FQA Institute for Social Impact

An Introduction to Substance Use Disorder: Prevalence, Trends, Treatment, Challenges, and Solutions

March 2023

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Background

Intended Audience

The intended audience for this resource is people who are unfamiliar with substance use disorder (SUD), who are interested in a detailed introduction to the disease.

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Background and Objectives

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Background

- We created this resource because while we have personal experience with SUD, we wanted to root our understanding in evidence-based research as an input to our Social Impact work.
- We are sharing this resource in hopes that it helps others who want to learn more.

Objectives

- This resource provides an overview of:
  - Key metrics and trends related to the prevalence of SUD
  - Challenges that individuals and families face along the journey
  - Ways that various ecosystem players engage with and support people with SUD

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What this resource is not

- This resources is **not** primary research; the content is based on publicly available information.
- This resource is **not** intended to serve as medical advice.
- This resource does **not** go into detail on all substance use disorders.
  - There are deep dives on alcohol use disorder, opioid use disorder, and stimulant use disorder, but other use disorders, such as Cannabis Use Disorder or Tobacco Use Disorder, are not covered.
- For more information, please refer to expert agencies, such as SAHMSA, NIDA, CDC, and NIAAA, among others or talk to your doctor.

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Addiction Overview

Defining and Discussing Addiction

What is addiction?

The American Society of Addiction Medicine defines addiction as "a **treatable, chronic medical disease** involving complex interactions among **brain circuits, genetics,** the **environment,** and an individual's **life experiences**. People with addiction use substances or engage in behaviors that become **compulsive** and often continue **despite harmful consequences**."

The Diagnostic and Statistical Manual's (DSM) chapter on substance use disorder and Addictive Behaviors includes 10 substance specific use disorders (e.g., alcohol use disorder) and gambling disorder:

- Anyone meeting 2 of 11 criteria during the same 12-month period (e.g., craving to use the substance, wanting to reduce use but not managing to, neglecting other parts of life because of substance use) is considered to have a substance use disorder (SUD)
- Severity is based on number of criteria met (mild moderate, severe)

"*Addiction is manifested in any behavior that a person **craves**, finds temporary **relief** or **pleasure** in but **suffers negative consequences** as a result of, and yet has **difficulty giving up**.*" - Dr. Gabor Maté (MD, expert, author and speaker on addiction)

This deck specifically focuses on addiction to substances (i.e., substance use disorder or SUD, not other behavioral addictions such as gambling).

ASAM DSM-V Decision DSM-5 SUD Overview APA Dr. Gabor Maté

Language matters: the words we use when talking about addiction can either promote stigma or reduce it

Do Use	Don't Use
Substance use disorder (SUD), addiction	Substance abuse
Person with SUD, individual in recovery	Addict, junkie, drug abuser, alcoholic*
Positive drug test	Dirty drug test
In recovery, in remission	Staying clean
Recurrence of use	Relapse, off the wagon

*Some people may choose to self-identify with these terms

Language Matters Video Language Matters Article

It is important to challenge common misconceptions of addiction

Common Beliefs and Stereotypes	Reality
✗ "Addiction is a choice"	✓ While the initial decision to use a drug is typically voluntary, a person's ability to exert self-control can be impaired with continued use. Addiction changes areas of the brain that are critical to judgement and behavioral control, among other functions. ✓ Many factors beyond choice are associated with higher risk of addiction (see next slide).
✗ "Drug users are criminals"	✓ SUD is a disease that can affect anyone. ✓ Imprisonment can be an additional barrier to care, which is associated with higher risk of recurrence of use.
✗ "People do not get treatment because they do not want to stop using"	✓ While readiness for change can be a barrier, insurance coverage, finances, and stigma are among many other barriers to care. ✓ There is a shortage of behavioral health professionals and providers with waivers to prescribe medications for OUD (MOUD).

Addiction in Brain Healthcare and SUD Alcohol Disorder Treatment Barriers BH Specialist Shortage X-Waivered Provider Availability

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Anyone can have a substance use disorder, but certain factors are associated with higher risk

Trauma	• Trauma changes the brain by disabling and distorting the stress response, so that one may be more susceptible to SUD • Childhood trauma in particular (Adverse Childhood Experiences or ACEs) increases the risk for SUD. Examples of ACEs include witnessing violence and experiencing abuse or neglect
Co-Occurring conditions	• 40% of those with SUD also have a co-occurring mental health disorder • Common co-occurring mental health disorders include anxiety, depression, schizophrenia, bipolar disorder, and ADHD
Family History/ Environment	• Children of people with AUD are approximately 4x more likely to develop AUD, but research into a definitive genetic causation has largely been disputed (i.e., just because a parent has AUD does not mean their child definitively will) • One's childhood environment (e.g., being surrounded by drugs) can affect likelihood to use and misuse drugs
Criminal Justice Relationship	• Recent release from prison or an abstinence program is a risk factor for OUD and overdoses • Children of incarcerated parents are more likely to use substances
Demographics/ Social Factors	• Women tend to progress from regular drinking to AUD more quickly than men ("telescoping" tied to metabolic differences) • Generally, the earlier a person starts using a substance, the more likely they are to develop SUD later in life • Neighborhood poverty, violence, and lack of economic opportunity are also risk factors for addiction

Approaches to preventing and treating SUD must consider the many inter-related factors that impact one's experience

Statistics Risk Factors Gateway Drugs Genetics of AUD Addiction & Trauma AUD Factors Risk Factors The Science of Addiction Trauma & SUD Trauma and the Brain

During a person's journey with addiction, they may engage with a wide variety of programs, treatment and other supports

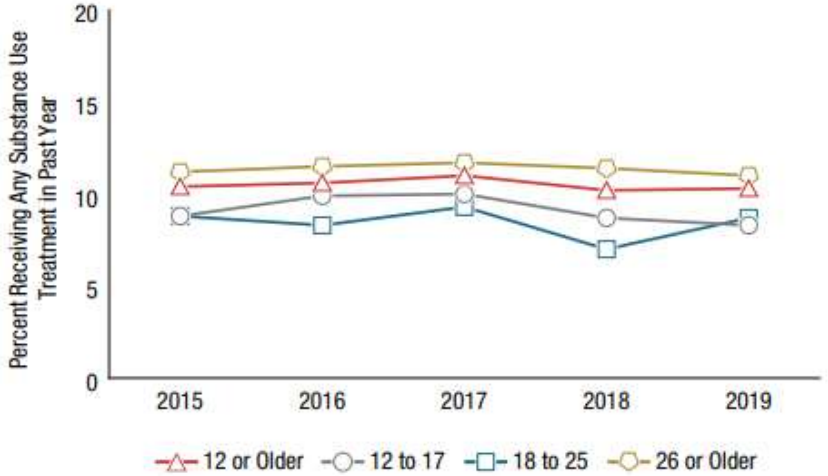
Prevention	Diagnosis and Treatment	Other Supports
• Primary Prevention: Seeks to prevent disease before it starts • Secondary Prevention: Aims to reduce the impact of a disease that one has • Tertiary Prevention: Works to reduce impact of a disease that has lasting effects	• PCP screening • Detoxification • Outpatient behavioral therapy • Inpatient or residential treatment • Medications for OUD and AUD • Medication for opioid overdose reversal (naloxone)	• Alcoholics Anonymous (AA) • Narcotics Anonymous (NA) • Al-Anon (family groups) • SMART Recovery

Despite many available evidence-based treatment options, only 10% of people get the care they need

Reasons for not receiving substance use treatment include but are not limited to :

- Not being ready to stop using (39.9%)
- Not knowing where to go for treatment (23.8%)
- Not having healthcare coverage or not being able to afford treatment (20.9%)
- Might cause neighbors or community to have a negative opinion (17.2%)
- Might have a negative effect on job (16.8%)
- Not finding a program with type of treatment that was wanted (14.7%)
- Thinking they could handle problem without treatment (11.7%)

Figure 67. Received Any Substance Use Treatment in the Past Year among People Aged 12 or Older Who Had a Substance Use Disorder in the Past Year: 2015-2019



Source: SAMHSA

2019 National Survey on Drug Use and Health

There is a capacity shortage of SUD treatment providers, which affects care delivery and access

Resource

- There are only about 3,600 physicians who are board-certified in addiction medicine (and of these, most are practicing part-time).
- Just over 4 percent of physicians in the U.S. have gone through the training process that enables them to prescribe buprenorphine (A 2016 law enabling NPs and PAs to prescribe buprenorphine may help take up some of the slack.)

Facility

- Methadone, can only be provided in specialized opioid treatment programs (OTPs), limited to approximately 1300 federally approved locations.
- One naloxone prescription is dispensed for every 69 high dose prescriptions.

Services

- Critical services such as in-person peer and community-based counselling is available 38 and 29 states respectively.
- Only 15 states offer training and development initiatives to build individual skillsets.
- After recovery, employment support is only offered in 13 states to help people to address SDOH.

