one of 25 grant recipients in May 2022; over 450 organizations applied.
- HRCKC was the only organization selected in Region Seven, and one of the few selected in a state that that still restricts SSPs.

SAMHSA Harm Reduction Project

- KC CARE provides testing, behavioral healthcare, and referrals.
- First Call provides community and individual education & recovery support; both organizations provide naloxone and fentanyl test strips.
- UMKC houses the Collaborative to Advance Health Services, one of nine members of the CDC's Harm Reduction TA Center.

KC CARE HEALTH CENTER

first call
HOPE STARTS HERE, YOUR FIRST CALL 816.361.5900

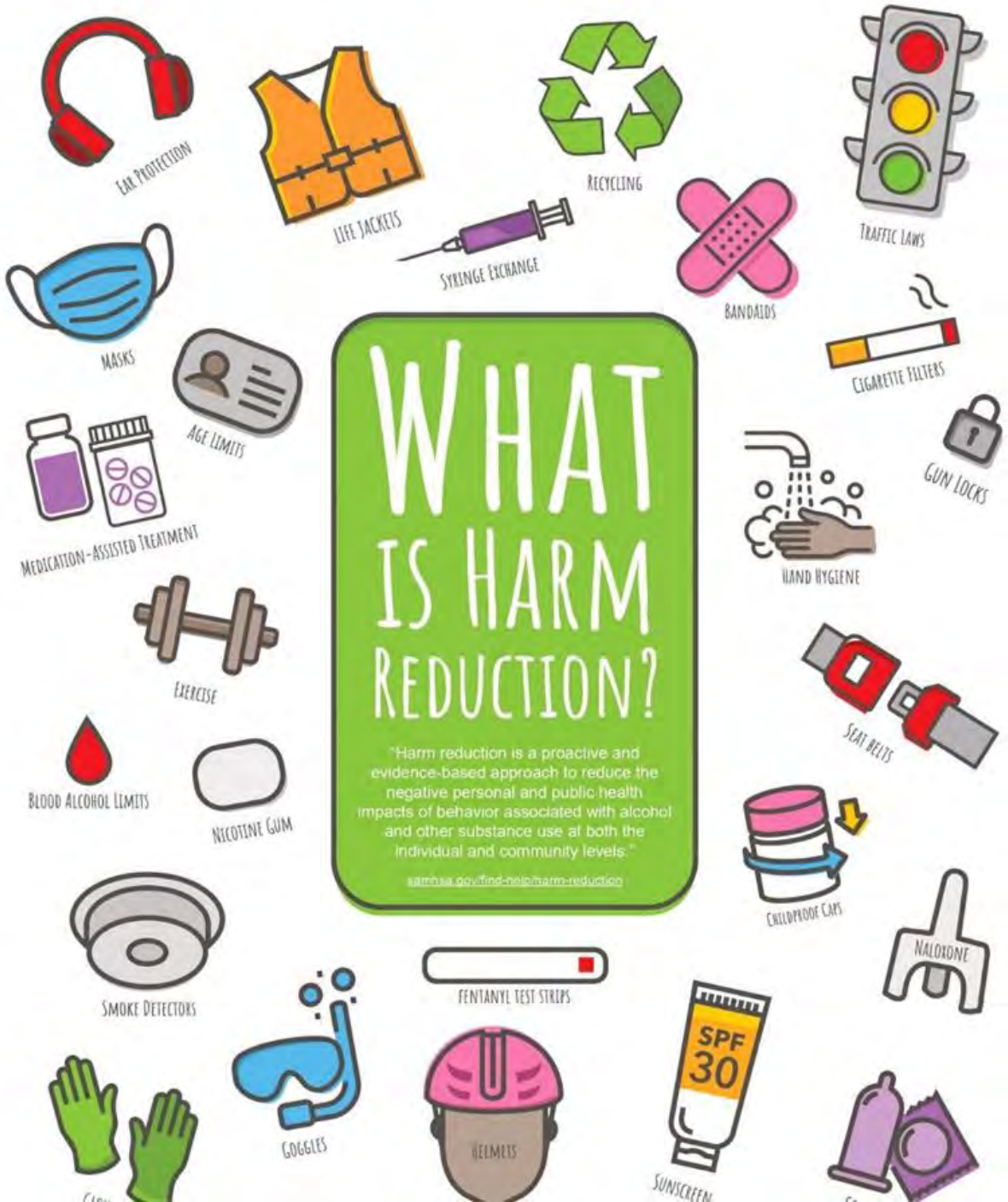
COLLABORATIVE
TO ADVANCE HEALTH SERVICES

Year 1 Accomplishments & Outcomes

- Completed harm reduction-focused Community Needs Assessment
- Consulted with NASTAD via the CDC's Harm Reduction TA Center to receive feedback on agency policies and procedures
- Established referral procedures between First Call & KC CARE for HIV, HCV & STI testing/treatment; viral hepatitis vaccination; counseling for SUD; treatment for SUD; recovery support services; & peer support services
- Established weekly Harm Reduction Support Group
- Provided community education on overdose prevention, naloxone & harm reduction strategies
- Purchased & distributed fentanyl test strips and naloxone throughout the community
- Purchased & distributed harm reduction 'go bags' throughout the community

- Continue with Year 1 activities (referrals, naloxone & FTS distribution, community education, etc.)
- Establish Harm Reduction Advisory Committee (inclusive of those with lived and living experience)
- Anti-Stigma Campaign
- Create sustainability plan
- Purchase at least one naloxone kiosk for KC CARE locations (piloting at our Northeast Location to start)

KC CARE HEALTH CENTER

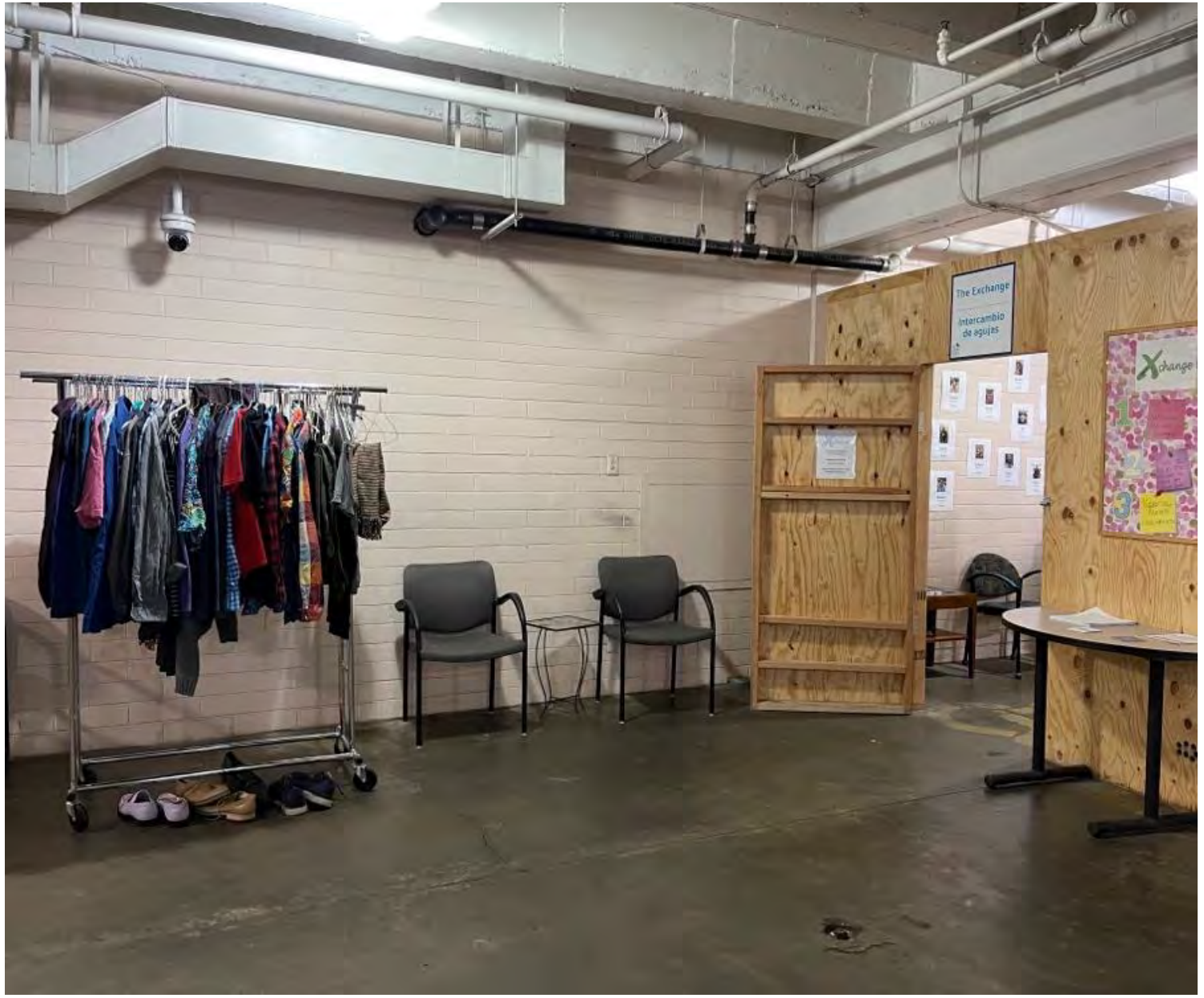


Nuts and Bolts

KC CARE HEALTH CENTER

Xchange

Xchange

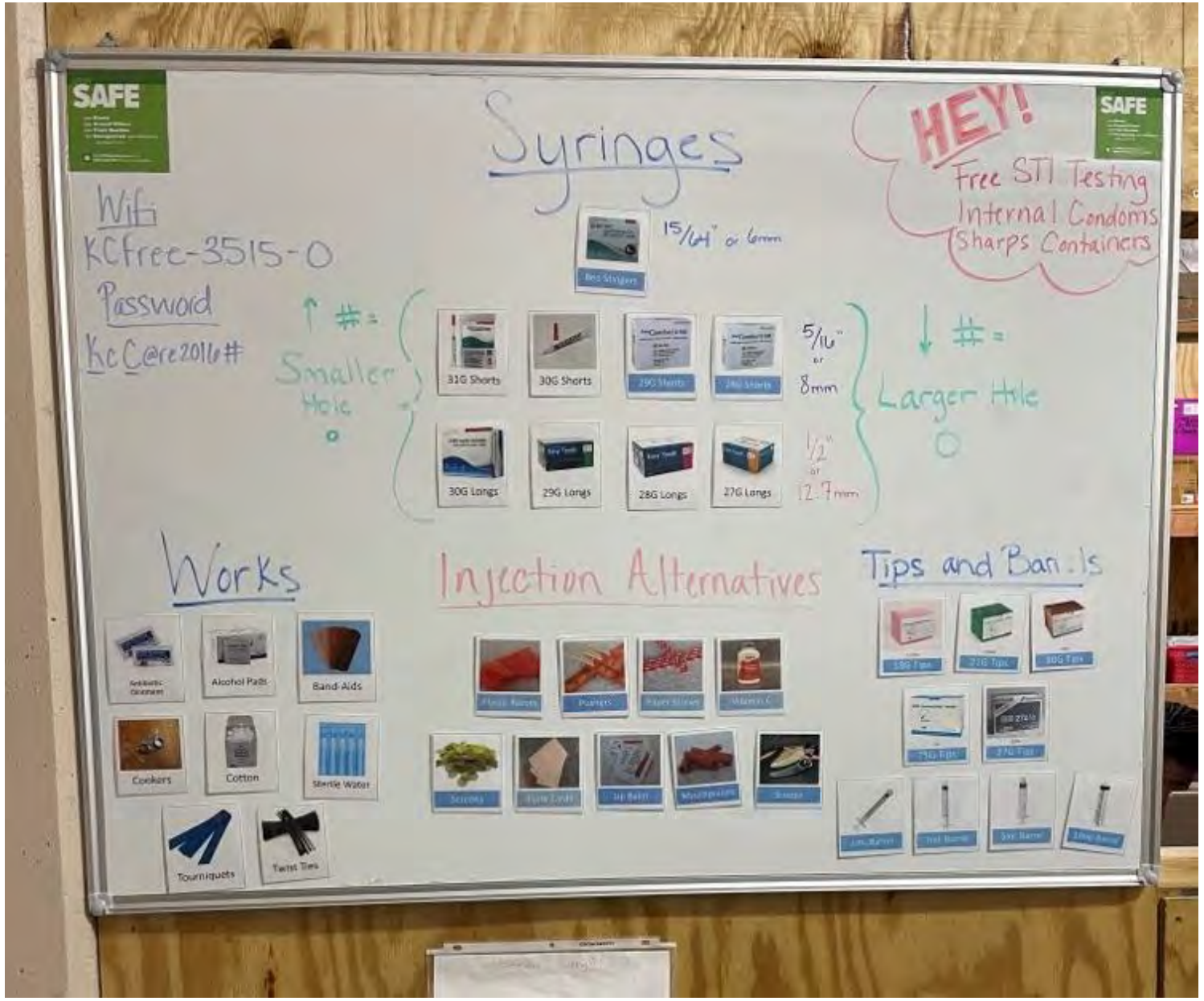


Xchange

Xchange


Proper Injection Technique
1
2
3
4 Inject
5 Don't reuse
HIV
Hepatitis C
Transmission
Treatment?
Yes
Yes
Cure?
No
Yes

Xchange


SAFE
Syringes
HEY!
Free STI Testing
Internal Condoms
Sharps Containers
SAFE
Wifi
KCfree-3515-0
Password
KcCare2016#
15/64" or 6mm
↑ # = Smaller Hole
31G Shorts
30G Shorts
5/16" or 8mm
↓ # = Larger Hole
30G Longs
29G Longs
28G Longs
27G Longs
1/2" or 12.7mm
Works
Alcohol Pads
Band-Aids
Cookers
Cotton
Sterile Water
Tourniquets
Twist Ties
Injection Alternatives
Tips and Barrels

Menu

SYRINGES

Bee Stingers (31G) 15/64"
Bee Stingers are the shortest needle we have available. We try to have Bee Stingers available in both 0.5- and 1-mL barrels.

31G Shorts 1cc 5/16"
31G needles are the thinnest needles we have. They are only available in 15/64" (Bee Stingers) and 5/16" (shorts).

30G Shorts 1cc 5/16"
30G shorts are the most commonly requested syringe size. Available in the EasyTouch brand.

29G Shorts 1cc 5/16"
29G shorts are a newer item purchased due to participant request. Available only in the Sure Comfort Syringe brand.

28G Shorts 1cc 5/16"
28G shorts are a newer item purchased due to participant request. Available only in the Sure Comfort Syringe brand.

30G Longs 1cc 1/2"
30G longs are available in the EasyTouch brand.

29G Longs 1cc 1/2"
29G longs are available in the EasyTouch and BD brands.

28G Longs 1cc 1/2"
28G longs are available in the EasyTouch and McKesson brands.

27G Longs 1cc 1/2"
27G longs are available in the EasyTouch brand. 0.5- and 1-mL barrels are in stock.

Tips & Barrels Misc.
We have 18G 1-1/2", 25G 1", 27G 1/2", and 30G 1/2" tips as well as 1-, 3-, 5-, and 10-mL barrels.

SAFE USE

Bubbles
For safe smoking when inhaling vapors (i.e., methamphetamine).

Straight Stems
For safe smoking when inhaling smoke (i.e., weed, crack cocaine).

Safe Snorting Kit
Include paper straws, plastic razors, scoops, lip balm, and a blank card.

These three can be considered novelty items. We'll have them when we can, but they are not the priority.