The workforce crisis is growing due to stigma, pay and aging

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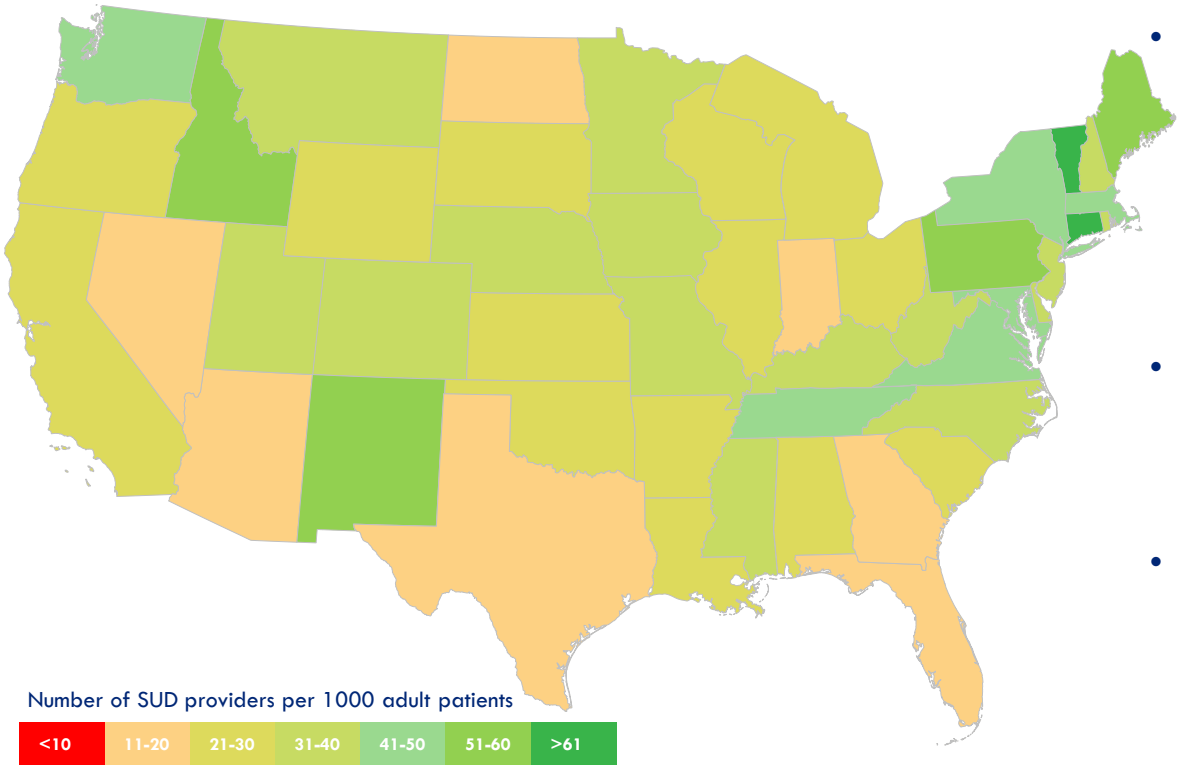
Total Number of SUD Providers per 100k*



- The number of SUD treatment specialists varies widely among states but are scarce at large. It ranges from more than 60 providers for 1000 non-elderly adults in Vermont and Connecticut and as low as 11 in Nevada (national average 32).
- Job estimates indicate that at least 330,000 in the workforce are required to cater service demand, further exacerbating current demand.
- Northeastern states (Rhode Island, Connecticut and Maine) have relatively higher number of (988/100,000 population) clients than southern states.

Hawaii (21-30) and Alaska (31-40) not represented on map

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The Pew Charitable Trust Mental Help and 2012 N-SSATS State Profiles

Most states indicate infrastructure supply-demand mismatch

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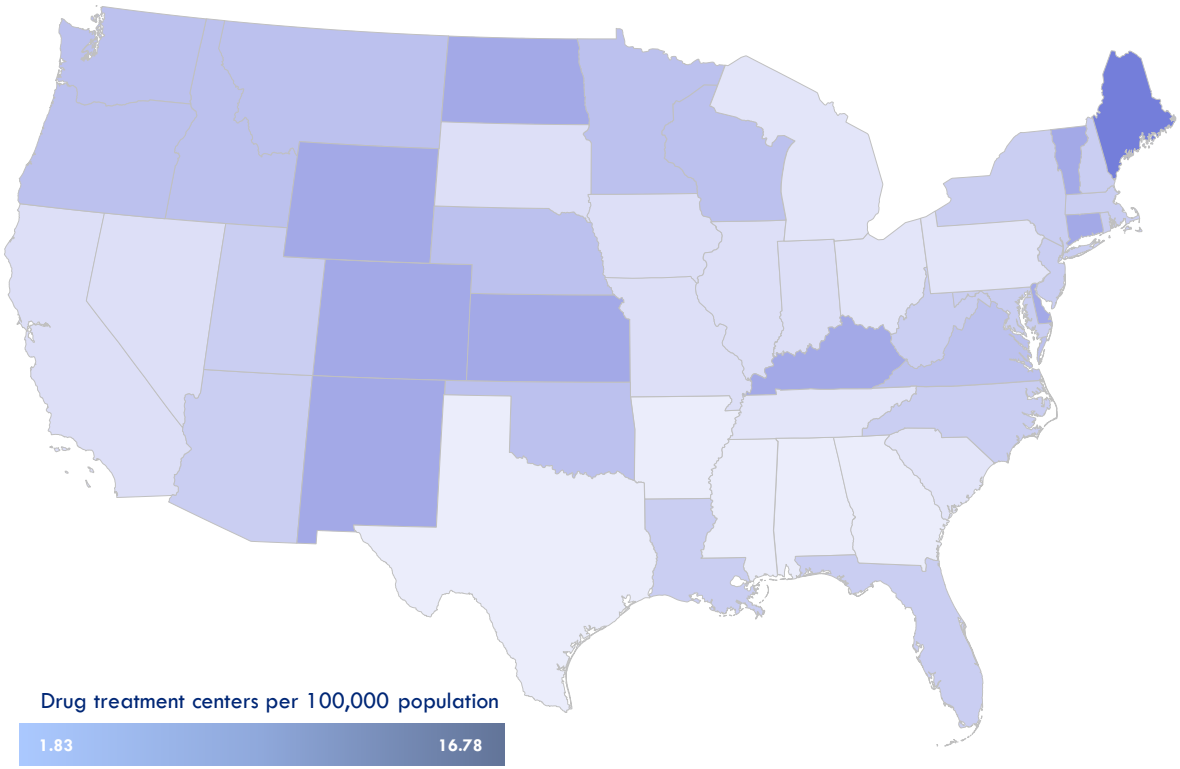
Total Number of Drug Treatment Centers per 100k*



*Hawaii (8.76) and Alaska (>10) not represented on map

- US has 5.7 treatment centers per 100,000 population with states like Maine, Alaska and Wyoming with the highest density. The southern region except Florida lacks treatment centers as well as clients.
- Although California (11%), New York (6%), and Florida represents highest number of facilities, this is offset by higher population, leading to operational challenges.
- Of the 1,754 Opioid Treatment Program facilities reporting in 2020, only 545 provided methadone, buprenorphine, and injectable naltrexone.

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Mental Help and 2012 N-SSATS State Profiles

Virtual care has potential to enable quality care at convenience

With only 10% of people getting the care they need for SUD, there is high potential for virtual care to expand access and receipt of care. Historically, many Medicaid, Medicare, and private payers didn't reimburse (or partially reimbursed) for virtually accessed computer-based cognitive behavioral therapy (CBT) treatments, tele-visits and other interventions, but COVID has changed the status quo.

Why are virtual care models promising?

- Addresses current **barriers to in-person care**
  - Apprehension to see provider
  - Unreliable transportation
  - Long wait times

- Supports patients in areas with **provider shortage**
  - Of the more than 3,000 counties in the United States, 60% have no psychiatrists at all (expected 15 per 100,000).

- May increase **PCP comfort** with SUD treatment
  - PCP is first point of contact but underutilized as they are not comfortable with SUD discussion, screening, and lack patient engagement trainings. Chatbots, triaging and engagement tools on virtual care platforms may help facilitate this.

- Takes advantage of **recent changes with COVID**, related to behavior and regulations
  - Early in COVID, CMS expanded coverage for telehealth for SUD and other conditions.
  - The pandemic has changed the status quo as more than half of all behavioral health care is being delivered virtually.