WORKS

Sterile Water
Cotton
Band Aids
Antibiotic Ointment
Tourniquets
Cookers w/ twist ties
Alcohol Pads

PREVENTION

Narcan
Fentanyl Test Strips
Safe Sex Kits
Sharps Containers

Xchange

CATS

(Counseling and Testing Services)

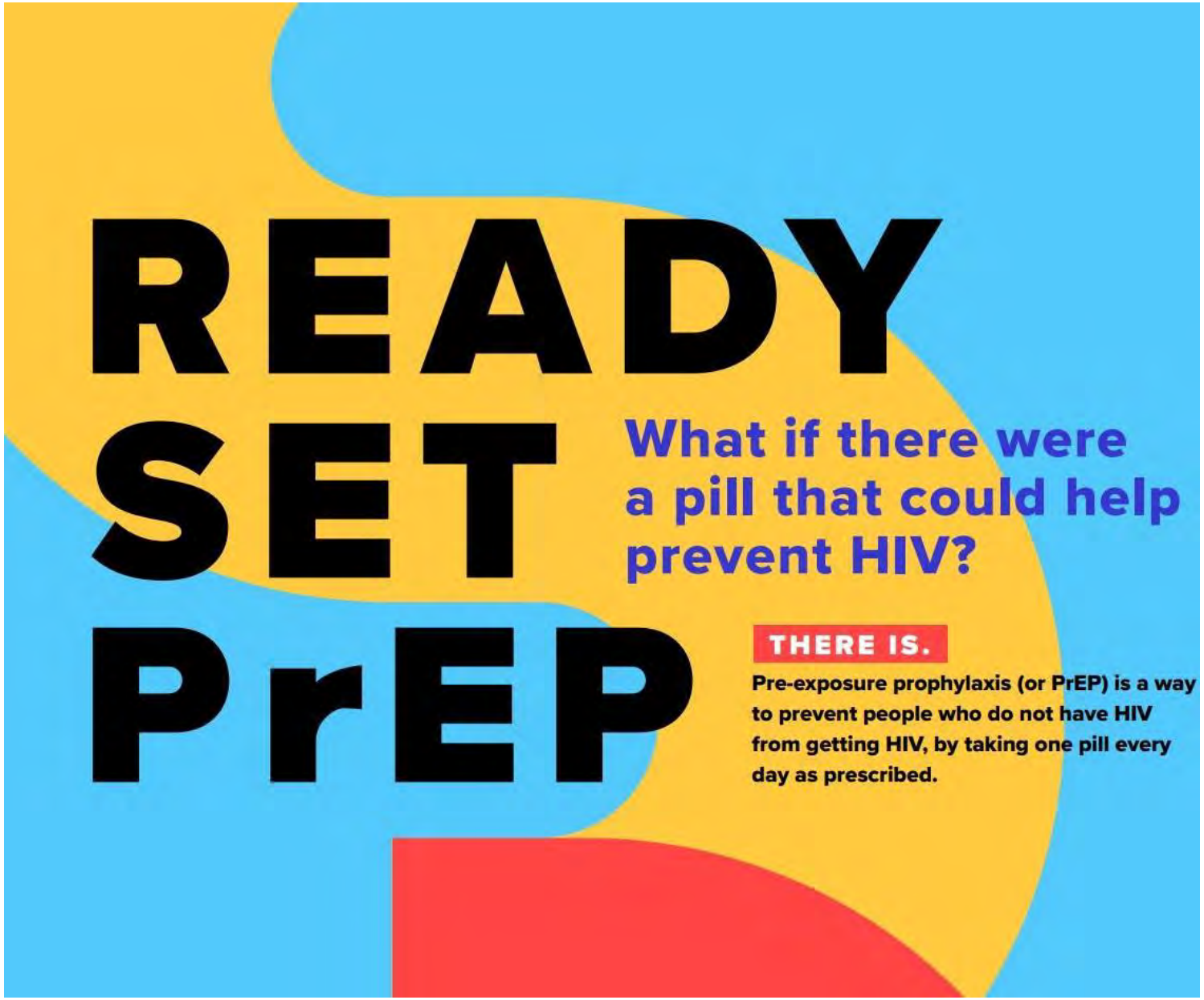
Outreach


Together we can do so much.
Opioid and Narcan Education
KANSAS CITY
Health Dept

Outreach


KC CARE
HEALTH CENTER
Healthcare in
your neighborhood
KC CARE
HEALTH CENTER
The heart of community healthcare

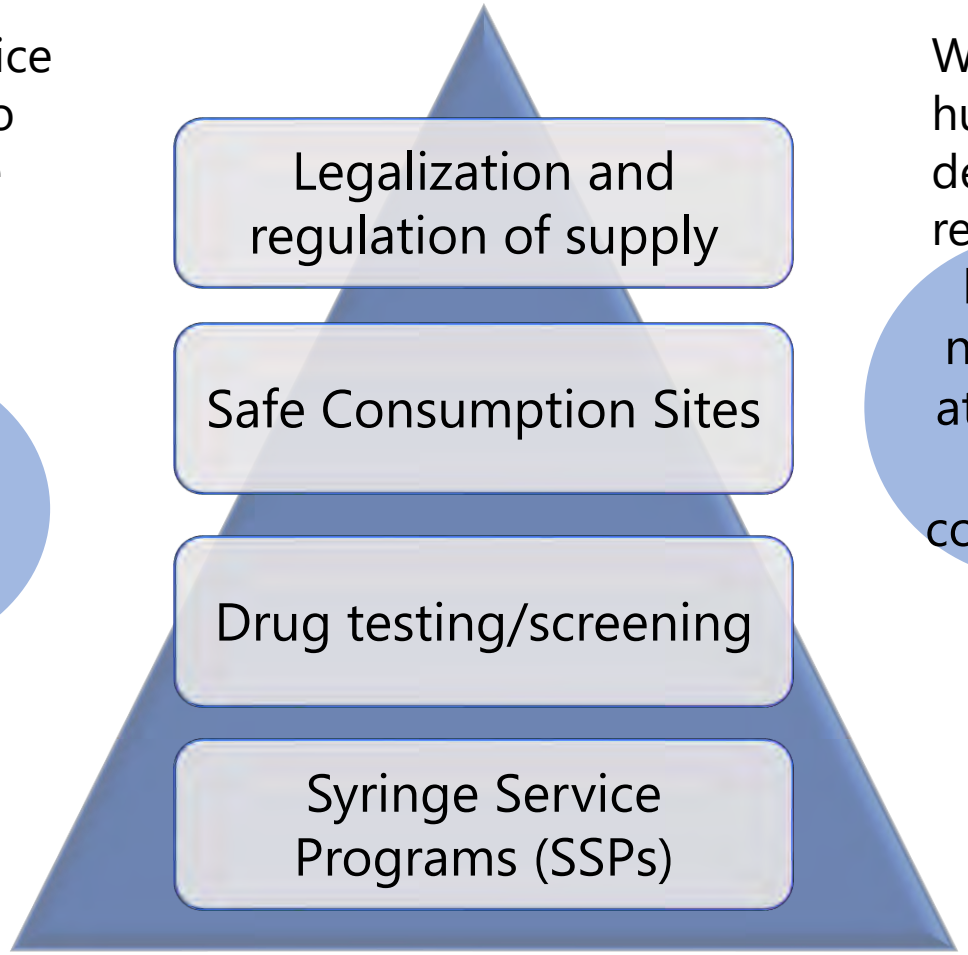
PrEP


READY
SET
PrEP
What if there were a pill that could help prevent HIV?
THERE IS.
Pre-exposure prophylaxis (or PrEP) is a way to prevent people who do not have HIV from getting HIV, by taking one pill every day as prescribed.

Harm Reduction Hierarchy of Needs

What legal and criminal justice policies can states employ to attack the supply side of the problem?

- Legaliz e SSPs
- Challenge paraphernali a laws
- Support funding for Harm Reduction programs



What can states do from the human services side to prevent deaths and assist those seeking recovery?

- Provide naloxone at no cost to consumers
- Promote HIV/HCV testing services
- Back affordabl e housing
- Destigmatiz e substance use
- Support MULTIPLE forms of recovery
- Offer vocal support of SSPs

SAMHSA
Substance Abuse and Mental Health Services Administration

MISSOURI TREATMENT COURTS

CHANGING MINDS, SAVING LIVES: THE EVOLUTION OF TREATMENT COURTS

GOALS

01

Provide Information

Foundation of Treatment Courts
Best Practices and Resources
Team Approach

02

Share Ideas

Questions Welcomed

03

Tailor to You

Your Role on the Team
Program Type
Time with the Program

TREATMENT COURTS

An alternative to incarceration for adult offenders in the criminal justice system who have been diagnosed with substance use disorder or co-occurring disorder. This problem solving court is led by a judge or treatment court commissioner and is comprised of a team of professionals which may include treatment providers for both substance use disorders and mental health issues, community supervision, prosecuting attorney, defense counsel, law enforcement, and social services providers. An emphasis on public safety and due process, along with supervision and accountability is joined with treatment to achieve individual success.

BRIEF HISTORY

- 1989- First Drug Court

  Miami, Florida

- 1993-First Drug Court in Missouri

  Jackson County-Kansas City

- 1994 - NADCP Founded

  National Association of Drug Court Professionals

- 1997 - 10 Key Components of Drug Courts

  Fundamental and principal document

- 2010 - DWI Courts in Missouri

  Legislation passed to establish DWI Courts

- 2020 - Missouri Treatment Court Standards Adopted

  Best Practices

TREATMENT COURTS IN MISSOURI

Treatment Court Coordination Commission

Oversee the Treatment Court Resource Fund

Chapter 478 RSMo

Allocate resources from the Treatment Court Resources Fund
Establish standards and practices that are based on current research related to practices shown to reduce recidivism
Treatment courts that do not comply with the commission's standards shall be subject to administrative action

Missouri Treatment Court Standards

Best Practice documents and resources

WHY TREATMENT COURTS?

Lawyer

SAMHSA
Substance Abuse and Mental Health Services Administration

State of Missouri
Office of State Courts Administrator

Reporting Period:
January 1 – December 31, 2022

Treatment Courts Coordinating Commission

Treatment Court Program Status

As of December 31, 2022, 44 judicial circuits had the following treatment court programs:

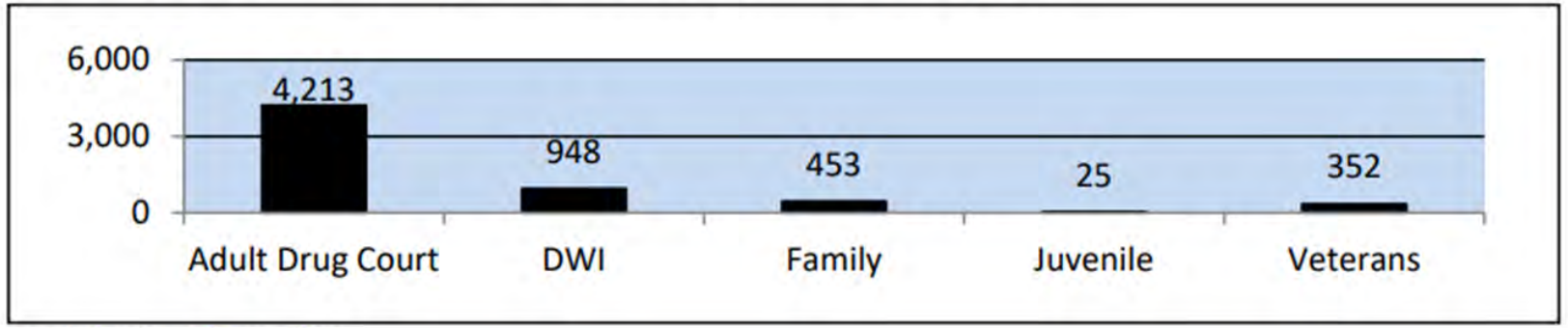
- 82 adult treatment courts serving 99 counties
- 4 juvenile treatment courts serving 5 counties
- 16 family treatment courts serving 24 counties
- 16 veteran's treatment courts serving 42 counties
- 25 designated DWI courts serving 34 counties

The commission provides funding to 133 of these programs in 43 judicial circuits.

Treatment Court Program Participants

During the 2022 reporting period, 5,991 individuals participated in a treatment court program.

4,213	Adult
948	DWI
453	Family
25	Juvenile
352	Veterans
5,991	Total*



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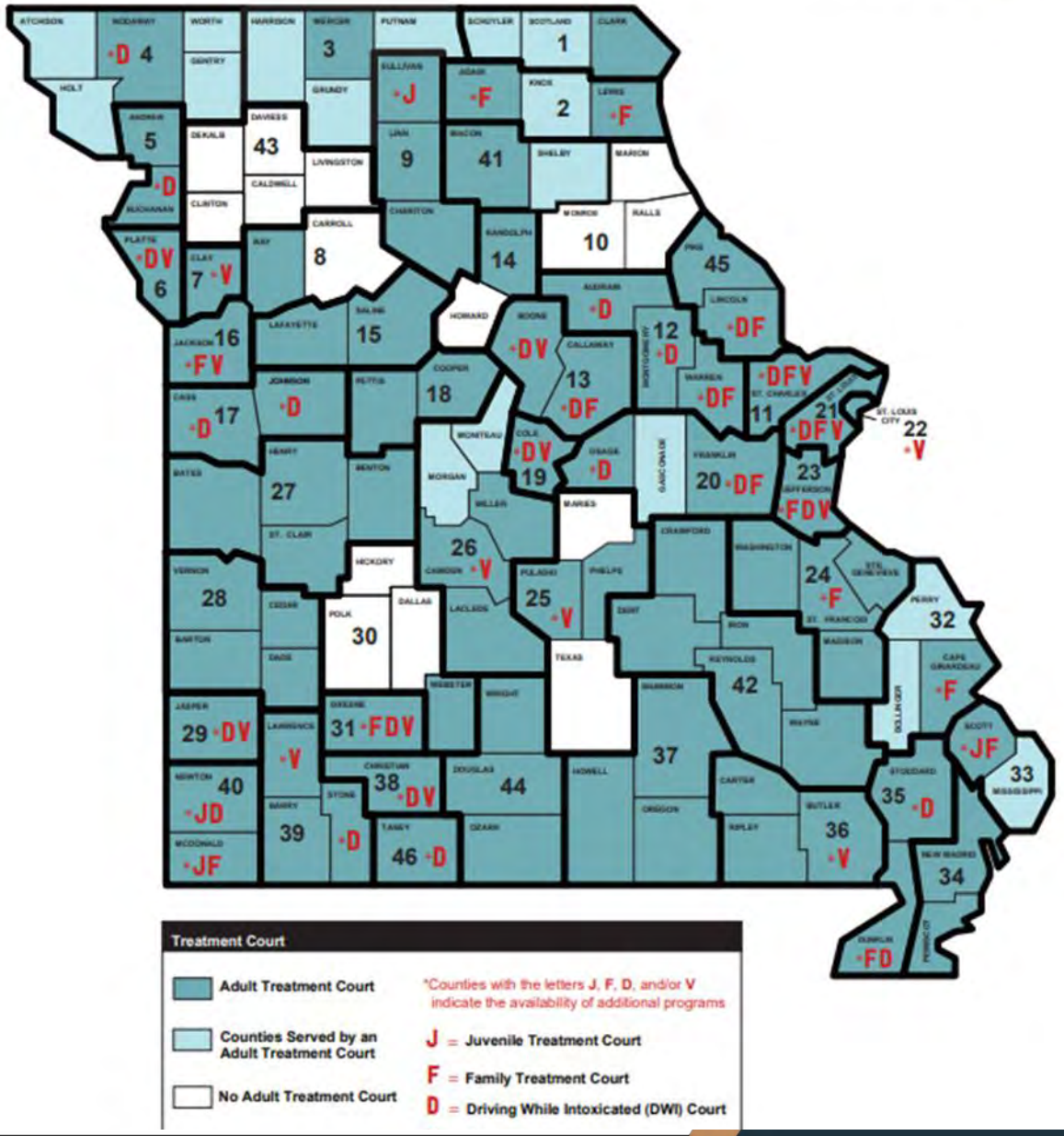

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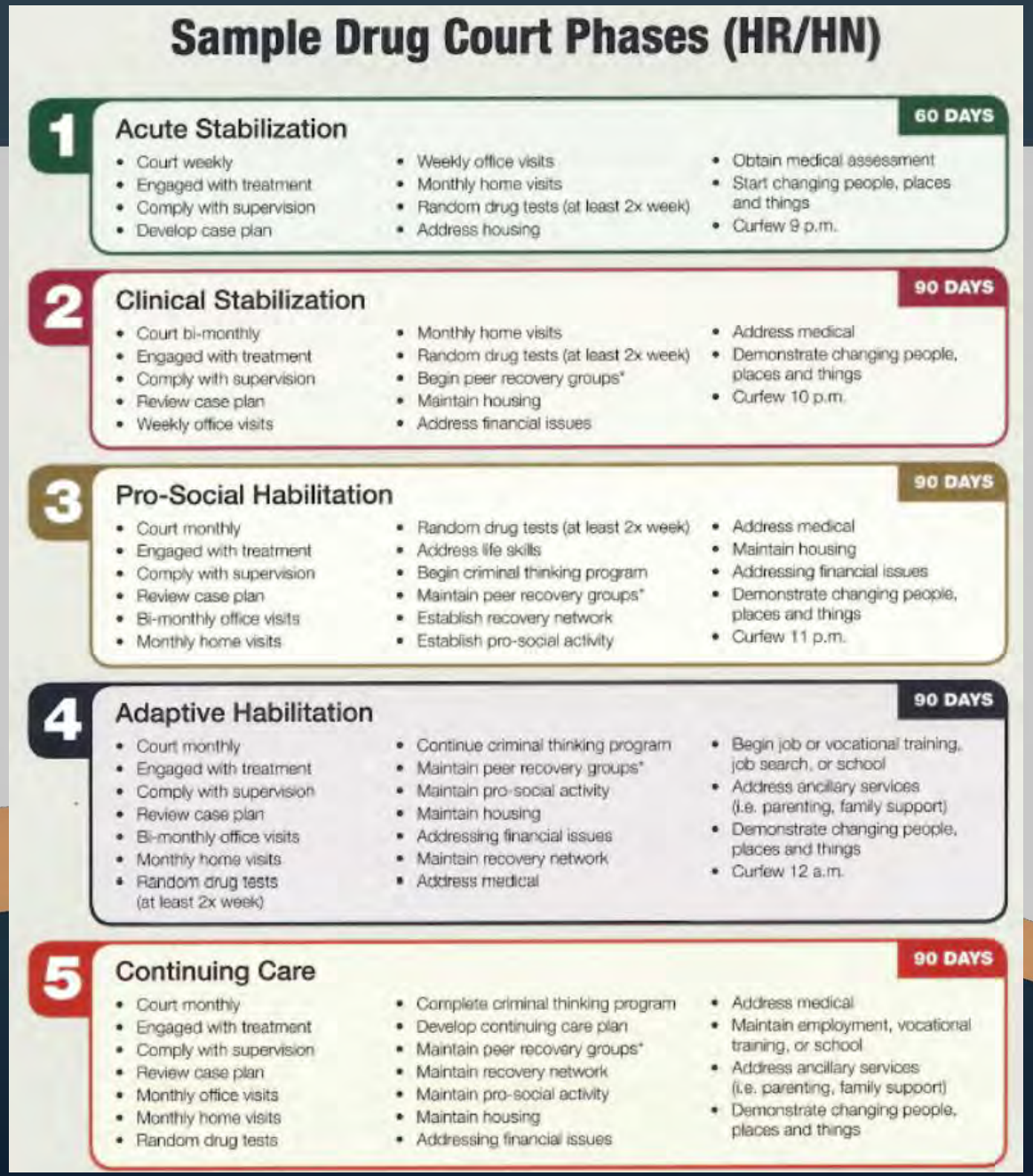