Addiction By the Numbers

Summary Data Estimates for Addiction in the US (2020*)

Factors	Illicit Drugs	Alcohol	Opioid (e.g., heroin, fentanyl, prescription painkillers)	Stimulants (e.g., cocaine, meth, and prescription stimulants)
% of Population Using**	22.2% (55.8M)	Binge – 22.2% (61.6 M) Heavy – 6.4% (17.7 M)	3.6% (9.1 M)	1.9% (4.8 M)
% of Population with SUD	6.6% (18.4 M)	10.2% (28.3 M)	1.0% (2.7 M)	1.1% (3.2 M)
Mortality Rate (per 100,000 of Total US Population)	25.6% (70K)	Overall – 34.4% (95 K) Chronic – 18.5% (51K) Acute – 15.9% (44k) Alcohol Poisoning (subset of acute) – 5.1% (14K)	15.6% (43K)	5.1% (14K Only Cocaine)
Economic Costs*	$193 B	$249 B	$78.5 B	Not available

*Statistics reflect 2020 data, besides economic cost data which is from 2007-2013
**Some overlap in prevalence data, given polydrug use

SAMHSA Costs of SUD Treatment Episode Data Set

Drug poisoning/overdose is the leading cause of unintentional injury death in the US and rose significantly in 2020

Leading Causes of Death (2020)

1. Heart Disease – 691K
2. Cancer – 599 K
3. COVID-19 – 351 K
4. Accidents (Unintentional Injuries) – 201 K
5. Stroke – 159 K
6. Chronic Lower Respiratory – 152 K
7. Alzheimer's – 133 K
8. Diabetes – 101 K

Leading Causes of Unintentional Injury Deaths (2020)

1. **Drug Poisonings/Overdoses – 87 K***
2. Older Adult Falls – 42 K
3. Motor Vehicle Crash – 41 K
   - 1/3 caused by drinking and driving

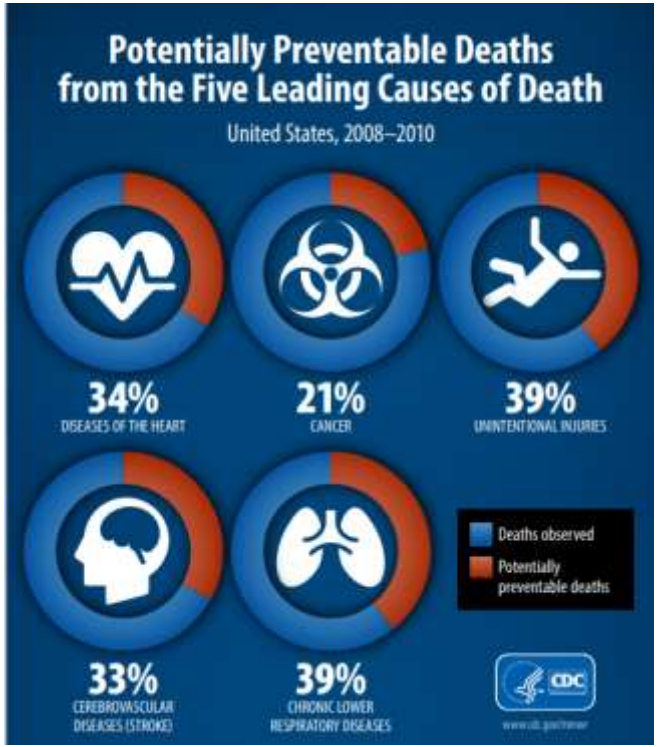
* Primarily opioids. Provisional 2021 data estimates 107,622 drug overdose deaths.

Leading Causes of Death Opioid Overdose Excessive Alcohol Use National Health Report Drug Overdose Deaths 2020 Chronic Disease Indicators 2021 Provisional Data

Excessive alcohol use is a top contributor to preventable death among the leading causes of death

It is estimated that 40% of annual deaths from the top five leading causes are potentially preventable. Modifiable risk factors include:

- Tobacco
- Poor Diet/Lack of Physical Activity
- **Excessive Alcohol Use (~95K deaths attributed in 2020)**
- High blood pressure
- High cholesterol



Leading Causes of Death Alcohol Facts and Statistics Preventable Causes of Death Deaths from Excessive Alcohol Use National Health Report Accidents (Unintentional Injuries) Drug Poisoning Mortality Drug Overdose Deaths Chronic Disease Indicators

Important Challenges to Address

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Looking upstream, stigma drives many issues in SUD ecosystem

"I think the biggest killer out there is stigma. Stigma keeps people in the shadows. Stigma keeps people from coming forward and asking for help. Stigma keeps families from admitting that there is a problem." –Jerome Adams, Former U.S. Surgeon General

How does stigma impact one's experience with SUD?

- Results in social isolation for patients and families
- Makes people ashamed to seek out care
- Makes PCPs hesitant about discussing drug use in annual visits
- Leaves families hesitant to talk about and address issues
- Raises concerns in communities building new treatment centers
- Impacts quality of care they may receive from providers with stigmatized beliefs
- Perpetuates discrimination
- Affects insurance coverage disparities

Shatterproof identifies four main types of stigma:

- Self-Stigma: Individuals accepting and internalizing negative stereotypes
- Public stigma: Society's negative attitudes towards those with addiction, creating environment where people are discredited, feared and isolated
- Structural Stigma: System-level discrimination that excludes those with addiction from opportunities and full participation
- Stigma against medication for OUD: Beliefs that medications "trade one addiction for another"

What are examples of organizations working on this?

- **Non-profits**, such as:
  - Shatterproof, which has ambassadors that speak in the community about stigma, provides resources, and runs competitions for initiatives focused on stigma reduction
- **News and media**, such as:
  - Reporting on Addiction, which provides resources to reporters and journalism schools on inclusive language and reporting approaches
  - Changing the Narrative, which helps journalists and thought leaders provide "accurate, humane, and scientifically-grounded information" in media coverage of drug use and addiction
  - Life Unites Us, which is changing the conversation around opioid addiction through a platform for people with SUD and their loved ones to upload videos telling their story of treatment and recovery, support and understanding
  - Last Day Podcast, which interviews people involved in the opioid addiction ecosystem, raising awareness and reducing stigma
- **Medical Schools**, such as:
  - University of TX at Austin's Dell Medical School, which has built course modules around reducing stigma and raising awareness among med students
- **Hospitals**, such as:
  - Boston Medical Center, which has taken a pledge around destigmatizing language

Providers and Stigma Screening and stigma Community Stigma Stigma as a Barrier to Care Shatterproof Stigma Addiction Policy Forum on Stigma Stigma Example from Shatterproof Reducing Stigma Education Tool

Patients and families have difficulty navigating the system

The addiction care ecosystem is fragmented and siloed. It can be challenging to find high-quality providers that will meet the unique needs of patients, as well as support to make the experience more integrated with smooth transitions between sites of care.

Why do patients and families have difficulty navigating the system?

- People **don't know all of their treatment options**
  - E.g., they know about AA/NA, but don't know about medications for OUD (MOUD)
- There is not typically a consistent **care manager** or coordinator who has visibility to a patient's full care journey and is helping along the way
  - Transition points between different care types are often not smooth (e.g., from detox into maintenance with MOUD, from prison to reentry with housing and employment services)
- Treatment needs are **individualized**, and options are **limited for certain populations**
  - There are challenges in finding mental health services for children
  - Centers may not be well equipped to care for a patient with co-occurring conditions
- **Messaging** from treatment centers is confusing and sometimes deceptive
  - Some focus on hard-sell luxury features, as opposed to medical care
- It's hard to determine the **quality** of a given treatment program
  - Care regulation is largely left to states, so there is variation in care and outcomes
  - Accreditation does not guarantee high-quality care (just that a fee was paid)
  - There are efforts to improve access to quality information (see right)
- **Insurance coverage** can be inconsistent/limited and hard to navigate

What are examples of organizations working on this?

- **Non-Profits**, such as:
  - Shatterproof, which built their ATLAS tool to help with finding high-quality care and advocates for Medicaid coverage to ensure integration of SUD care and referral to services in primary care
  - Treatment Alternatives for Safe Communities (TASC), which offers specialized care management for people with SUD in Illinois
  - Fresh Out, a prison re-entry program in Portland, that provides meals, housing, support services and other aid to people coming out of prison
- **Agencies**, such as:
  - SAMHSA's BH Treatment Services Locator
  - NIAAA's Alcohol Treatment Locator
- **State programs**, such as:
  - Vermont's Health Homes for Opioid Addiction, which uses a hub-and-spoke method where a regional treatment center performs the initial assessment, care coordination, medication maintenance therapy and connects patients with other services to receive specialty treatment
- **Payers**, such as:
  - Blue Cross Blue Shield plans have Distinction Centers for Substance Use Treatment and Recovery to indicate quality care

2019 National Survey on Drug Use and Health Care Coordination Strategies Rehab Industry Messaging Mental Health Parity Report Drug Possession Children's Mental Health Co-Occurring Conditions Transition Barriers Care Regulation

Despite its effectiveness, MAT is highly underutilized*

Medication Assisted Treatment (MAT) is a highly effective, evidence-based practice in which a provider prescribes medications often in combination with behavioral therapies to help address withdrawal symptoms and long-term maintenance for those with OUD and AUD (medications also referred to as MOUD or MAUD). Use of MAT has been shown to substantially decrease all cause mortality.

Why is MAT underutilized?

- Clinicians need **extra training** to get a waiver to prescribe buprenorphine and other medications; this training is not typically required in med school
- 39% of counties do not have a licensed buprenorphine provider; **access to care** is of particular concern in rural areas
- An initial **in-person appointment** is needed to get a buprenorphine prescription (although this was lifted when COVID began and may remain)
- **MAT is offered by less than half of private treatment programs**
- **80% of jails/prisons do not allow** buprenorphine or methadone treatment
- Research shows that providers may have **stigmatized beliefs** about addiction and MAT, similar to the general public (e.g., that MAT is replacing one drug for another, that addiction is a moral failing and not a disease).
- MAT medications are **not consistently covered by payers**
- Payers' **prior-authorization requirements** can limit access to MAT
- The **cost** of MAT can be prohibitive for uninsured people
- Additional **guidance is needed** on MAT initiation, dosage, and length of treatment for people using fentanyl

What are examples of organizations working on this?

- **Providers,** such as:
  - Symetria: Takes an integrative approach to MAT, with support functions all under one roof
  - Bicycle Health: Enables virtual care and MAT therapy for Opioid Use Disorder (OUD)
  - Project Echo: Trains PCPs on MAT and treatment of SUD
  - Ophelia: Enables virtual care and MAT for OUD
- **Advocacy groups,** such as:
  - Shatterproof: Advocates for use of evidence-based treatment (via removal of prior-authorizations, education for licensed providers)
- **Researchers,** such as:
  - Penn LDI: Partners with their medical school on treatment research and policy recommendations
- **Medical schools,** such as:
  - UMass Med School received a federal grant to create a training program for medical, NP, and PA students
- **Payers,** such as:
  - Cigna's Evernorth has invested in MAT related start-ups (e.g., Quit Genius)

*See later sections for more info on MAUD and MOUD

Harm reduction programs work, but barriers to expansion exist

Harm reduction programs decrease risk of overdose deaths, prevent HIV and other infectious diseases, and provide a foundation for an ongoing relationship between the person using a drug and a treatment provider. Examples of items provided include clean injection equipment, naloxone, fentanyl test strips, and safer sex kits; services may also be provided such as infectious disease screening and referral to treatment.

What barriers stand in the way of harm reduction programs?

- **Stigma and misconceptions**
  - Belief that having safe syringe programs (SSPs) and naloxone (overdose reversal medication) available to people with SUD enables and promotes drug use
    - Research does not support increase in use
    - Research shows people using SSPs are three times more likely to decrease or discontinue use and five times more likely to enter treatment
  - Belief that opening an SSP will increase crime and litter in the local community
    - Studies do not show increase in crime or litter (decreased litter in some cases)
- **Legality**
  - SSPs are illegal in some states (e.g., Alabama, Delaware, Mississippi)
  - In some states where SSPs are allowed, there are significant limitations (e.g., require those receiving needles to turn in used ones, require a state ID, etc.)
  - There are limitations around who can dispense and administer naloxone
- **Insufficient funding**
  - At a federal level, some legislation has placed limits on how funds can be used for SSPs (e.g., programs can use federal funding to cover costs such as gas and rent, but not the provision of syringes)

What are examples of organizations working on this?

- **Non-profits**, such as:
  - North America Syringe Exchange Network (NASEN) helps connect people using drugs to local SSPs and supports new and existing SSPs with gaining access to affordable supplies
  - The Chicago Recovery Alliance has several vans which stop at various locations in Chicago to provide clean/safe injection equipment, naloxone, overdose training, rapid HIV tests, etc.
  - Dallas Harm Reduction Aid is an initiative that provides naloxone, safe injection kits, safe sex kits, fentanyl test strips, etc.
- **Advocacy groups**, such as:
  - Addiction Policy Forum, which advocates for SSPs at the local level and is currently creating a toolkit for those looking to help

SSP Webinar SSP Info CDC Harm Reduction Guide A Fentanyl Test Strips WV Needle Exchange Naloxone NASEN Advocacy

Why are harm reduction programs useful in SUD?

0%

Mortality among communities using safe syringe programs (SSPs) in Vancouver study

75-100%

Rates of reversal success when overdose treatment (e.g., naloxone) administered by nonmedical personnel in OUD

35%

Reduction in drug overdose incidents by safe injection sites in Vancouver study

43%

People reported change in drug use behavior after using fentanyl test strips (FTS)

#1

Cause of death among people 18-45 is a fentanyl overdose

100,000+

Drug overdose deaths annually

Harm Reduction Guide Supervised Drug Injections Fentanyl Test Strips Fentanyl Cause of Death

Drug-Specific Research

This section provides a detailed overview of alcohol use disorder (AUD), opioid use disorder (OUD), and stimulant use disorder (SUD). For each, there are two main topics researched:

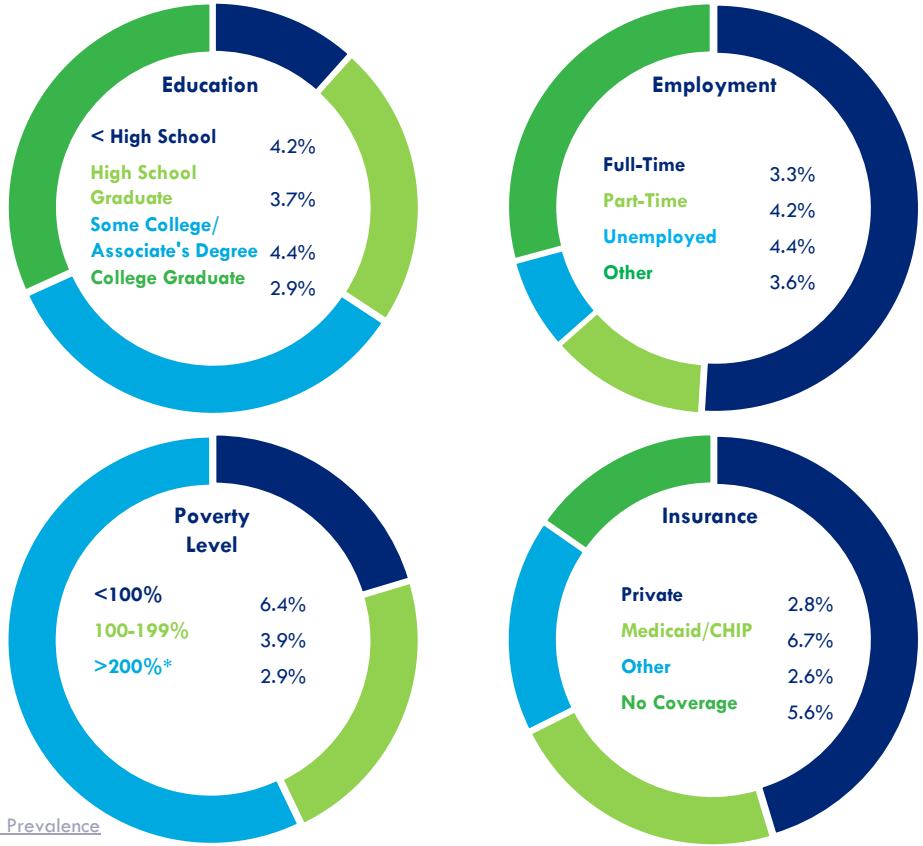
- ***Background***
- ***Prevalence and Trends***
- ***Patient Journey and Treatment***

Quick Context: Interpretation of Substance Use and Prevalence

Tips for interpreting the graphs in this section:

- The data has been obtained from the latest available SAMHSA survey.
- The graphic title indicates the type of substance, whether the data reflects use disorder vs. misuse and the socioeconomic factor.
- The doughnut chart indicates the percentage split within the socioeconomic factor.
  E.g., for Poverty Level, visual interpretation of the chart shows that approximately 20% of people who misuse opioids are <100% of FPL, while 25% of people who misuse opioids fall between 100-199% of FPL and the rest of the people who misuse opioids are >200% of FPL
- The percentages indicated within the chart give the prevalence of people who misuse drugs within that socioeconomic factor.
  E.g., for Poverty Level, the highest prevalence of opioid misuse is among people <100% of FPL at 6.4% while the lowest prevalence is among those >200% of FPL at 2.9%.