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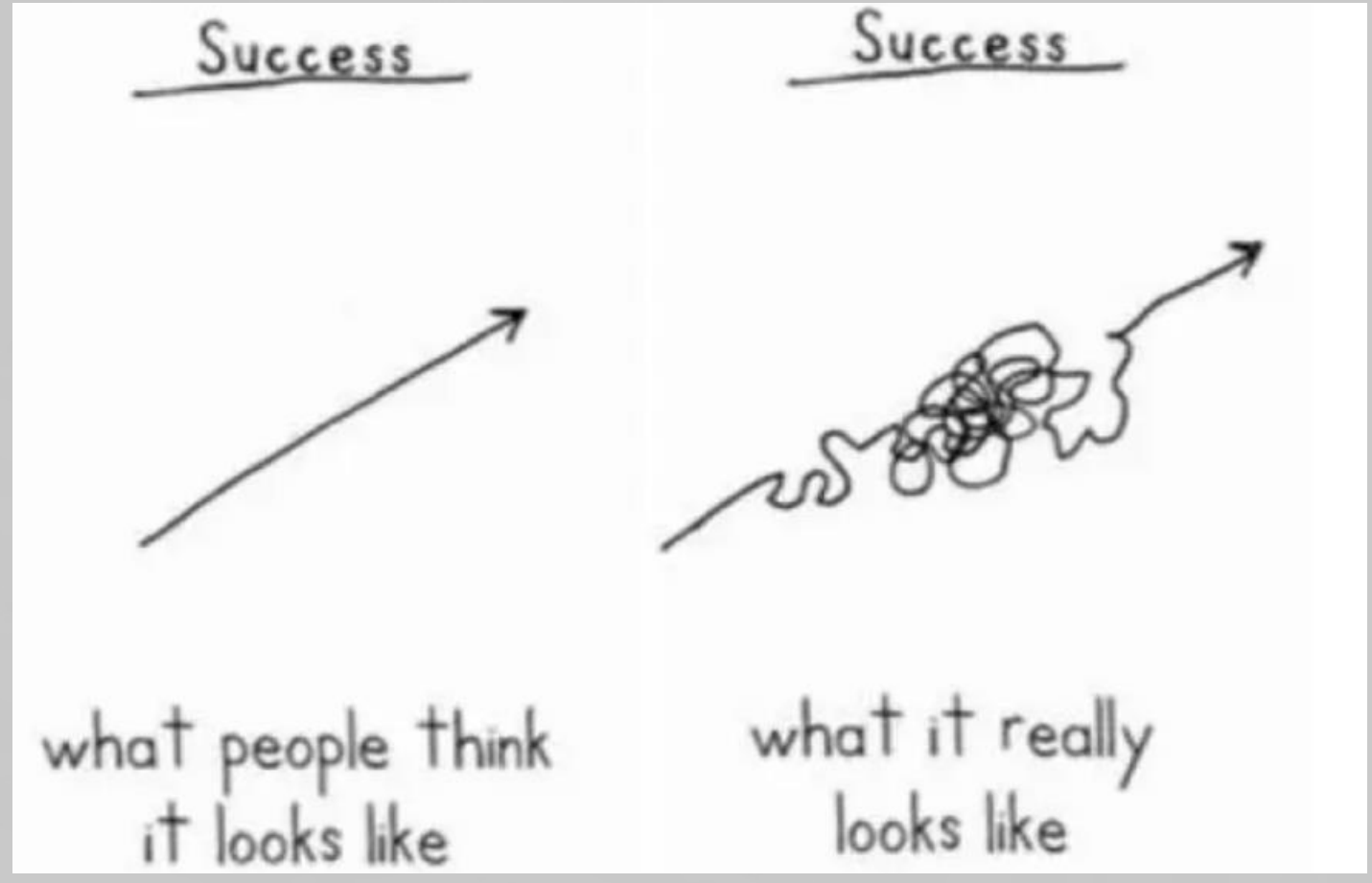

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Stacey Langendoerfer
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Jefferson City, Mo. 65110
573-356-5072
modrugcourts@gmail.com

MISSOURI TREATMENT COURTS

CHANGING MINDS, SAVING LIVES: THE EVOLUTION OF TREATMENT COURTS

GOALS

01

Provide Information

Foundation of Treatment Courts
Best Practices and Resources
Team Approach

02

Share Ideas

Questions Welcomed

03

Tailor to You

Your Role on the Team
Program Type
Time with the Program

TREATMENT COURTS

An alternative to incarceration for adult offenders in the criminal justice system who have been diagnosed with substance use disorder or co-occurring disorder. This problem solving court is led by a judge or treatment court commissioner and is comprised of a team of professionals which may include treatment providers for both substance use disorders and mental health issues, community supervision, prosecuting attorney, defense counsel, law enforcement, and social services providers. An emphasis on public safety and due process, along with supervision and accountability is joined with treatment to achieve individual success.

BRIEF HISTORY

- 1989- First Drug Court

  Miami, Florida

- 1993-First Drug Court in Missouri

  Jackson County-Kansas City

- 1994 - NADCP Founded

  National Association of Drug Court Professionals

- 1997 - 10 Key Components of Drug Courts

  Fundamental and principal document

- 2010 - DWI Courts in Missouri

  Legislation passed to establish DWI Courts

- 2020 - Missouri Treatment Court Standards Adopted

  Best Practices

TREATMENT COURTS IN MISSOURI

Treatment Court Coordination Commission

Oversee the Treatment Court Resource Fund

Chapter 478 RSMo

Allocate resources from the Treatment Court Resources Fund
Establish standards and practices that are based on current research related to practices shown to reduce recidivism
Treatment courts that do not comply with the commission's standards shall be subject to administrative action

Missouri Treatment Court Standards

Best Practice documents and resources

WHY TREATMENT COURTS?

Lawyer

SAMHSA
Substance Abuse and Mental Health Services Administration

State of Missouri
Office of State Courts Administrator

Reporting Period:
January 1 – December 31, 2022

Treatment Courts Coordinating Commission

Treatment Court Program Status

As of December 31, 2022, 44 judicial circuits had the following treatment court programs:

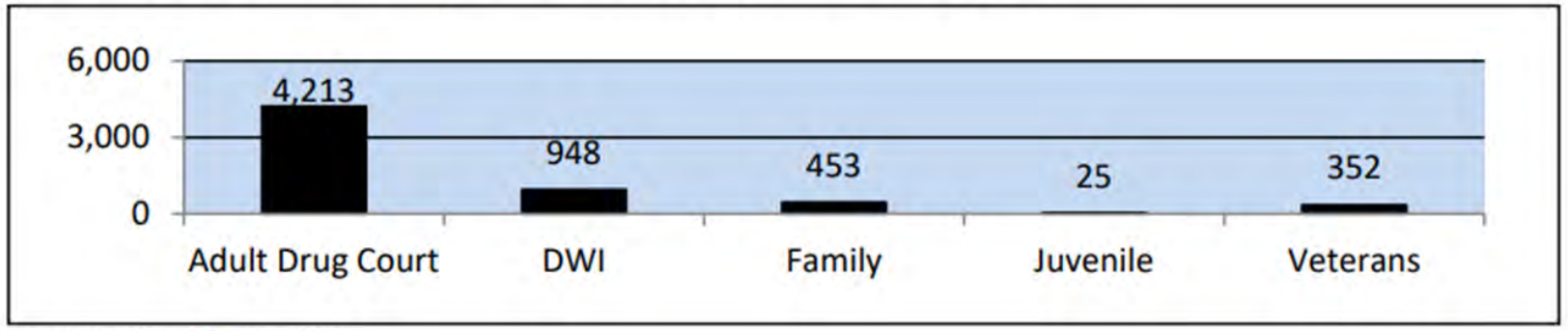
- 82 adult treatment courts serving 99 counties
- 4 juvenile treatment courts serving 5 counties
- 16 family treatment courts serving 24 counties
- 16 veteran's treatment courts serving 42 counties
- 25 designated DWI courts serving 34 counties

The commission provides funding to 133 of these programs in 43 judicial circuits.

Treatment Court Program Participants

During the 2022 reporting period, 5,991 individuals participated in a treatment court program.

4,213	Adult
948	DWI
453	Family
25	Juvenile
352	Veterans
5,991	Total*



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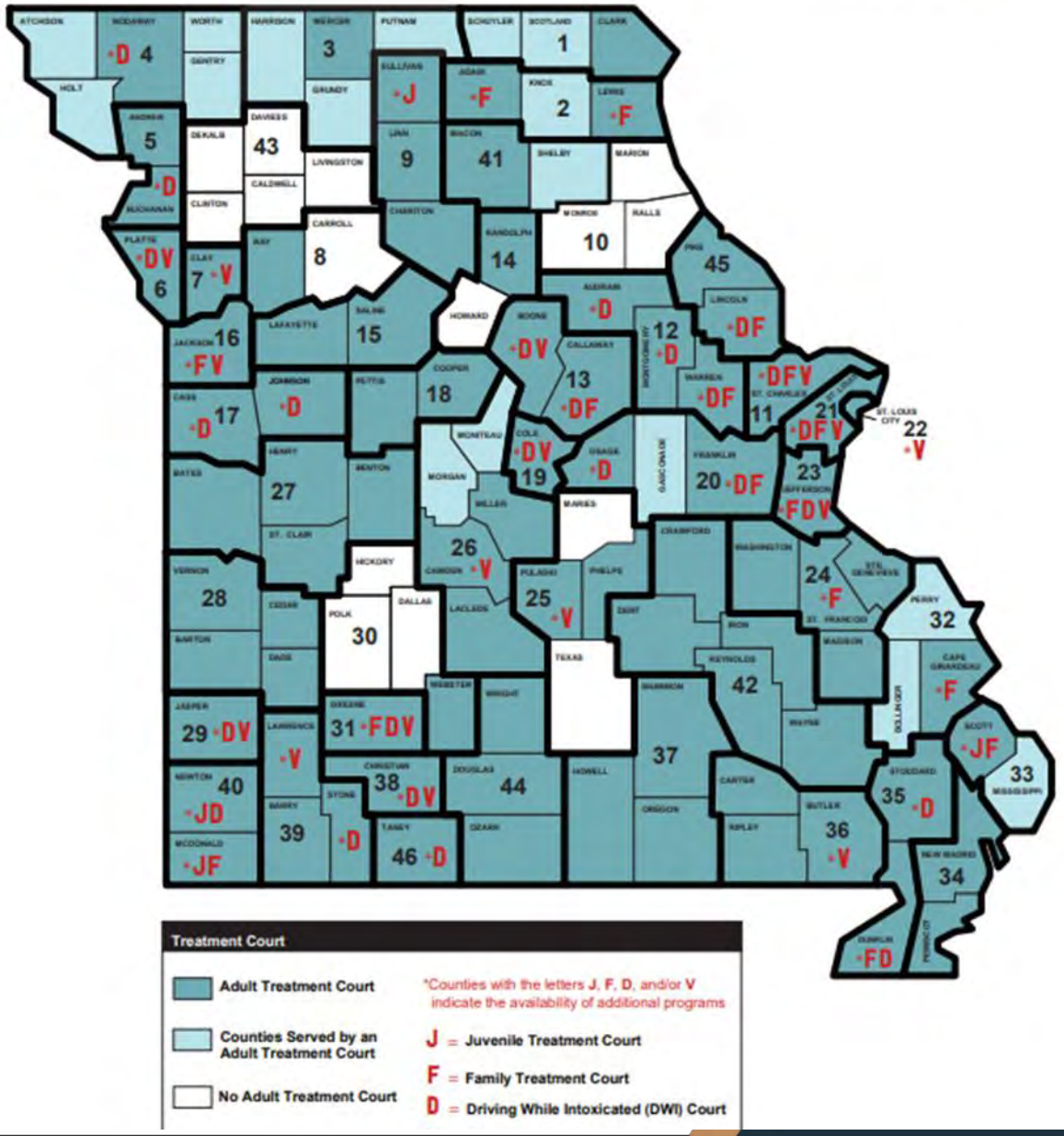

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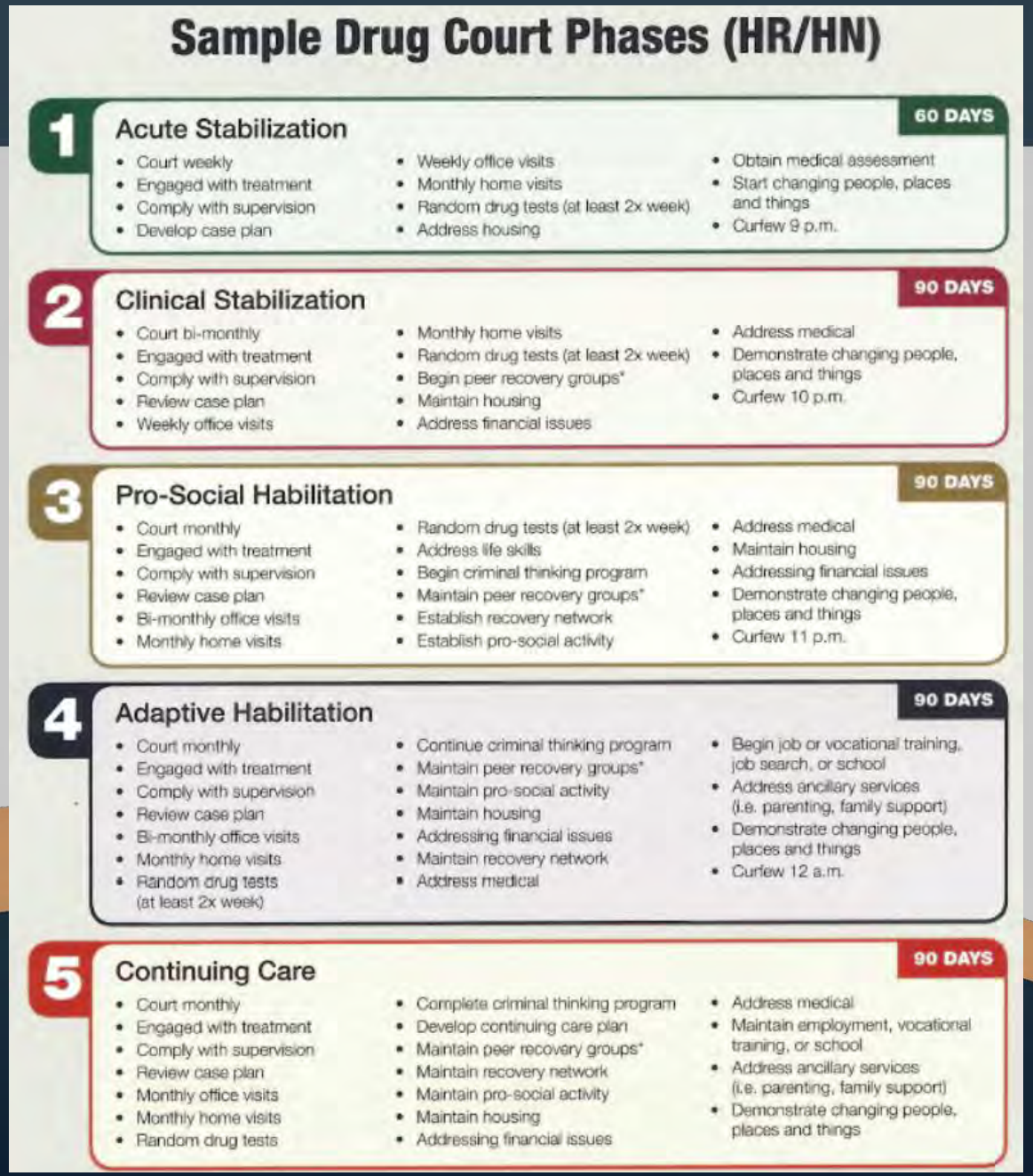