For example, Prevalence of Opioid Misuse by Socioeconomic Factors, 2020



SAMHSA (2020) Opioid Use Prevalence

Alcohol Use Disorder (AUD)

Background

The Diagnostic and Statistical Manual-5 (DSM-5) defines alcohol use disorder (AUD) as the presence of 2+ identified symptoms

Symptoms include but are not limited to*:

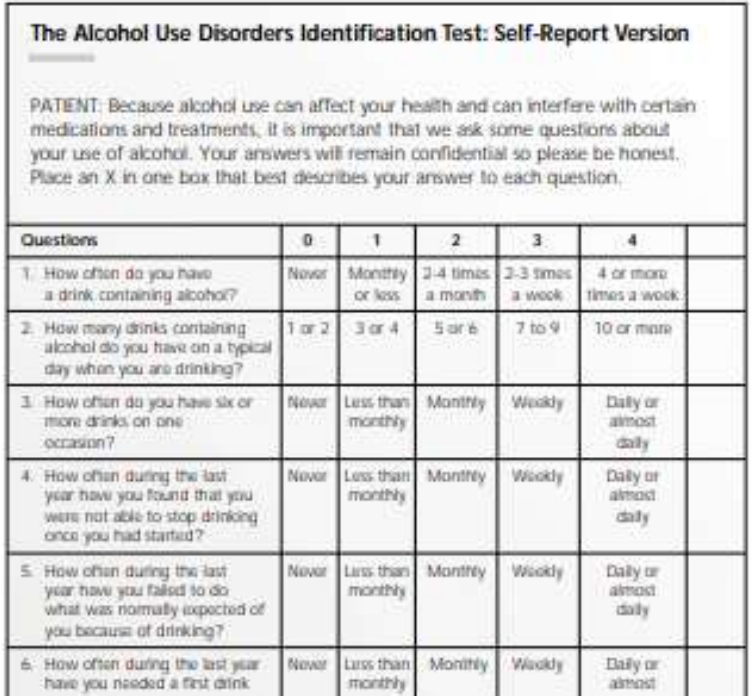
- More than once, wanting to reduce or stop drinking but not being able to
- Spending a lot of time drinking or being sick related to aftereffects
- Wanting to drink so badly that a person cannot think of anything else
- Finding that drinking or being sick from the aftereffects interfered with home, family, work, etc.
- Continuing to drink even with resulting problems with family or friends
- Stopping or reducing activities that were important to the person
- More than once, getting into situations while or after drinking that increased risk of getting hurt (e.g., driving, swimming, having unsafe sex)
- Continuing to drink even if it makes a person depressed, anxious or adds to another health problem
- Experiencing withdrawal symptoms (e.g., trouble sleeping, nausea, racing heart) when effects of alcohol wear off

The severity of AUD is evaluated based on number of symptoms (mild: 2-3 symptoms, moderate: 4-5 symptoms, severe: 6 or more symptoms).

*See Symptoms of AUD for more information

The AUD Identification Test (AUDIT) is a tool is used in screening

- The AUDIT assesses patients' drinking behaviors and alcohol-related associations.
- The test is dependent on the patient's responses and understanding of their habits.
- The point scoring scale is:
  - 1-7: low risk consumption
  - 8-14: hazardous or harmful consumption
  - 15-40: Likelihood of moderate to severe AUD
- CAGE (cut down, annoyed, guilty, eye-opener) is another screening tool, typically used in ER and inpatient settings.



The Alcohol Use Disorders Identification Test: Self-Report Version

PATIENT: Because alcohol use can affect your health and can interfere with certain medications and treatments, it is important that we ask some questions about your use of alcohol. Your answers will remain confidential so please be honest. Place an X in one box that best describes your answer to each question.

Questions	0	1	2	3	4	
1. How often do you have a drink containing alcohol?	Never	Monthly or less	2-4 times a month	2-3 times a week	4 or more times a week	
2. How many drinks containing alcohol do you have on a typical day when you are drinking?	1 or 2	3 or 4	5 or 6	7 to 9	10 or more	
3. How often do you have six or more drinks on one occasion?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily	
4. How often during the last year have you found that you were not able to stop drinking once you had started?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily	
5. How often during the last year have you failed to do what was normally expected of you because of drinking?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily	
6. How often during the last year have you needed a first drink	Never	Less than monthly	Monthly	Weekly	Daily or almost	

SAMHSA Risk and Protective Factors AUDIT AUDIT Scoring CAGE

Key Terms

- **Moderate Drinking:** 1 drink per day for females, 2 drinks per day for males
  - Dietary Guidelines recommend not drinking or to drink in moderation when alcohol is consumed
- **Binge Drinking:** 4 or more drinks in a single occasion for females, 5 or more drinks in a single occasion for males
- **Heavy Drinking:** 8 or more drinks per week for females, 15 or more drinks per week for males
- **Withdrawal:** Symptoms that a person may experience when they stop or reduce the amount of alcohol they consume, such as increased hand tremor, insomnia, nausea, anxiety, and hallucinations, among others

Source: CDC

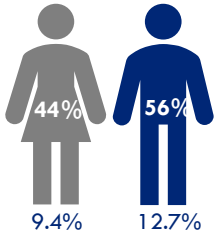
CDC – Binge and Heavy Drinking Withdrawal

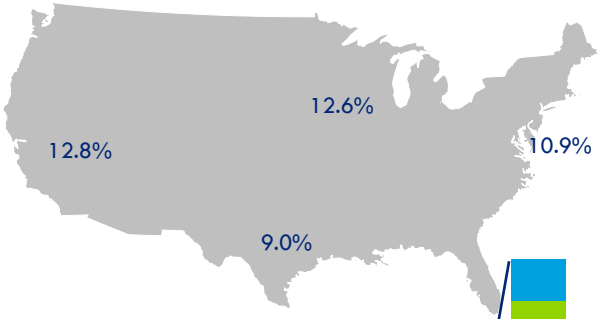
Prevalence and Trends

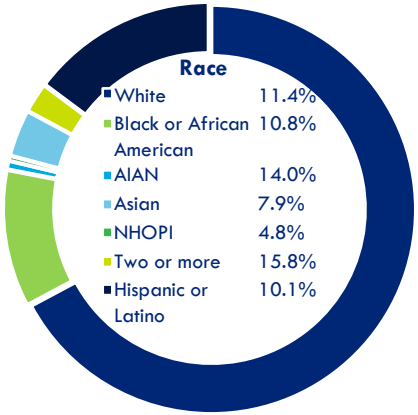
11% (roughly 27.6 million) of adults (18+) have AUD, with variation in rates across demographic traits

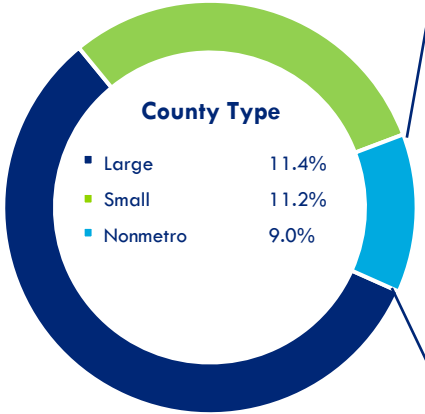
- The prevalence of AUD is higher in men than women, and in white people than other races.
- Geographically, prevalence is lower in the Northeast while prevalence is higher in urban settings.
- Among adolescents aged 12 to 17, the prevalence of AUD declined from 5.9% in 2002 to 1.7% in 2019.

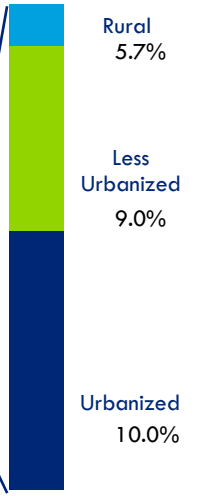
Prevalence of AUD by Socioeconomic Factors, 2020











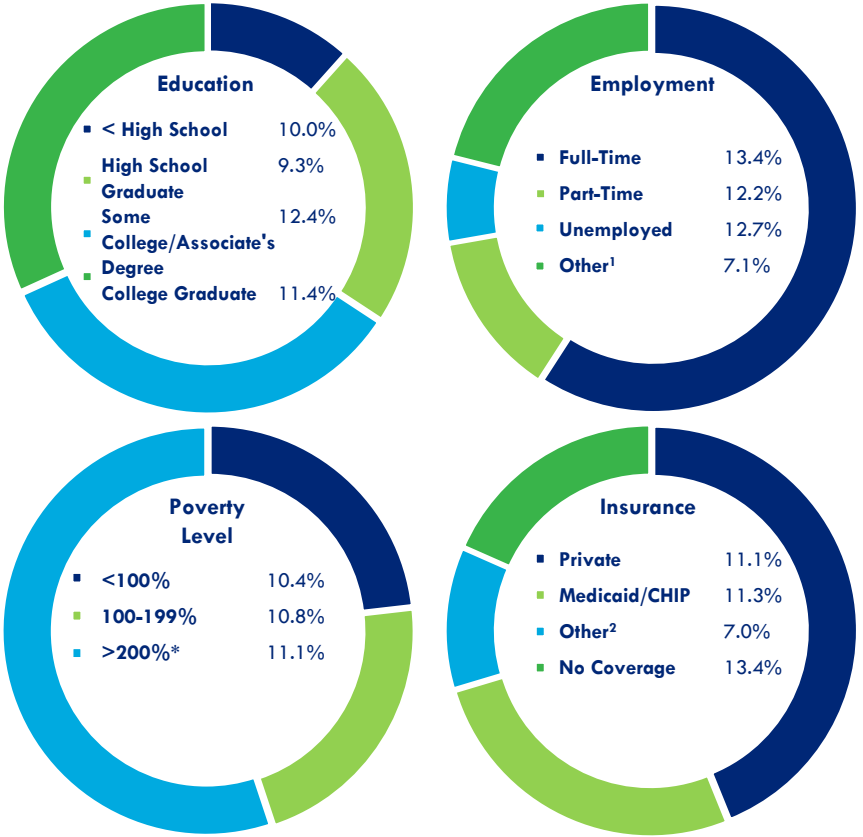
SAMHSA (2020)

Please refer slide 29 for graph interpretation tips.