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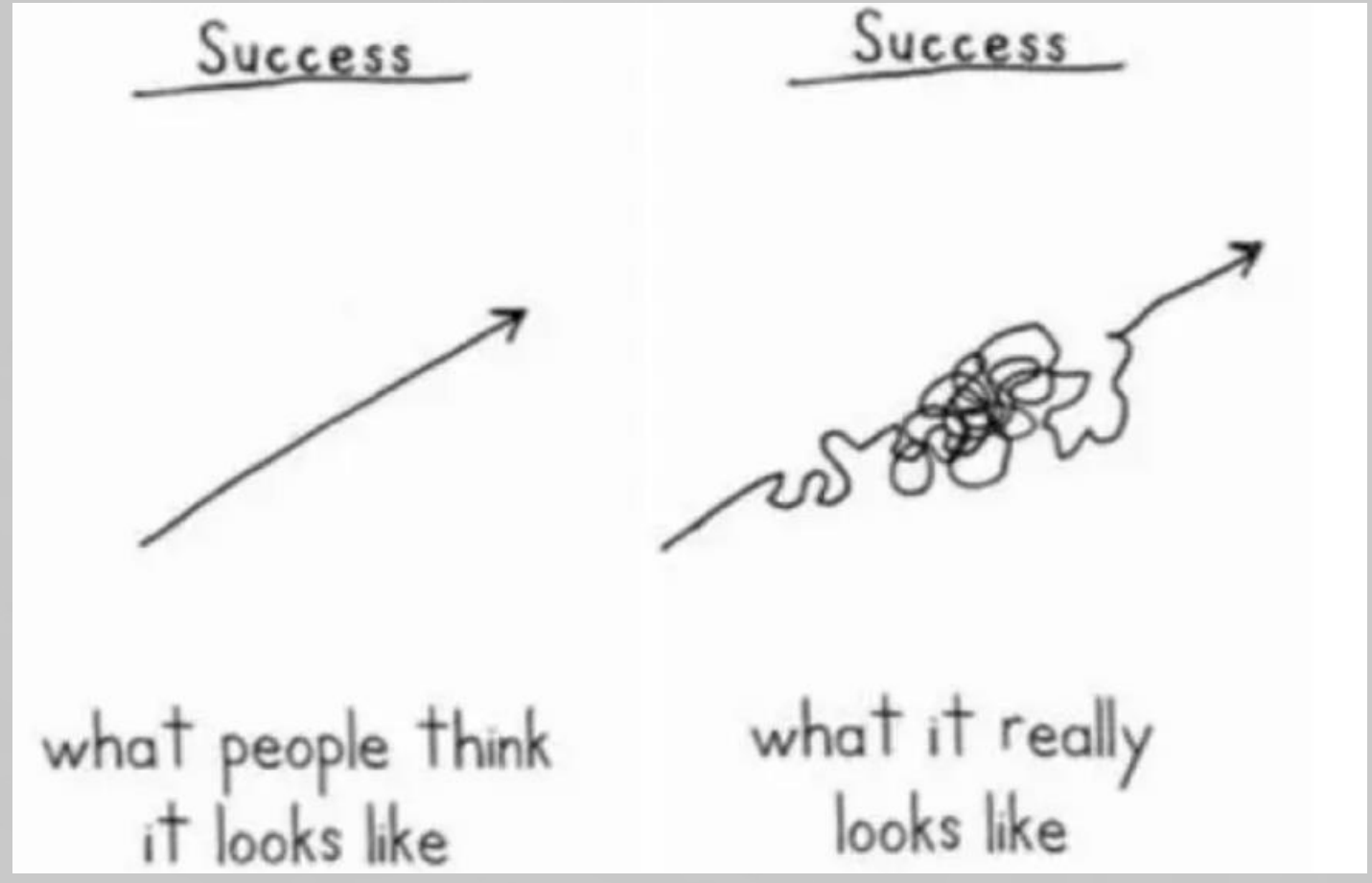

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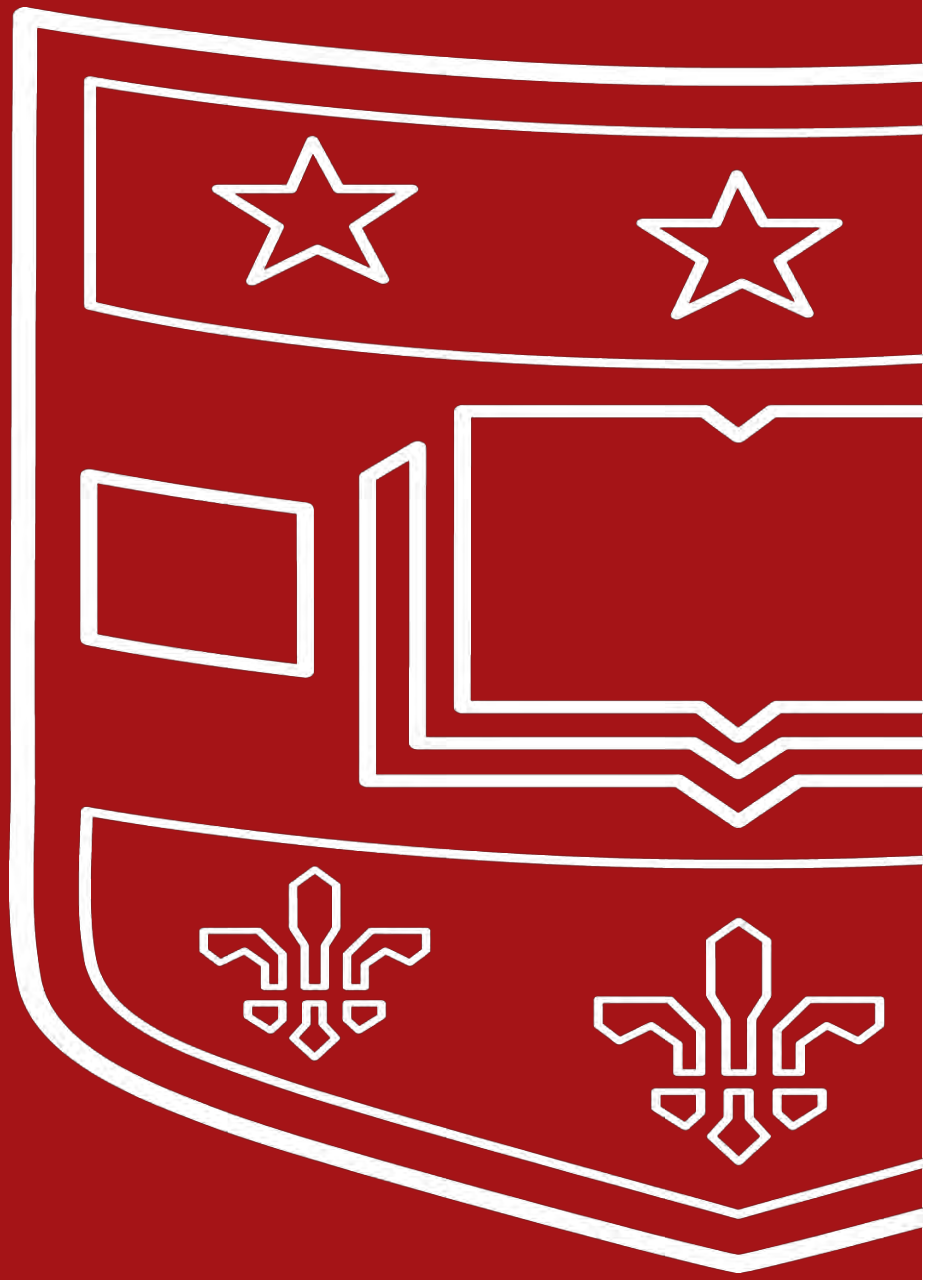
The opioid crisis: Emerging issues

Madeline McCrary, MD
Assistant Professor, Infectious Diseases



Washington University in St. Louis

Objectives

- Review the evolution of the opioid crisis
- Understand toxicities of drug supply and impact on people who use drugs and public health
- Understand infectious complications and importance to public health

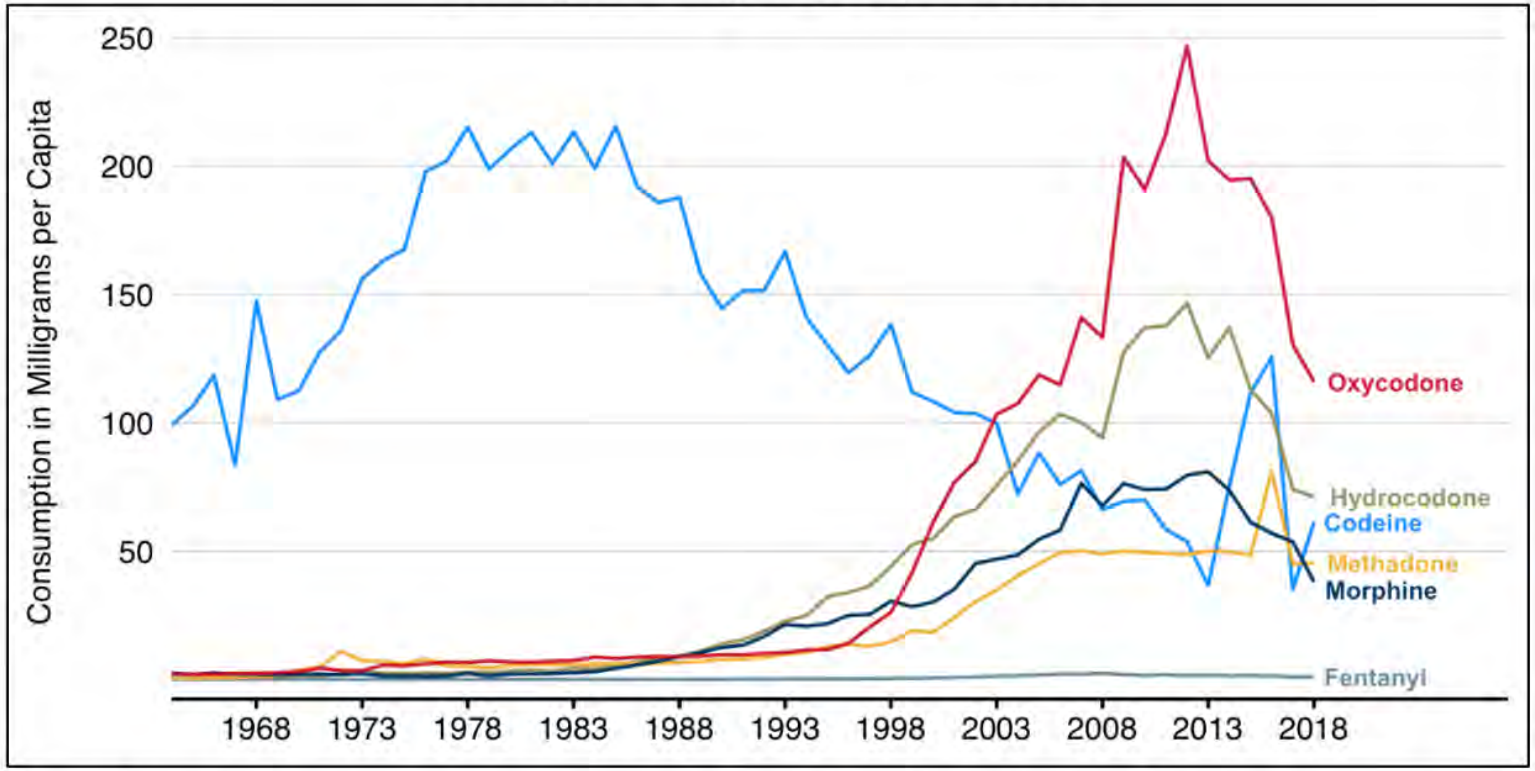
Outline

- Background
- “Fourth wave”
- Drug checking
- Emerging substances in the drug supply
  - Xylazine
  - Nitazenes
- Crisis as a *syndemic*
  - Infectious complications of substance use and impacts on health systems

Words Matter

Figure 3. Opioid Consumption in the United States, by Opioid

Consumption in milligrams per capita: 1964-2018

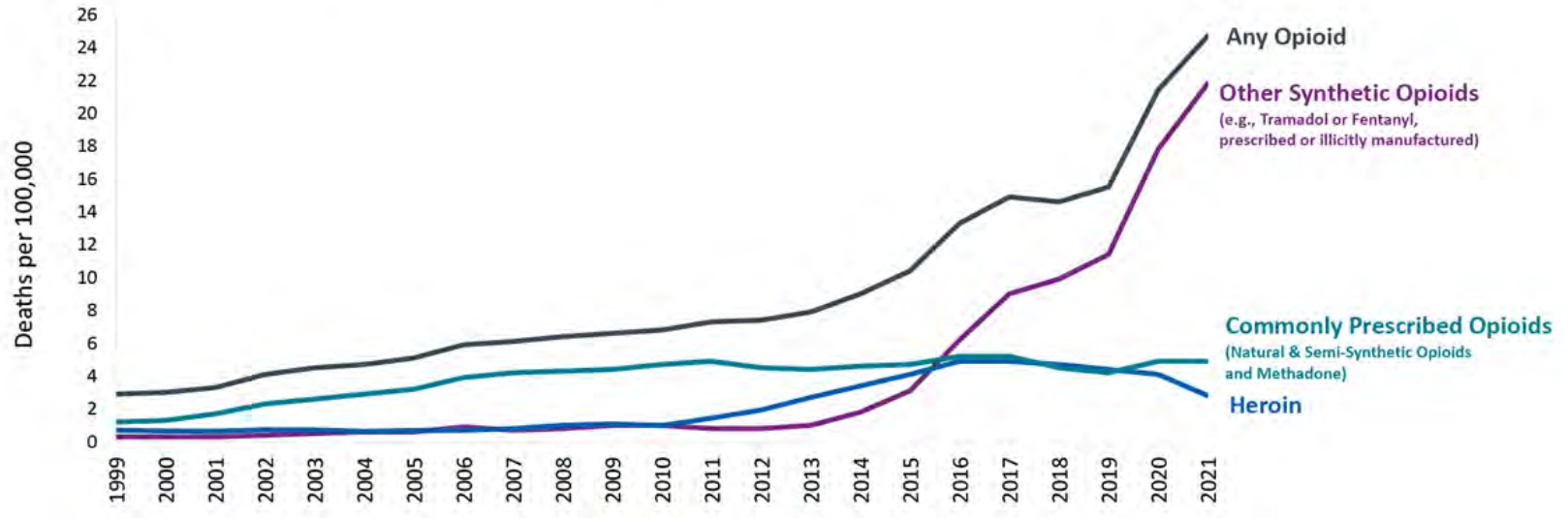


Source: International consumption of narcotic drugs, 1964-2018, data provided to CRS by the International Narcotics Control Board (August 2020).

Notes: Consumption in milligrams per capita accounts for population change over time but does not factor in the potency of the opioid.

https://crsreports.congress.gov/product/pdf/R/R46805

Three Waves of Opioid Overdose Deaths



SOURCE: National Vital Statistics System Mortality File.

What is fentanyl?

- Synthetic (manufactured, non-naturally produced) opioid
- 30-40x more potent than heroin
- Some analogues much more potent
  - Carfentanil – 10K x morphine
- Fast onset of action but shorter half-life

- Pros – more potent
- Cons – have to seek out drug more often due to shorter duration action – in withdrawal A LOT

Why did fentanyl enter the drug supply?

- ‘Demand-led’: did producers think that people who use opioids want (or need) a stronger, cheaper product?
- ‘Supply-led’: reduced costs of production and distribution
- But, initially in US, people did not know there was fentanyl in the product (thought buying heroin, but actually heroin + fentanyl)
  - Entered at the wholesale level
- Thought to be a combination of decreased opium production and distribution issues, increasing street price of heroin PLUS high demand for heroin

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6548693/pdf/nihms-1001711.pdf

Why has fentanyl persisted despite high deaths?

- From business perspective, not necessarily ideal if customers are dying
- At the same time
  - Cheaper to produce
  - Synthetic - avoid supply issues with opium plant like climate, disease etc
  - Easier distribution as more concentrated

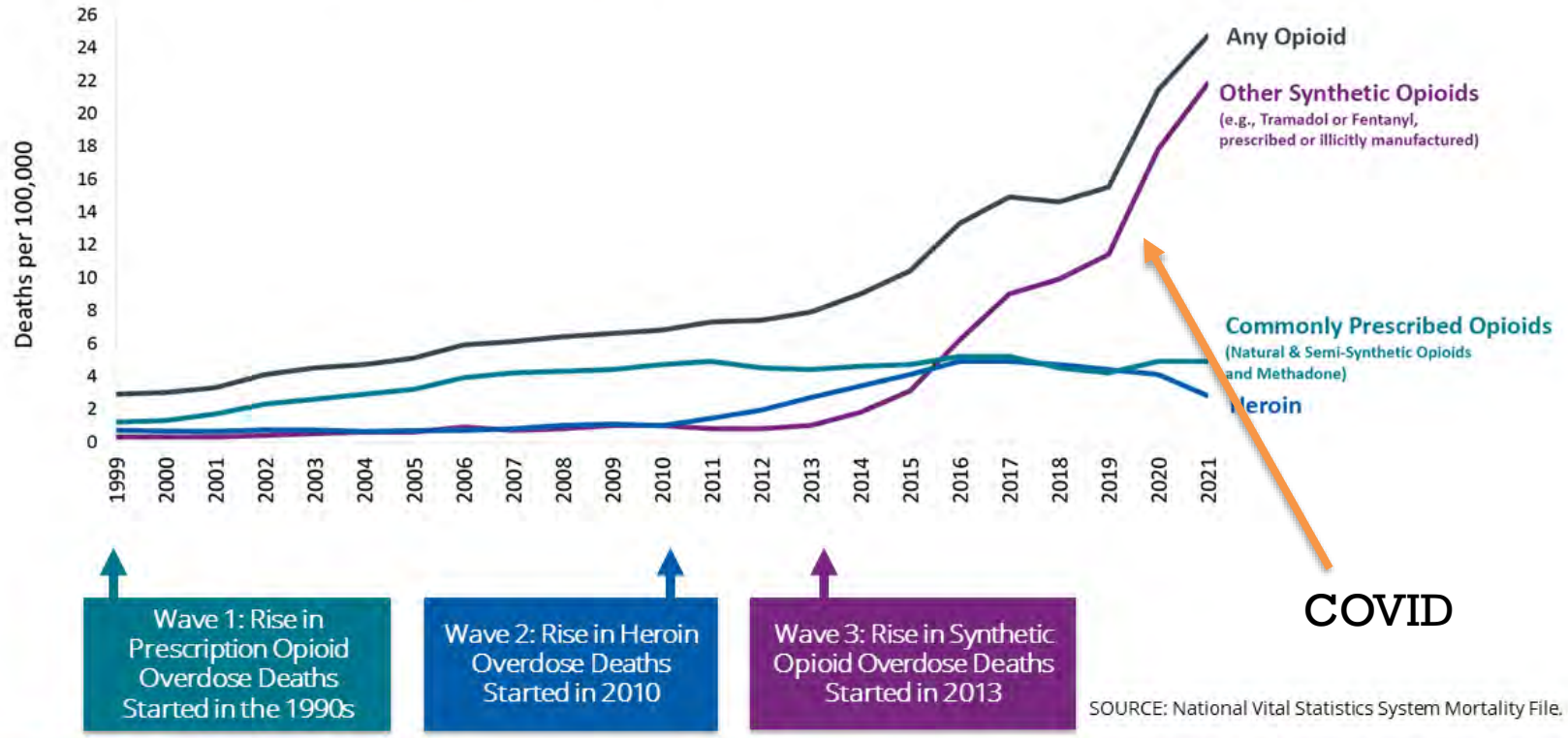
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6548693/pdf/nihms-1001711.pdf

Entire opioid drug supply is essentially now illicit fentanyl (or analogues)

- Little to no real heroin
- No real prescription opioid on the street
  - "Perc 30s" are *not* Percocet – they are pressed fentanyl pills
- Variable concentration of fentanyl in products even when marketed as fentanyl – cannot tell how much using or even if it is something else
- **Reflects a heightened *structural* risk for PWUD**

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6548693/pdf/nihms-1001711.pdf
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8154745/pdf/nihms-1695670.pdf

Three Waves of Opioid Overdose Deaths



SOURCE: National Vital Statistics System Mortality File.

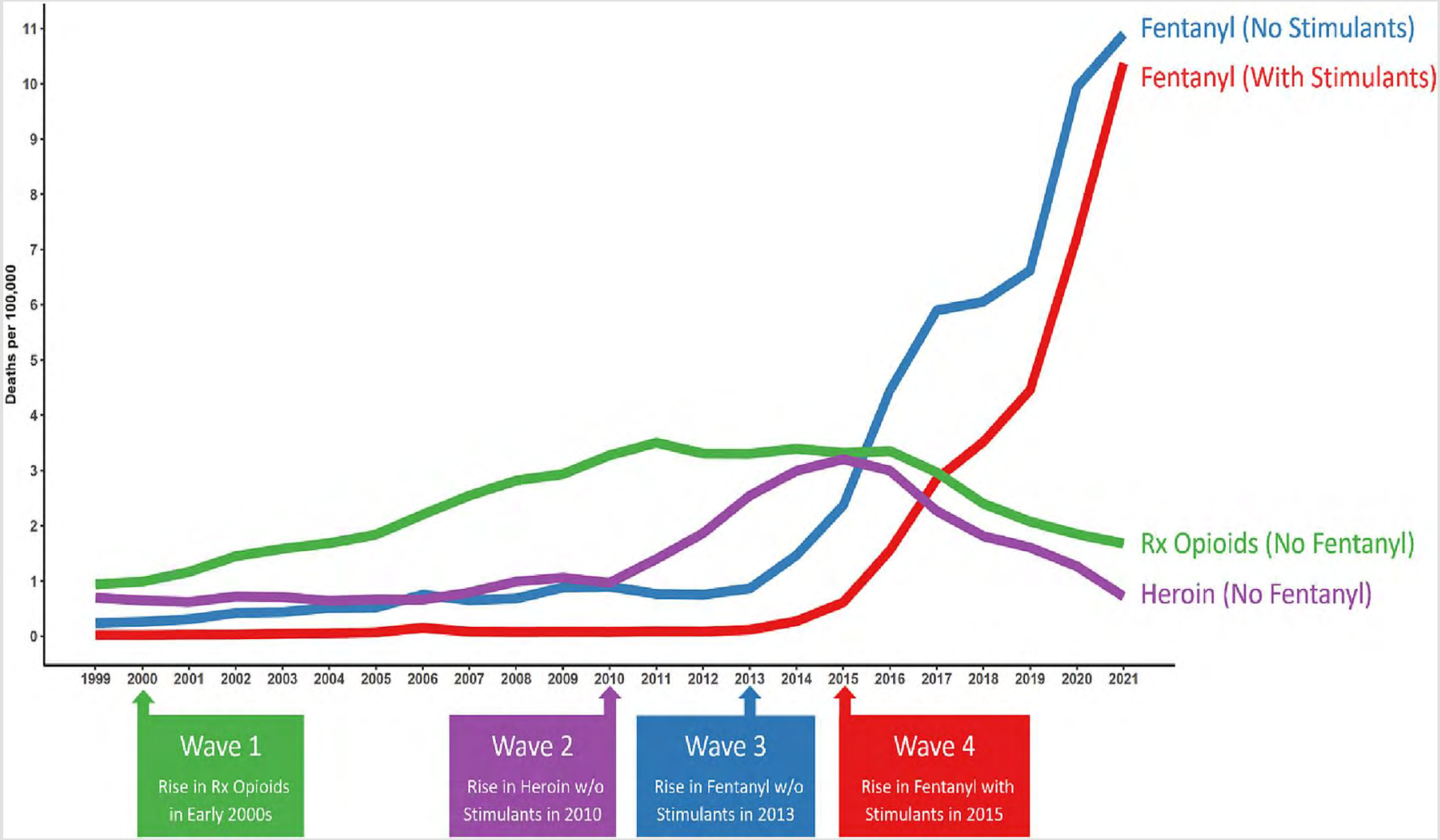
The ”fourth wave”

- Illicit fentanyl + stimulants (cocaine, methamphetamine) or other drugs
- Started in ~2015

- Age-adjusted drug overdose rates per 100,000 people
  - Cocaine increased from 1.4 to 6.0 from 2012 to 2020 with rate in 2020 being 22% higher than 2019
  - Psychostimulants generally increased from 2008 to 2020, with the rate in 2020 being 50% higher than in 2019

https://stacks.cdc.gov/view/cdc/112340

Charting the fourth wave: Geographic, temporal, race/ethnicity and demographic trends in polysubstance fentanyl overdose deaths in the United States, 2010–2021



Addiction, First published: 13 September 2023, DOI: (10.1111/add.16318)

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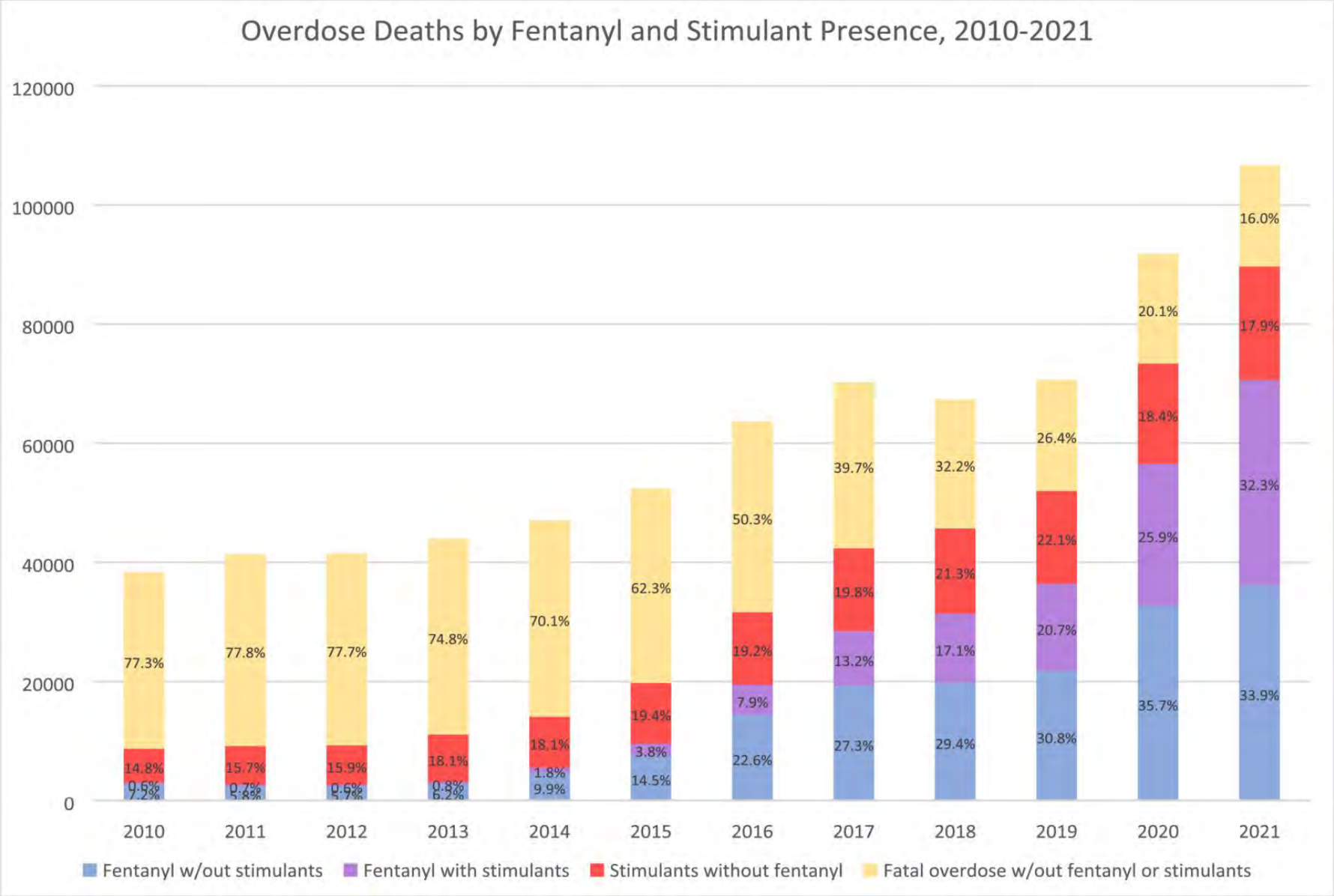
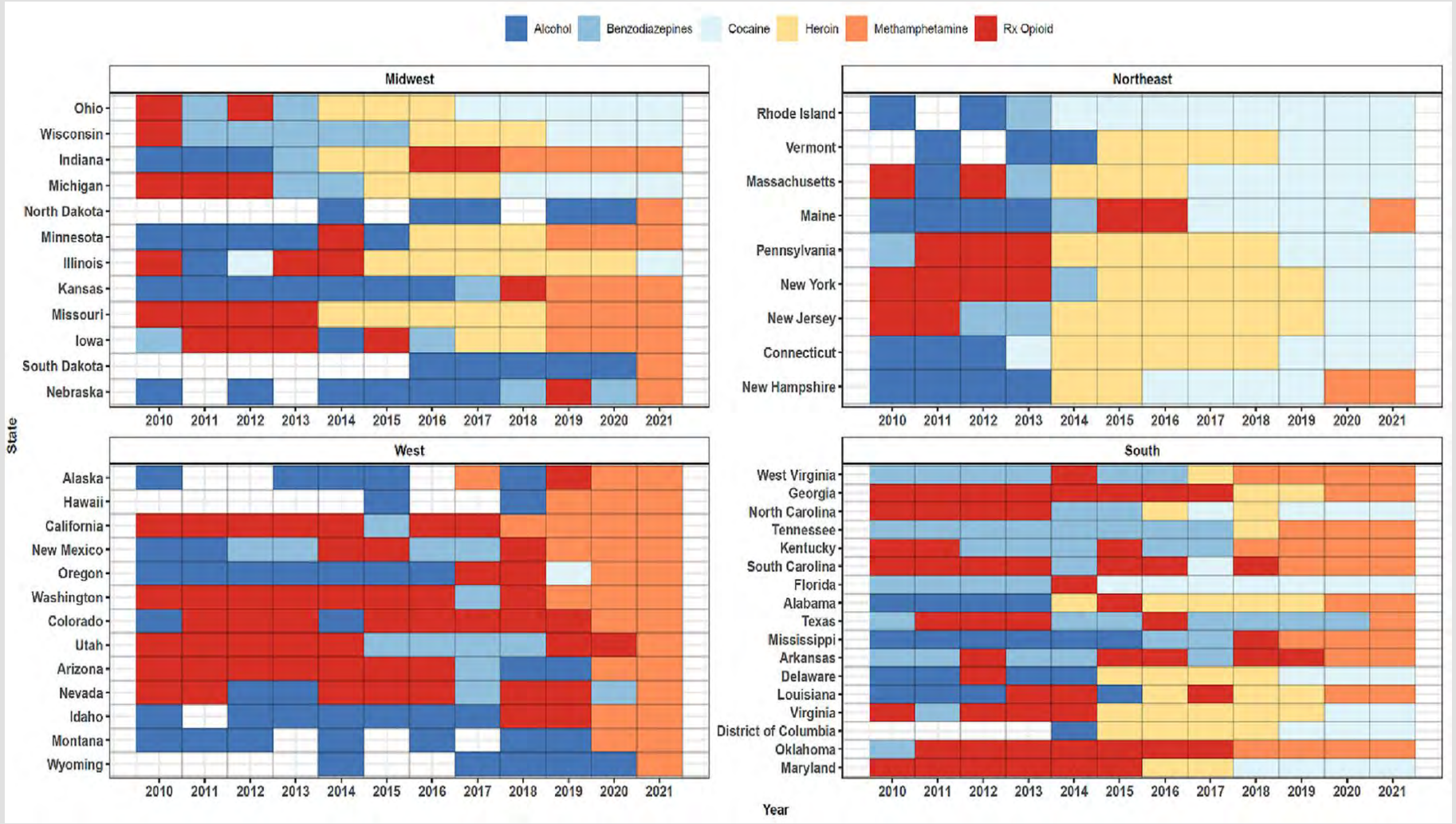


Addiction, First published: 13 September 2023, DOI: (10.1111/add.16318)

Charting the fourth wave: Geographic, temporal, race/ethnicity and demographic trends in polysubstance fentanyl overdose deaths in the United States, 2010–2021

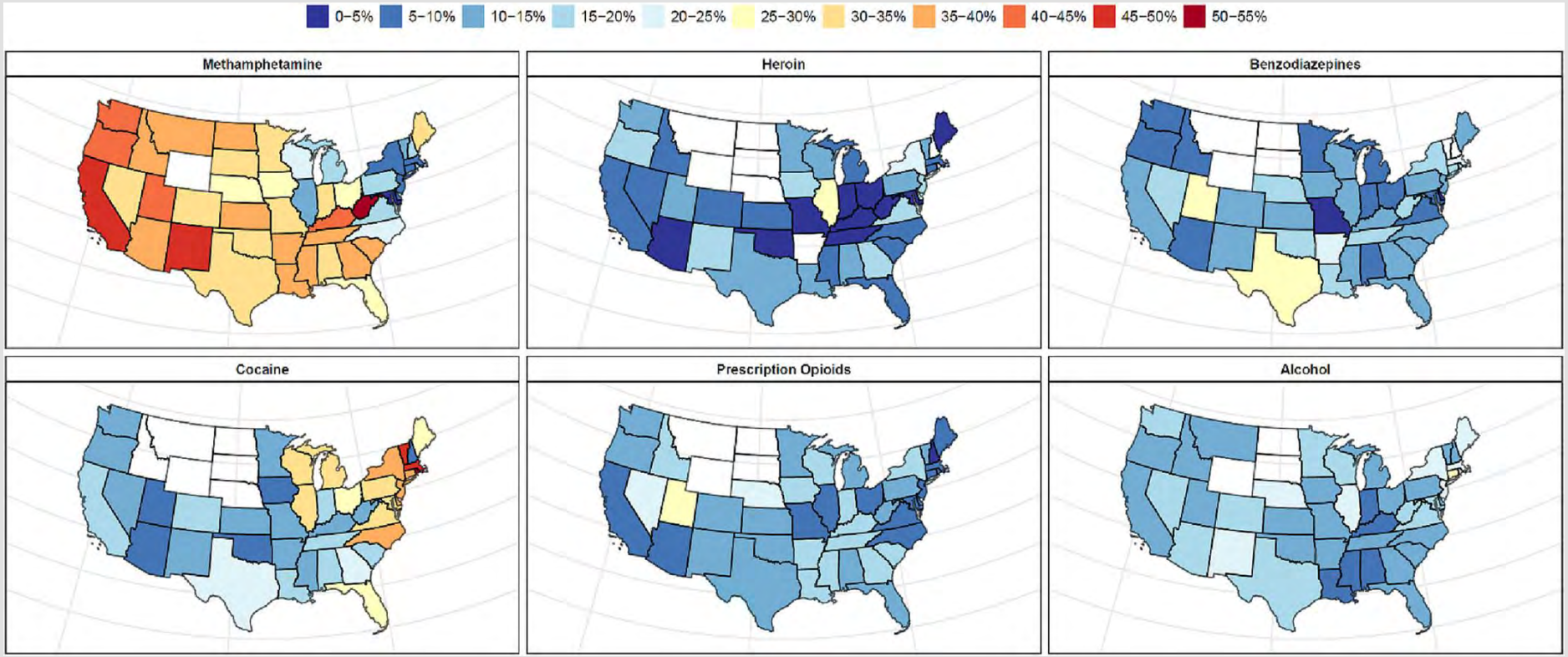
Most common drug co-involved in overdose mortality with fentanyl, by state and year, 2010–2021.