AUD rates vary by socioeconomic factors as well

- The prevalence rate of AUD is higher among college degree holders and those employed full-time.
- Individuals with an income over 200% of the federal poverty line have the highest prevalence of AUD.
- AUD prevalence rates are similar across the insured status (private, Medicaid, other and no coverage), but slightly higher rates are seen among those with no coverage
- People who are unemployed show a higher rate of AUD than people who are employed.

Prevalence of AUD by Socioeconomic Factors, 2020



[1]Other Employment includes students, people keeping house or caring for children full time, retired or disabled people, or other people not in the labor force

[2]Other Health Insurance is defined as having Medicare, military-related health care, or any other type of health insurance.

SAMHSA (2020)

Please refer slide 29 for graph interpretation tips.

Both high- and low-income patients with AUD perceive barriers to treatment

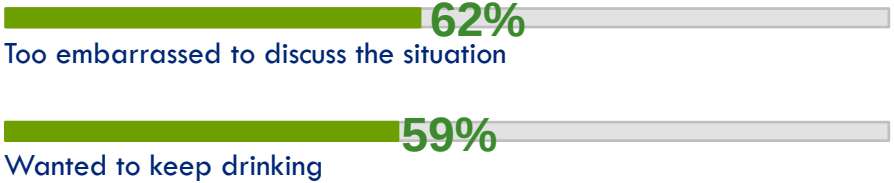
Perceived barriers to seeking treatment by insurance coverage (SUD specific):

- Uninsured people indicated financial concerns as the biggest barrier
- People with Medicaid indicated accessibility as the biggest barrier
- For people with private insurance, nonfinancial barriers exist, such as stigma, lack of readiness to stop using, and not prioritizing treatment

Perceived barriers to seeking treatment by income (AUD specific):

- **Low income**

- **High income**



Alcohol is the third leading preventable cause of death in the US

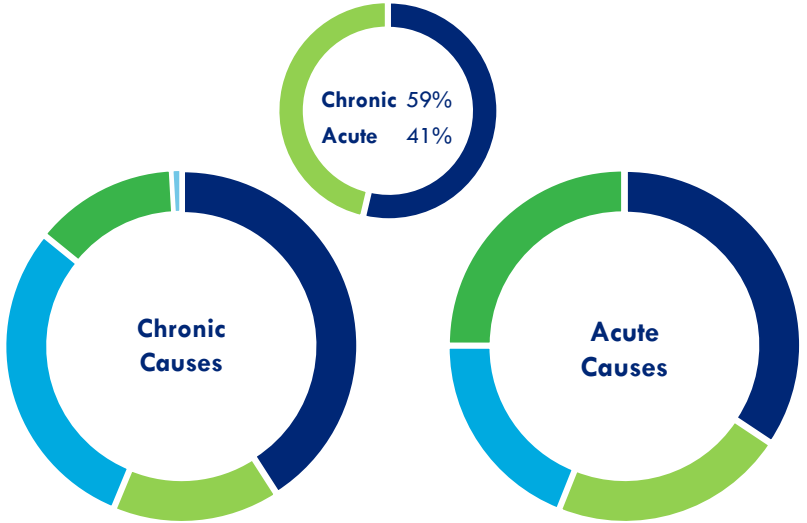
Examples of alcohol-attributable deaths include but are not limited to:

- Alcohol-related poisoning
- Alcohol-associated liver disease
- Heart disease and stroke
- Unspecified liver cirrhosis
- Upper aerodigestive tract cancers
- Liver cancer
- Supraventricular cardiac dysrhythmia
- Breast cancer
- Hypertension
- Alcohol-related driving fatalities

Excessive alcohol use is more likely to lead to Alcohol-Related Emergencies and Deaths

- Alcohol contributes to an estimated **18.5% of ED visits**.
- The rate of all alcohol-related ED visits increased **47% between 2006 and 2014**, which translates to an average annual increase of 210,000 alcohol-related ED visits.
- The annual average **between 2015 and 2019** for alcohol-attributable deaths due to excessive alcohol use is shown in the data to the right. The average was **140,557** deaths per year. 100% alcohol-attributable liver disease is the number one cause of death, followed by heart disease.
- Alcohol contributes to an estimated **22.1% of overdose deaths** related to prescription opioids.
- In 2019, alcohol-impaired **driving fatalities** accounted for 10,142 deaths (28.0% of overall driving fatalities).

Annual Average of Excessive Alcohol Attributable Deaths, 2015-19



100% Alcohol-Attributable	41%	Alcohol-Related Poisonings	34%
Cancer	15%	Motor Vehicle Traffic Crashes	22%
Heart Disease and Stroke	30%	Suicide	19%
Liver, Gallbladder, and Pancreas	3%	Other Acute Causes	25%
Other Chronic Causes	1%		

Traffic Safety Stats Alcohol-Related ED Visits 2015-19 CDC Report

Please refer slide 29 for graph interpretation tips.

AUD-related mortality rates vary by demographic and socioeconomic factors

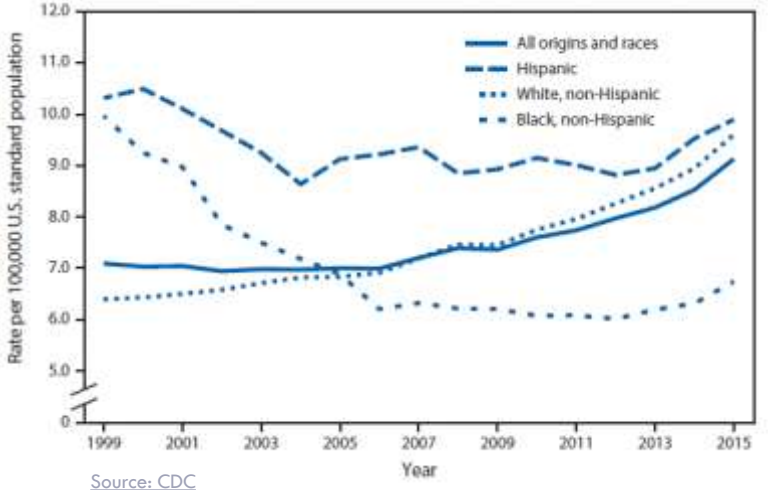
Demographic Factors

- Older age is associated with premature death.
  - Age group 50-64 have the highest numbers of alcohol attributable deaths (alcohol induced diseases).
- Males are at higher risk of death than females.
- Hispanic people have the highest mortality rate for alcohol induced causes.

Socioeconomic Factors

- Individuals who are socially isolated have higher risk of mortality over 10 years with AUD.
- Disadvantaged socioeconomic factors (e.g., housing status, employment, education) increases the risk of alcohol related mortality by 66% for males and 78% for females.

CDC Death Rates of Alcohol Induced Causes by Race (2017)



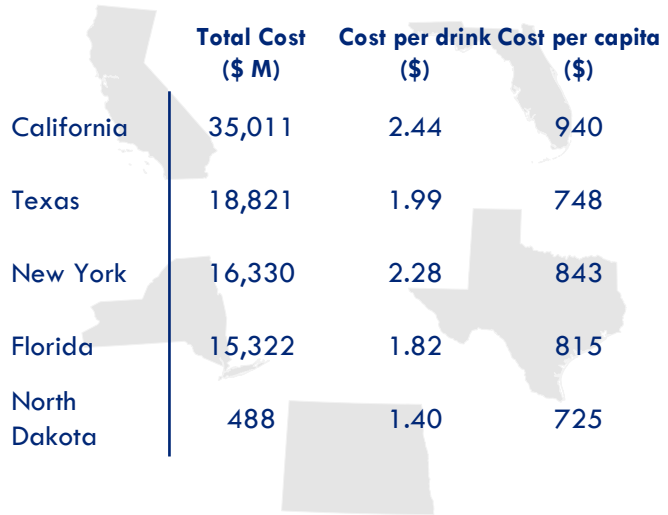
Source: CDC

There is no official mortality score or predictor for AUD, however research shows that the mortality rate can be greatly lowered if help is sought early on.

Excessive alcohol consumption cost the United States $249 billion in 2010

- This amounts to roughly $807 per person or about $2.05 per drink
- Costs due to excessive drinking largely resulted from losses in workplace productivity (72% of the total cost), health care expenses (11%), and other costs due to a combination of expenses from criminal justice, motor vehicle crashes, and damage to property.
- Excessive use of alcohol cost states and DC a median of $3.5B in 2010, ranging from $488M in North Dakota to $35B in California.
- Binge drinking, defined as consuming 4 or more drinks per occasion for women or 5 or more drinks per occasion for men, was responsible for about three-quarters (77%) of the cost of excessive alcohol use in all states and DC.
- About $2 of every $5 of the economic costs of excessive use of alcohol were paid by federal, state, and local governments.