Addiction, First published: 13 September 2023, DOI: (10.1111/add.16318)

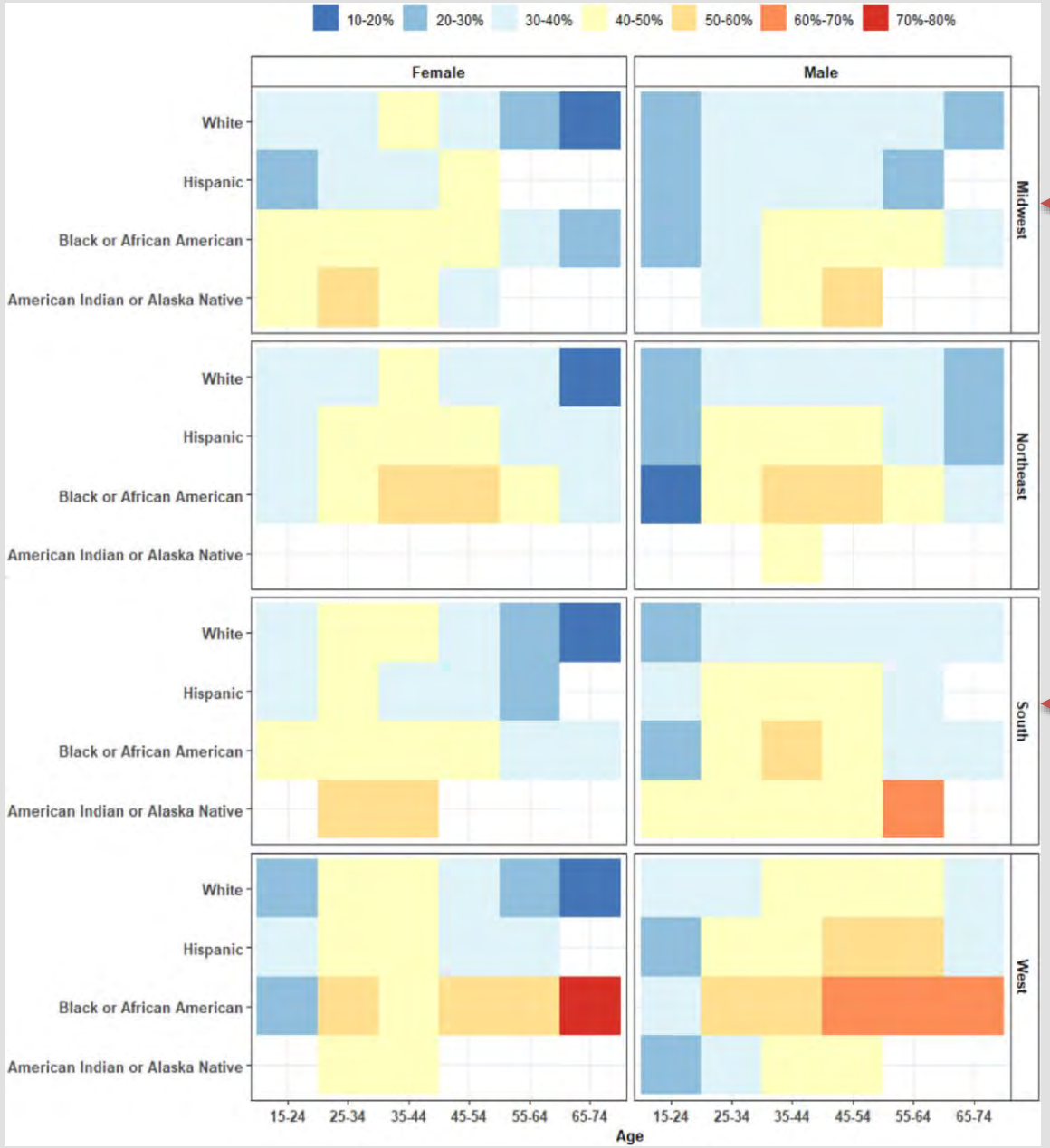
Charting the fourth wave: Geographic, temporal, race/ethnicity and demographic trends in polysubstance fentanyl overdose deaths in the United States, 2010–2021

Percent of fentanyl overdose deaths containing other drug classes by state, 2021



Addiction, First published: 13 September 2023, DOI: (10.1111/add.16318)

Charting the fourth wave: Geographic, temporal, race/ethnicity and demographic trends in polysubstance fentanyl overdose deaths in the United States, 2010–2021



Addiction, First published: 13 September 2023, DOI: (10.1111/add.16318)

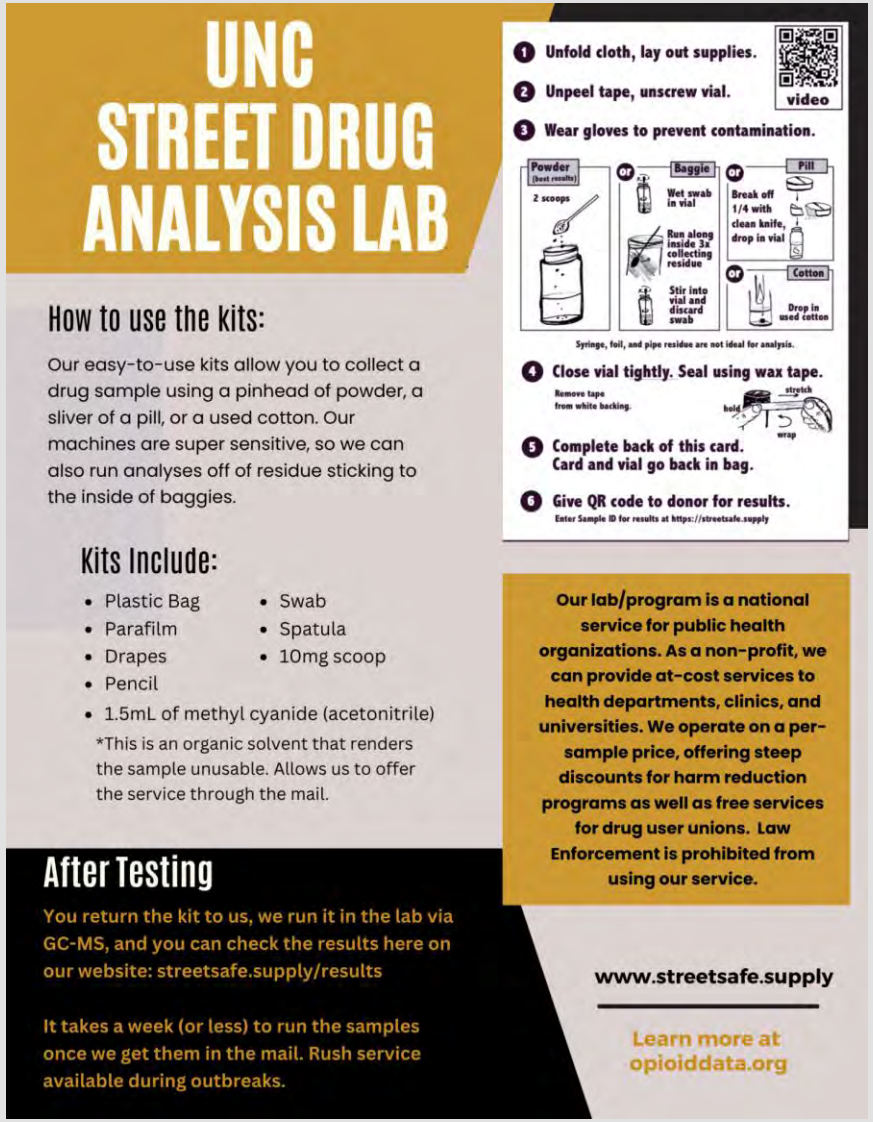
Beyond stimulants…

- People have no idea what is or isn't in their drugs
- Some advocate for using the term "poisonings" as opposed to "overdoses"

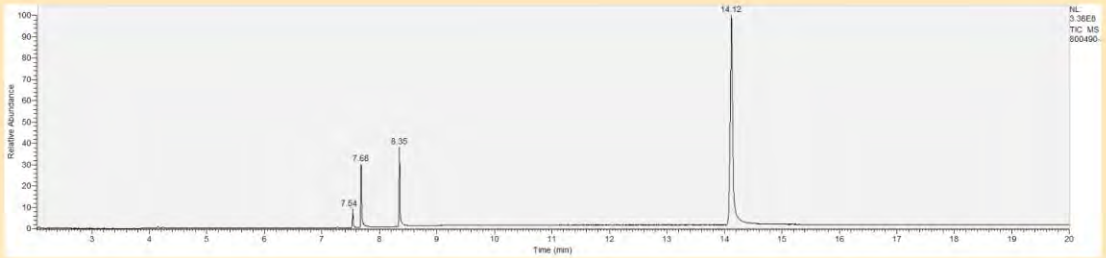
- Drug checking programs have consistently identified numerous adulterants in the supply
  - Unclear whether these are supply or demand driven
  - Ie – added to provide something positive for the consumer VS to cut the supply and add more filler

UNC Street Drug Analysis Lab

- Offers anonymous drug checking using mass spectrometry (GCMS)
  - Fancy machine that analyzes a substance and can tell you the chemical compounds/composition



800490



From Cortland, New York on 8/17/2023
Assumed to be xanax

2 major substances detected:

- **lidocaine**
- **etizolam**

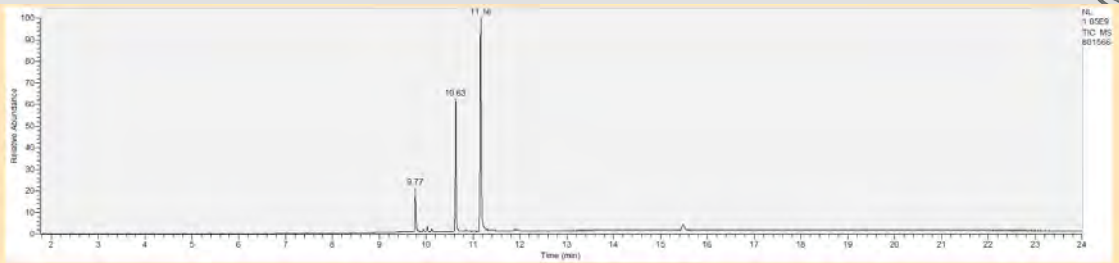
Looks = light green pill

Need free supplies and advice to keep you safe? Find your nearest harm reduction program at harmreduction.org

Major substances in graph:

- Peak 14.12 = etizolam
- Peak 7.54 = lidocaine

801566



From Grand Rapids, Michigan on 8/8/2023
Assumed to be benzodiazepine

4 major substances detected:

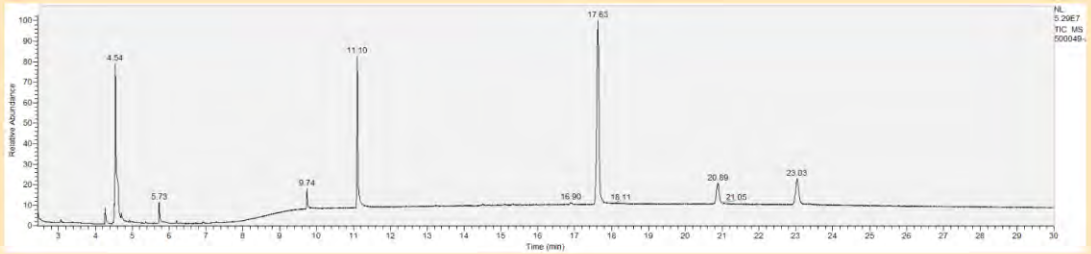
- **quinine**
- **4-ANPP**
- **fentanyl**
- **heroin**

But we found lots of contaminants too, with traces of 6-monoacetylmorphine (6-MAM) + papaverine + ethyl 4-ANPP + acetylcodeine + phenethyl 4-ANPP. Trace substances in small quantities are usually harmless, but can sometimes cause health problems. Unexpected sensations may be due to these.

Fentanyl is potent and the amount changes by batch. If you weren't expecting it, consider getting test strips online or from a harm reduction program. **Carry naloxone (Narcan)** to reverse overdoses. **Don't use alone** so someone can help if you go out.

Looks = white, tan, brown, black powder, chunky, pill

500049



From Franklin, North Carolina on 9/11/2023
Assumed to be fentanyl

This is a messy brew of 6 major substances:

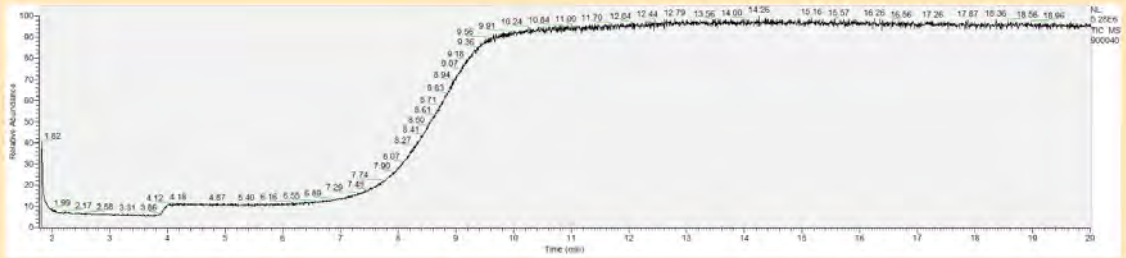
- **N-phenylpropanamide**
- **metonitazene**
- **fentanyl**
- **protonitazene**
- **4-ANPP**
- **N-pyrrolidino-etonitazene**

Fentanyl is potent and the amount changes by batch. If you weren't expecting it, consider getting test strips online or from a harm reduction program. **Carry naloxone (Narcan)** to reverse overdoses. **Don't use alone** so someone can help if you go out.

There are a lot of different substances in this sample. We don't know the harms that some of these can cause. Be careful and be prepared for unexpected reactions.

Looks = white crystals, powder

900040



From Houston, Texas on 5/22/2023
Assumed to be heroin, fentanyl, methamphetamine

Sorry, no substances of interest detected.
Looks = clear crystals, powder, pill

Need free supplies and advice to keep you safe? Find your nearest harm reduction program at harmreduction.org

Method(s): GCMS

Lab Notes:
Record for Sample 900040 last updated 6 Sep 2023.

Emerging adulterant substances

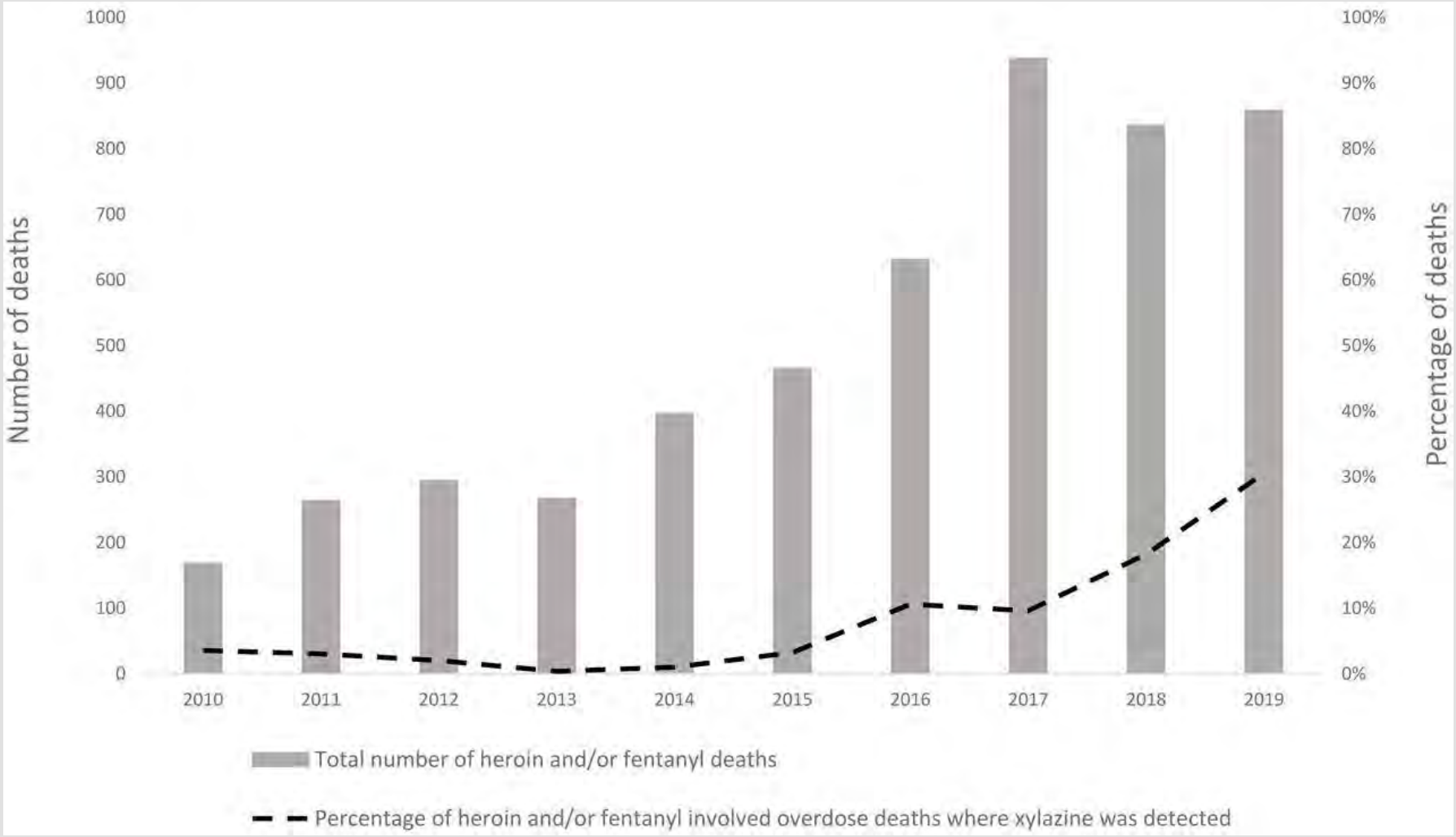
- **Xylazine**
- **Nitazenes**
- Designer benzodiazepines

Xylazine

- Veterinary tranquilizer
- In humans, can cause low blood pressure, central nervous system depression, respiratory depression and low heart rate
- Central alpha-2-agonist
- It does NOT act on the mu-opioid receptor (opioid receptor responsible for respiratory depression)
  - Effects on respiratory depression won't be reversed by naloxone (Narcan)

- Human use among PWUD documented in Puerto Rico since early 2000s

Number and percentage of heroin and/or fentanyl unintentional overdose deaths involving xylazine, Philadelphia, Pennsylvania, 2010–2019.



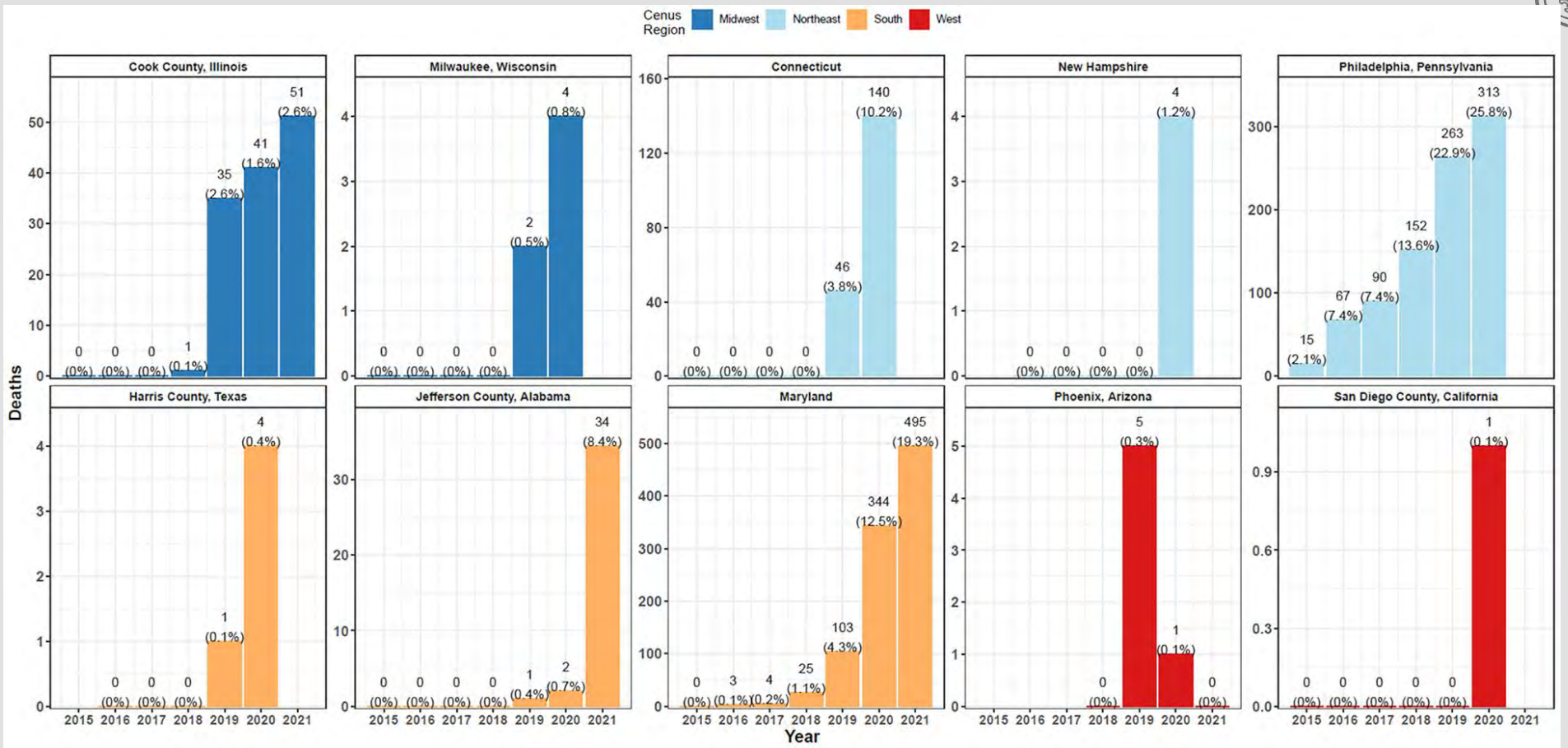
Jewell Johnson et al. Inj Prev 2021;27:395-398

Why did this enter the supply?

- Some people like it, some people don't
- Some liked that it perpetuates the effects of fentanyl (recall, very short acting) and stave off withdrawal
- Many were wary of the negative health effects particularly risk of severe skin wounds, sedation and worsened withdrawal

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9128597/

Xylazine spreading west across US



Xylazine-Present Overdose Deaths by Jurisdiction and Year. Xylazine-present deaths are show as counts and as a percent of all overdose deaths in text. Color indicates US census region. Values for 2021 represent estimates, should trends from the observed fraction of the year continue linearly.

Drug Alcohol Depend. 2022 Apr 1; 233: 109380.
Published online 2022 Feb 26. doi: 10.1016/j.drugalcdep.2022.109380

Xylazine

- Important implications
  - Increased overdose risk (not reversed by naloxone)
  - Challenging to manage, severe withdrawal syndrome
  - Sedating – leaves person vulnerable
  - Necrotic skin wounds not associated with injection sites, can occur even with non-injection use
    - Unclear mechanism
    - Very painful

Nitazenes

- Powerful illicit synthetic opioids
- Created decades ago but never approved for use in US
- Potency of analogs can be far greater than fentanyl
  - **isotonitazene**, etonitazene, metonitazine
- Possible contributor to recent upticks in deaths

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10361140/

Nitazenes

- Isonitazene – detected in “biological sample” by European monitoring center in July 2019
  - Since then, implicated in >200 drug-related overdose deaths in Europe and North America
- Metonitazene – detected in early 2020, confirmed in 20 forensic autopsies with 30% the only opioid found, others in combination with other opioids/substances
  - CDC MMWR – overdose deaths in Knox Co, TN from 2020-2021, 12% (26/218) involved metonitazene & fentanyl

https://www.cdc.gov/mmwr/volumes/71/wr/mm7137a5.htm
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10361140/

Nitazenes

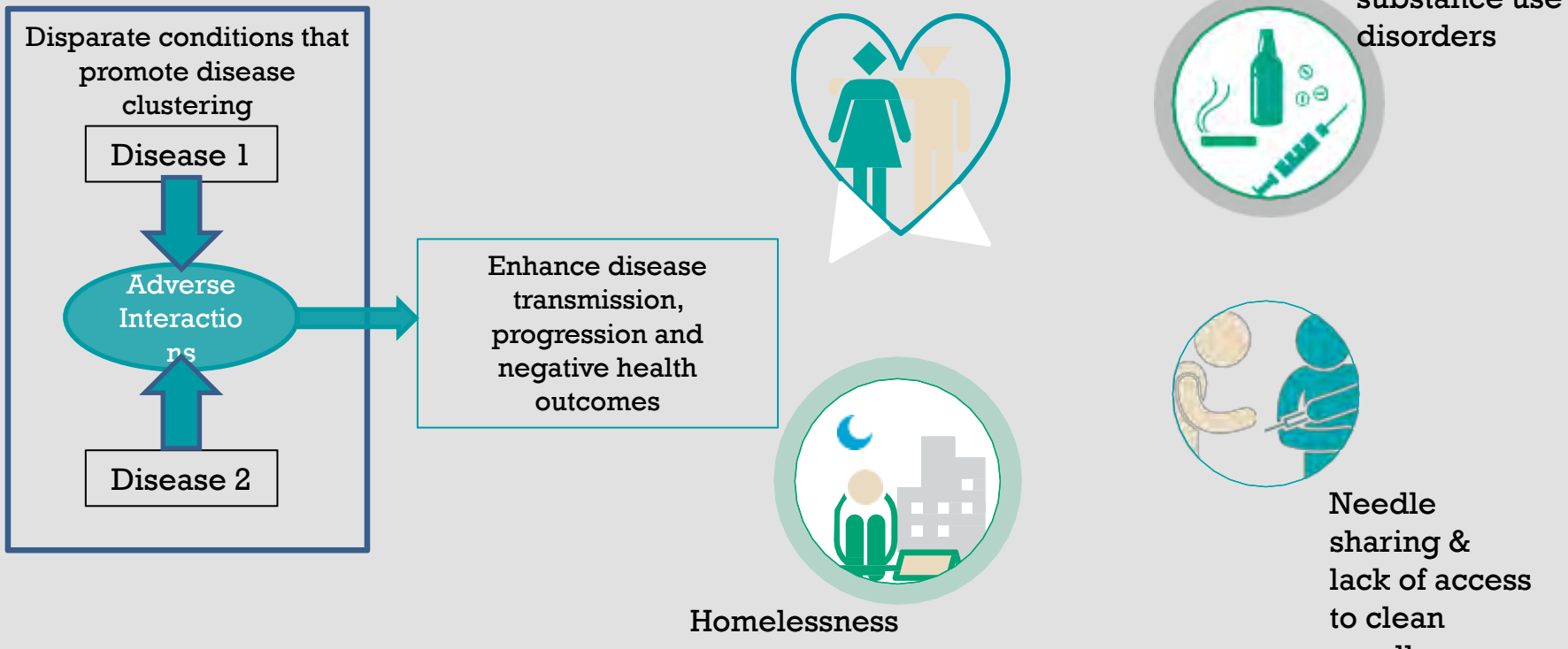
- Thought chemists in clandestine labs are repurposing old drugs
- Can also create new analogs

- Trying to address with “scheduling” these substances might turn into a game of ‘whack-a-mole”

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10361140/

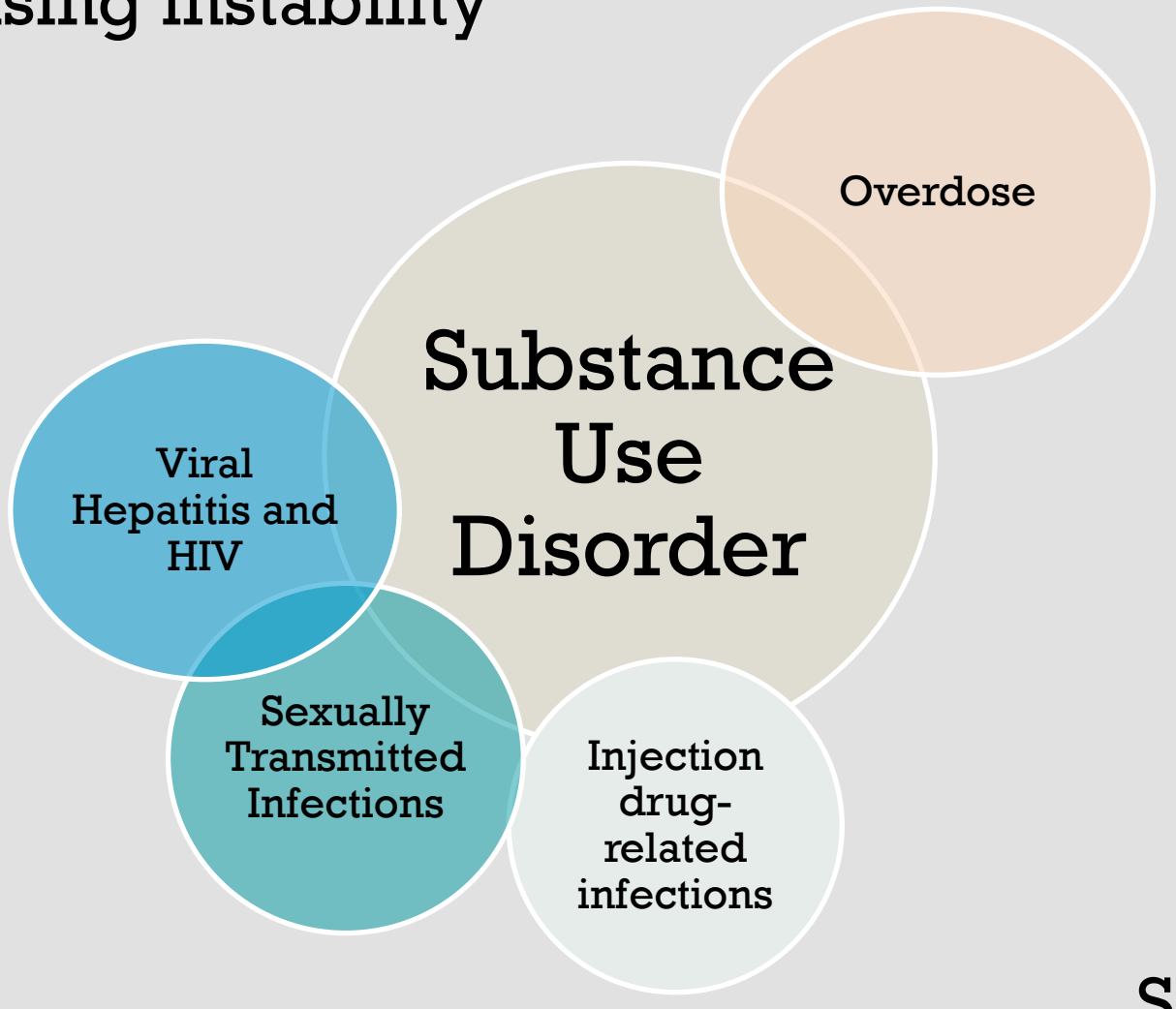
Public health data coming from **forensic autopsies** → incomplete picture and delayed responses

Syndemic of opioid use, overdose & infectious diseases



Credit: Dr. Laura Marks

Housing instability



Stigma

Incarceration

Credit: Dr. Laura Marks

HIV outbreaks in PWID in the U.S.A

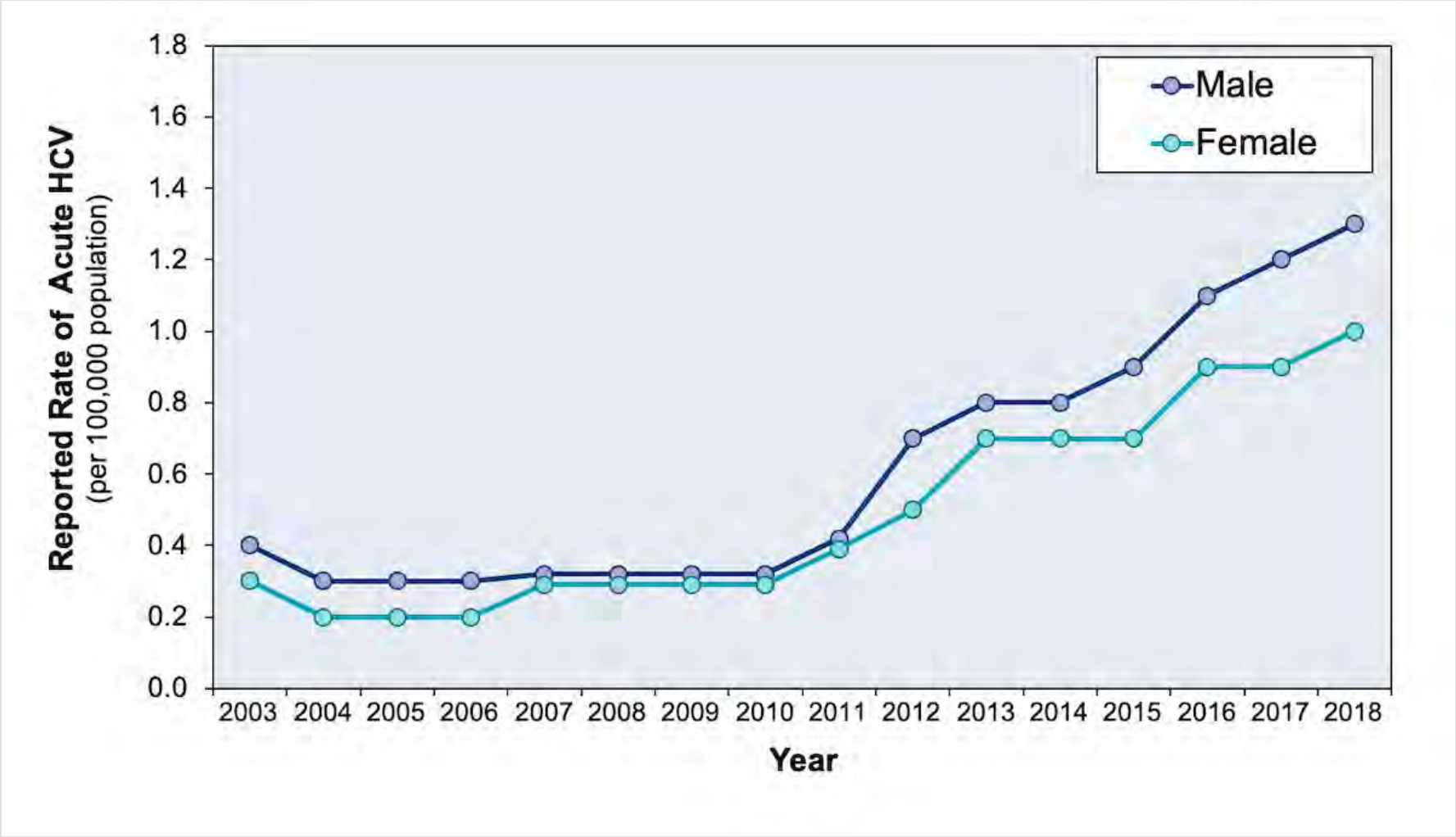
Scott county Indiana – **181** new HIV cases Nov 2014- Oct 2015

Cabell County West Virginia – **81** new HIV cases in PWID as of Oct 16

Lowell/Lawrence HIV outbreak MA 2018-2019 – **129** cases

Multnomah County Oregon, HIV outbreak – **42** cases as of Oct 2019

New HCV cases driven by IDU



https://www.hepatitisc.uw.edu/go/key-populations-situations/perinatal-hcv-transmission/core-concept/all