Costs of Excessive Alcohol Consumption of Selected State



	Total Cost ($ M)	Cost per drink ($)	Cost per capita ($)
California	35,011	2.44	940
Texas	18,821	1.99	748
New York	16,330	2.28	843
Florida	15,322	1.82	815
North Dakota	488	1.40	725

AUD treatment for 60 days or more can save more than $8,200 in healthcare and productivity costs

Costs incurred by a person with AUD include:

Healthcare costs related to:

- Hangover recovery
- Sleep disorders
- Heart disease and stroke
- Liver disease
- Hepatitis and other communicable viral conditions
- Concurrent psychiatric disorders

Financial Costs

- Potential legal issues (Fines, bail, lawyer fees, etc.)
- Lost or damaged property
- Marital troubles and divorce costs
- Lost wages (sick days) and job loss
- Increased insurance costs

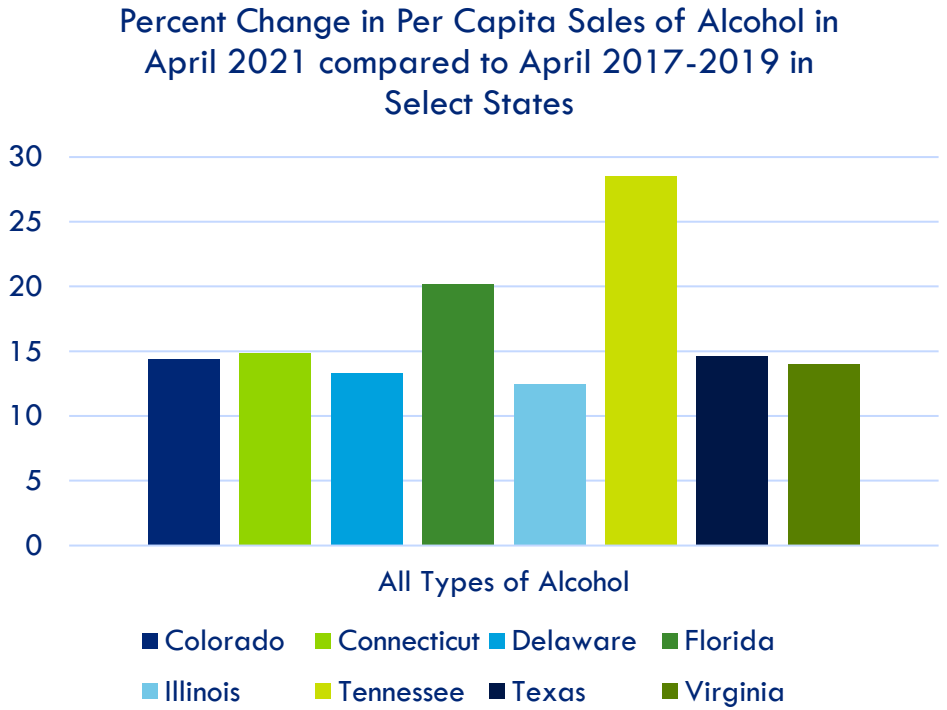
Cost of Treatment:

Treatment	Cost
Detox	$300-800 a day
Outpatient	$0-10,000
Residential	$2000-25,000 for 30-days

Every dollar invested in addiction treatment programs yields $4-7 reduction in drug-related crimes, judicial cost and theft

Alcohol use increased during COVID-19

- Alcohol sales rose in many states as compared to before COVID-19.
- A study found that frequency of alcohol consumption during the pandemic increased overall by 14% over the baseline. On average, alcohol was consumed 1 day more per month by 3 out of 4 adults.
- There are many reasons why alcohol use may have increased during COVID-19, from the stress of unemployment to isolation due to social distancing.
- In addition to a range of negative physical health associations, excessive alcohol use may lead to or worsen existing mental health problems, such as anxiety or depression, which also increased during COVID-19.



Alcohol Consumption during COVID-19 State Level Data Alcohol Consumption NIAAA Blog

Patient Journey and Treatment

Risk for AUD is impacted by family history and environment

FQA Institute for Social Impact

Family History

- 60% of the risk of developing AUD can be attributed to **family history and genetics** according to an NIH study
- Parent's drinking habits and the child's upbringing heavily influence their future behaviors
- Offspring of people with AUD are approximately 4x more likely to develop AUD (but not guaranteed)

Environmental Factors

Age

- Those who began drinking before the age of 15 are 5x more likely to develop AUD
- Those after age 60 (later-onset AUD) attribute dependence on life stress or psychiatric stressors

Mental Health Conditions

- Psychiatric conditions are comorbid with AUD
- People with AUD are 21x more likely to have antisocial personality disorder

AUD is often associated with co-occurring psychiatric conditions

Medical conditions associated with AUD include but are not limited to:

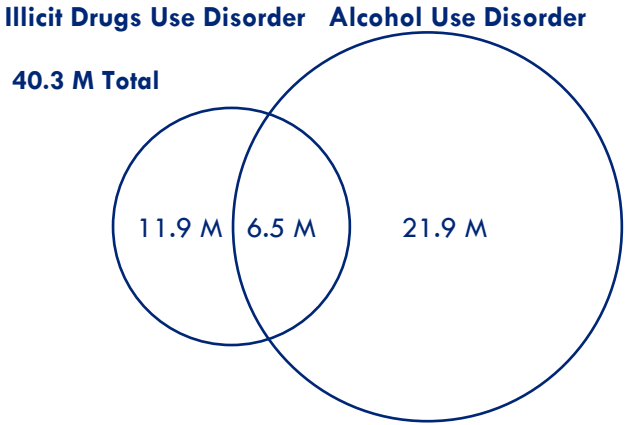
- Anxiety disorders (20% to 40% people with AUD)
- Mood disorders such as major depressive disorder and bipolar disorder (27% to 40% patients with AUD)
- Post-traumatic stress disorder (30% and 60% patients with AUD)
- Sleep-related disturbances (36% to 91% cases suffering from AUD)
- Schizophrenia (11% prevalence in people with AUD)

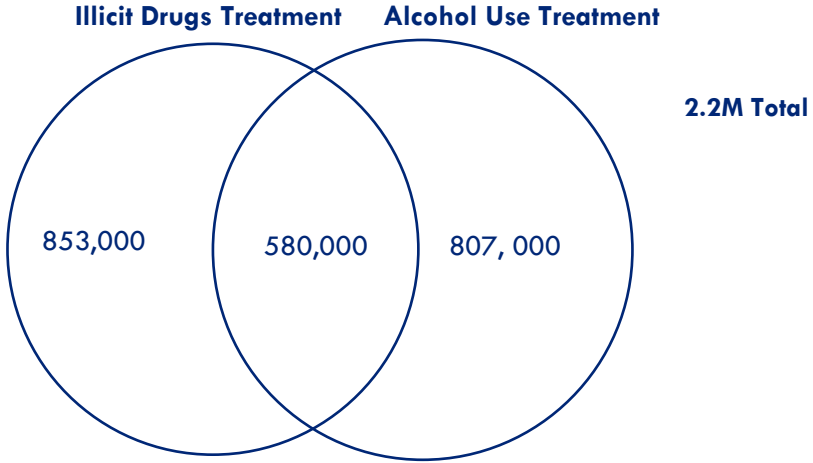
Treatment for AUD and co-occurring conditions:

- Although people with AUD often have co–occurring psychiatric disorders, they may not receive specialized treatment that addresses both conditions. Timeline of symptoms and behaviors plays vital role in diagnosis.
- Some people with comorbid diagnoses face greater difficulties in accessing and using traditional AUD treatment and self–help groups. Studies demonstrate that patient success is higher if both the AUD and the co-occurring mental health disorder are treated simultaneously which is not practically addressed. This is commonly aggravated by patients' preference to treat other medical conditions rather than AUD.

As mental health and substance use treatment facilities expand their services for patients with dual diagnoses, further research is needed to guide the treatment of this patient population.

AUD can also be found in combination with other SUDs





- Almost 71% of adults with a substance use disorder struggled with alcohol use disorder and 46% struggle with illicit drug use disorder.
- About 16% struggle with both alcohol and illicit drug disorder.

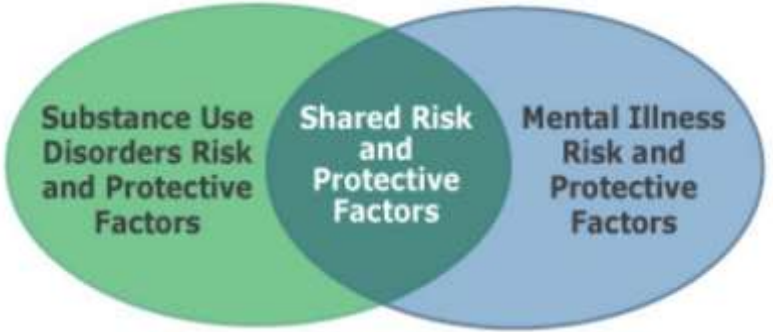
- About 5% of those suffering from alcohol use disorder and about 8% suffering from illicit drug disorder receive treatment.