HCV in pregnancy

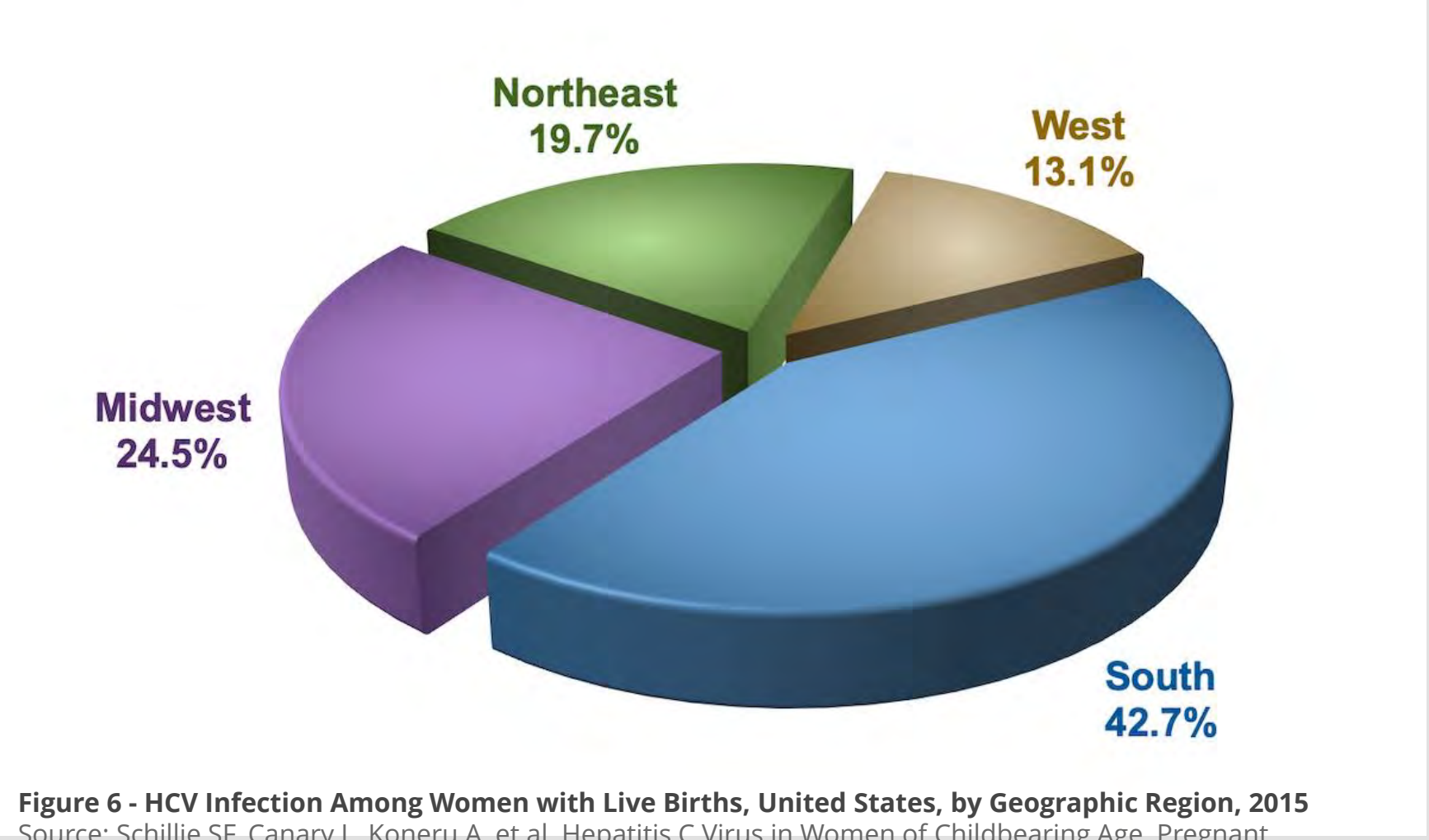
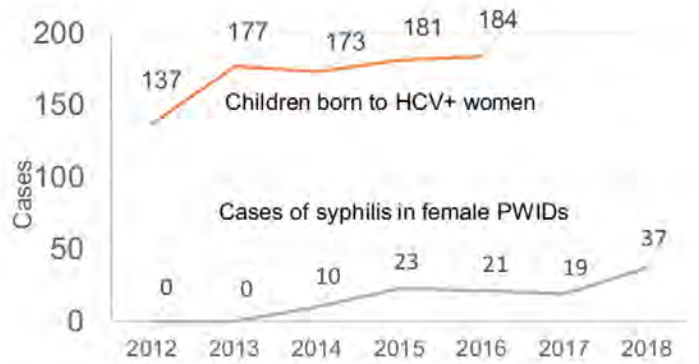
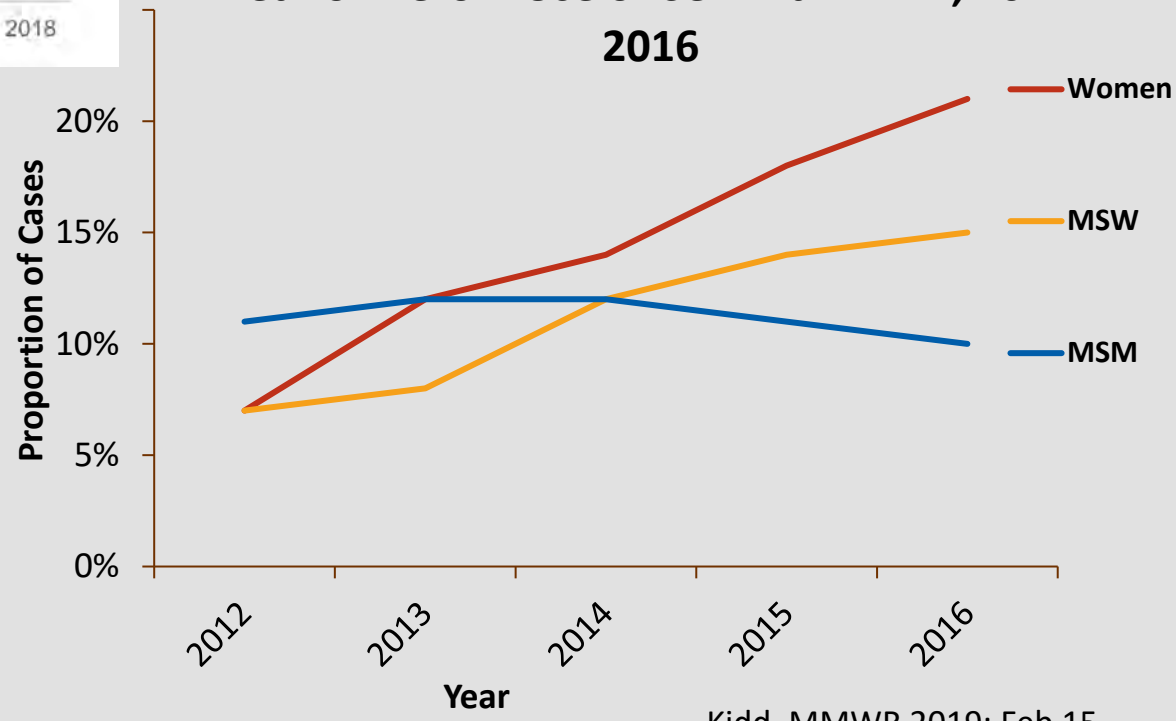


Figure 6 - HCV Infection Among Women with Live Births, United States, by Geographic Region, 2015
Source: Schillie SF, Canary L, Koneru A, et al. Hepatitis C Virus in Women of Childbearing Age, Pregnant Women, and Children. Am J Prev Med. 2018;55:633-41.

Figure 1. Impact of opioid epidemic and injection drug use on women and infants, Oregon, 2012–2018



Proportion of Syphilis Cases that Reported Meth or Heroin Use or Sex with PWID, 2012–2016



Kidd, MMWR 2019; Feb 15

PWUD & congenital syphilis

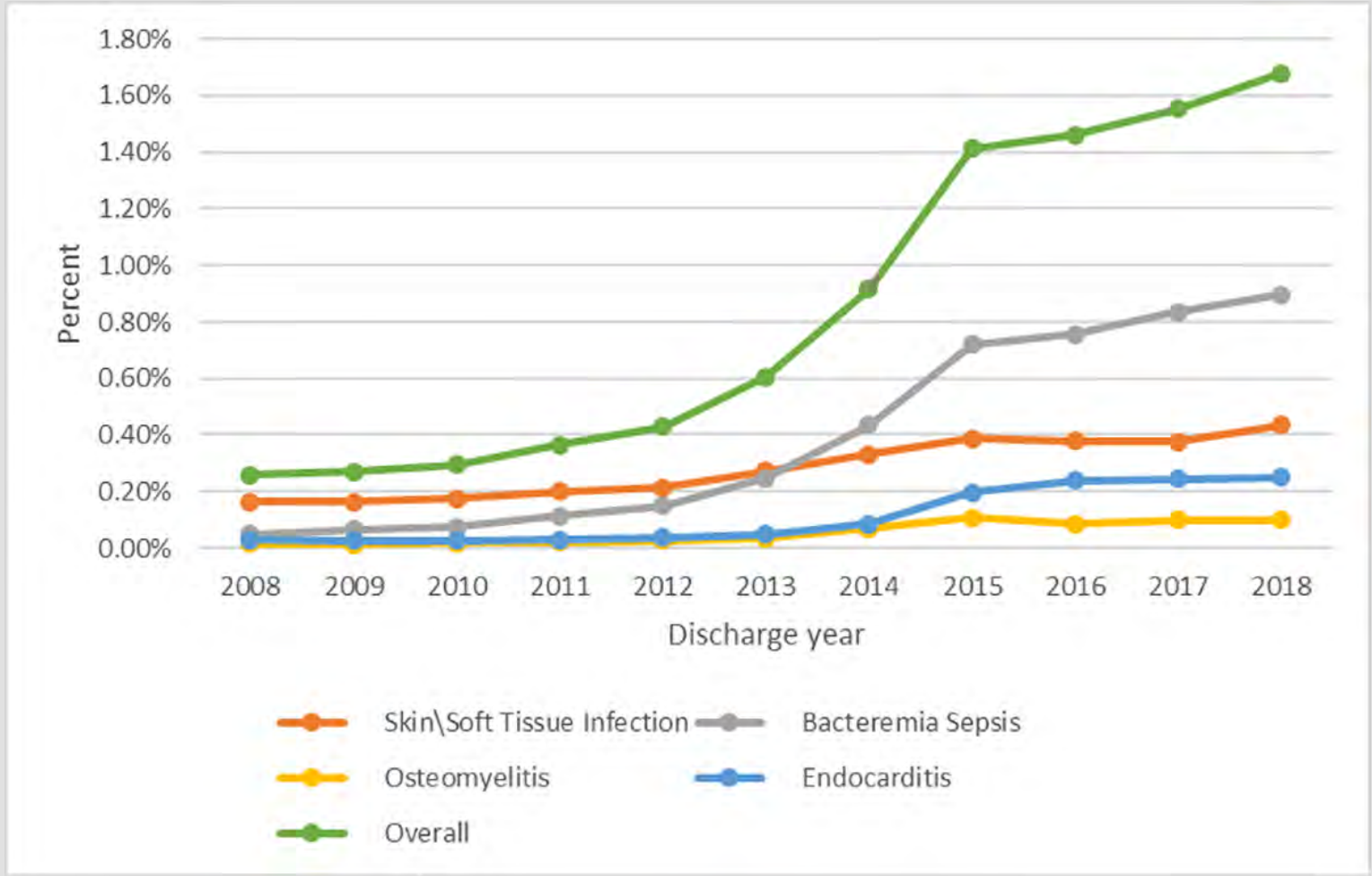
TABLE 2. Reported substance use*,† among pregnant persons with syphilis, by congenital syphilis pregnancy outcome§ — Surveillance for Emerging Threats to Pregnant People and Infants Network, Arizona and Georgia, 2018–2021

Substance used	No. (%) Congenital syphilis (n = 360)	No. (%) Noncongenital syphilis (n = 410)	Prevalence ratio¶ (95% CI)
Any substance*	173 (48.1)	101 (24.6)	1.95 (1.60–2.38)
Tobacco	99 (27.5)	46 (11.2)**	2.45 (1.78–3.37)
Alcohol	29 (8.1)	20 (4.9)**	1.65 (0.95–2.86)
Cannabis	69 (19.2)	56 (13.7)††	1.40 (1.01–1.93)
Illicit use of opioids§§	75 (20.8)	14 (3.4)**	6.09 (3.50–10.58)
Illicit, nonprescription substance¶¶	101 (28.1)	26 (6.4)**	4.41 (2.94–6.63)

"Approximately one half of persons who used substances during pregnancy and had a congenital syphilis pregnancy outcome had late or no prenatal care."

http://dx.doi.org/10.15585/mmwr.mm7203a3.

Increasing hospitalizations for serious bacterial and fungal infections



https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0242165#

Southeast – high rates of drug-related heart valve infections requiring surgery

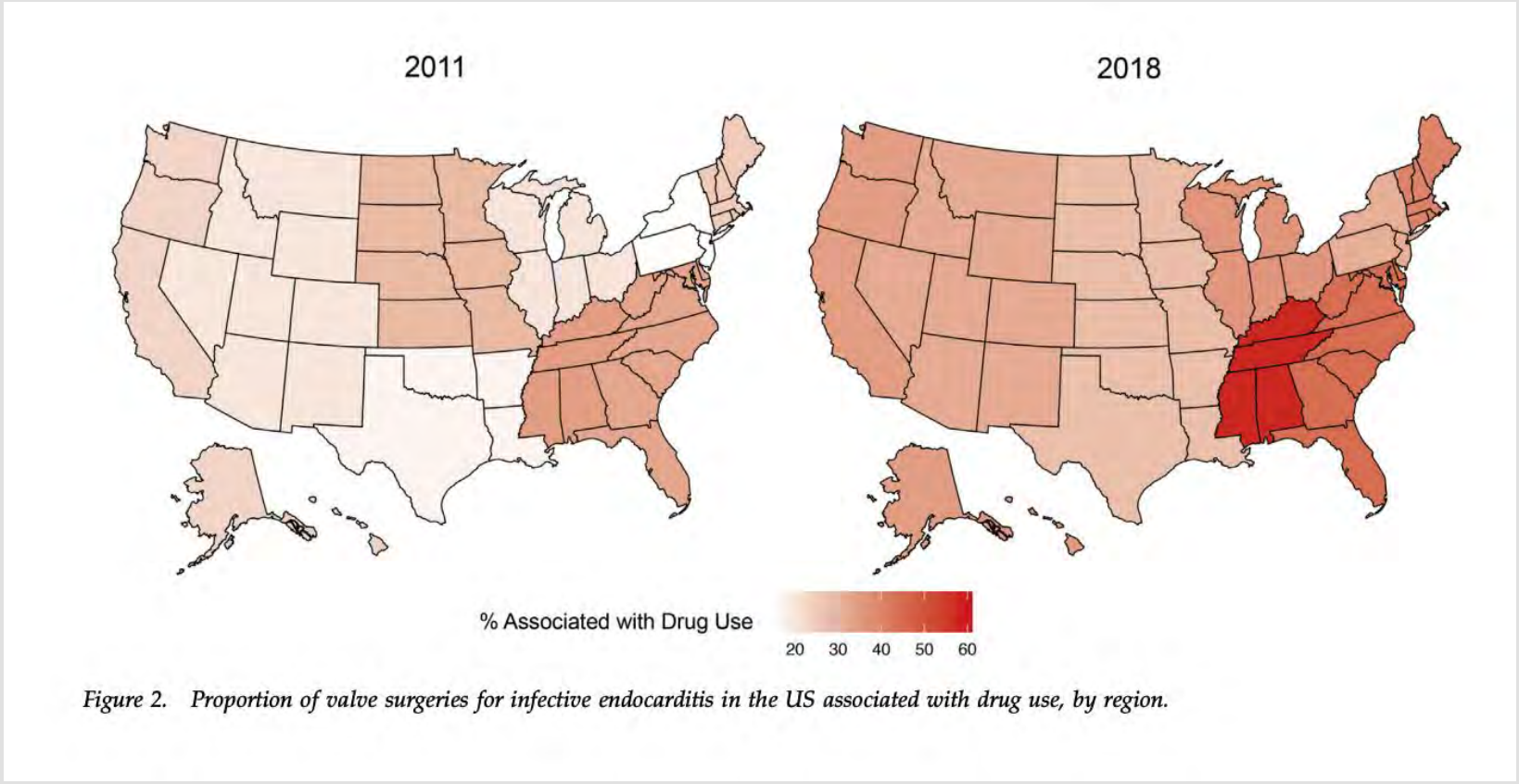


Figure 2. Proportion of valve surgeries for infective endocarditis in the US associated with drug use, by region.

https://www.sciencedirect.com/science/article/pii/S0003497520306329

Take-aways

1. Drug supply is toxic and rapidly evolving

- Fentanyl is ubiquitous
- Xylazine is getting there
- Nitazenes may be an emerging, under-recognized driver of deaths
- Rapid increases in deaths involving fentanyl + stimulants, predominantly affecting racial/ethnic minorities

- This is a structural environmental risk that PWUD have no control over

Take-aways

2. This is a **syndemic** with significant public health implications with various infectious diseases

- HIV
- Hepatitis C (and B, A)
- STIs – especially syphilis

Pregnancy

- Serious bacterial/fungal infections leading to hospitalizations, increased health care spending and increased mortality

Can knowledge be power?

- Drug checking programs
- Test strips

Must screen, treat and prevent infections

- This requires access to these services
- Harm reduction services are key (ie syringe service programs)
- Stigma a major barrier to medical/perinatal care

Addressing emerging issues requires:

- Allying with PWUD
- A public health approach
- Reducing stigma

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