SAMHSA (2020)

Protective factors can help reduce the impact of risk factors

At the individual level, protective factors include:

- Participation in prosocial activities
- High parental monitoring
- Involvement with peers who don't use substances
- High religiosity
- High achievement in high school
- Strong bonding to school
- Delayed age of onset of drinking among children



Community/systems level strategies to support protective factors include:

- Promoting screening and brief intervention for alcohol and other drugs
- Implementing prevention programs in schools and other community organizations

SAMHSA Risk and Protective Factors Genetics (NIH) NIAAA on Prevention Protective Factors Among Pacific Islander Young Adults CDC on Protecting from ACEs Community Factors

Properly Diagnosing AUD

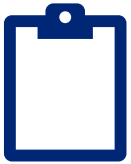
According to the Mayo Clinic, when screening for AUD, a doctor will:

Ask questions about the patient's drinking habits

Perform a physical exam

Conduct lab tests and imaging tests

Complete a psychological evaluation



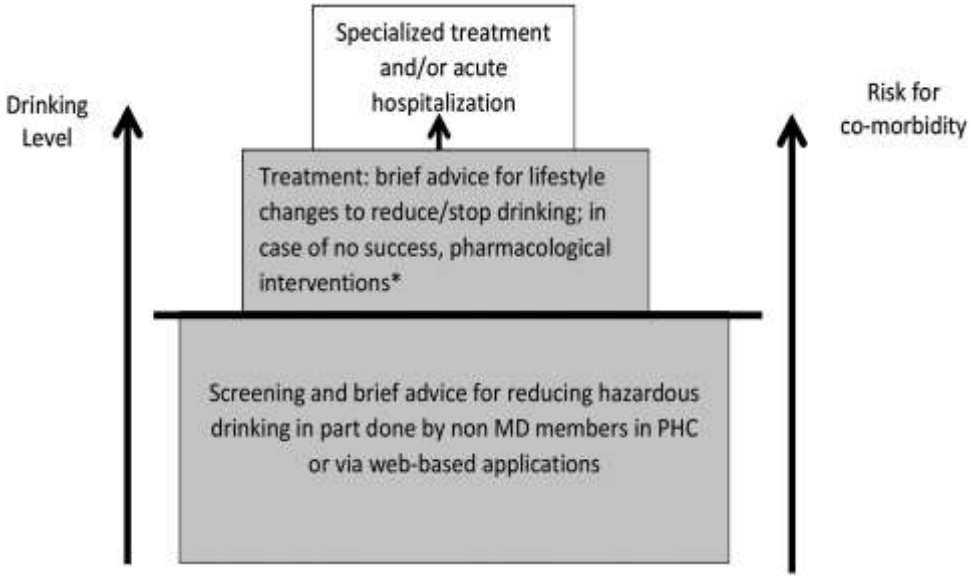
Use the DSM-5 criteria

If the doctor identifies a problem, they may refer patients to a mental health professional. A 2015 study found that only 19.8% of people with lifetime AUD were ever treated.

Mayo Clinic AUD DSM-5 & AUD

PCPs play an important role in screening and counselling, but studies show opportunities to increase consistency and comfort

3 Main Takeaways from Study on How PCPs talk about Alcohol
1. Patients disclosed information regarding alcohol use, but the provider did not explore the information further.
2. Counseling for alcohol use was typically vaguer as compared to smoking advice, which was clearer and more direct.
3. Provider discomfort was observed during alcohol related discussions. Avoidance is a barrier between patient provider interactions for proper alcohol screening.



Treatment options and other supports after diagnosis with AUD

Treatment Type	Description	Provider Involved
Rehab	Patients live at a treatment facility and attend group therapy and individual counseling	Rehab Facility Staff (licensed alcohol and drug counselors, social workers, nurses, doctors, peer coaches)
Behavioral Treatment	Aimed at changing drinking behavior through counseling	Primary care provider, psychiatrist, psychologist, social worker, alcohol counselor
Medication	Intended to slow or stop drinking and to prevent relapse	Primary care provider, psychiatrist
Mutual Support Groups	12-Step program; Alcoholics Anonymous	Medical professionals, friends/family

Studies from the USA, the Netherlands, the UK, Canada and Australia suggest that 30 to 40% of patients do not receive evidence-based treatments, and up to 25% of patients receive treatments that are either inappropriate or even harmful.

Evidence-Based AUD Treatment for Alcohol Problems AUD Treatments

The rehab process consists of detox, inpatient, and transition to outpatient care

~2-7 days

Detox

- In detox, the body is purged of harmful substances
- Severity of withdrawal symptoms depends on severity of AUD
- Process occurs at medical facilities and rehab centers with doctors and nurses onsite
- Recommendation for patients is to undergo detox at a rehabilitation center

~28-90 days

Inpatient Rehab

- Patients live at the treatment facility under supervision
- Patients attend several hours of group and individual counseling
- Patients can also participate in 12-Step support groups and holistic therapy
- In some cases, Medication Assisted Treatment (MAT) is provided

~1-6 months

Outpatient Care

- Behavioral and Medication Assisted Treatment (MAT) specific to the severity of one's AUD
- Several hours of group therapy and one hour of individual therapy per week
- Limited supervision

The NIH identifies four categories of behavioral treatment

Cognitive-Behavioral Therapy

- Takes place one-on-one with a therapist or in small groups
- Focuses on identifying the emotions and situations that lead to heavy drinking and managing underlying stress that can lead to recurrence

Motivational Enhancement Therapy

- Builds and strengthens motivation to change drinking behavior
- Focuses on forming a plan for making changes to one's drinking habits, builds confidence, and develops the skills needed to stick to the plan

Marital and Family Counseling

- Incorporates partners and other family members in treatment process
- Can increase chances of maintaining abstinence compared with patients undergoing individual counseling

Brief Interventions

- Provides personalized feedback from counselors to help client set goals and provide ideas for helping make a change to their drinking habits

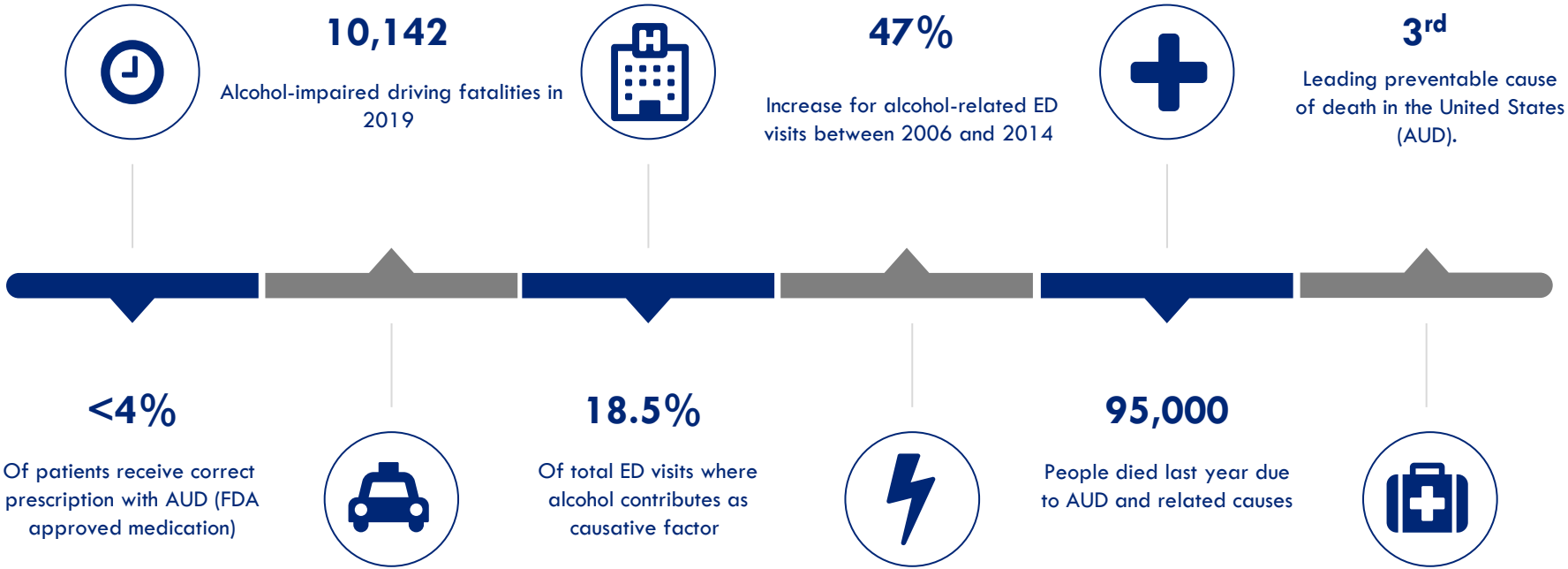
Although underutilized, medication has proved a successful treatment for AUD*

The FDA has approved three medications for treating AUD (MAUD or MAT, when used in combination with therapy):

Medication treatment effects	Naltrexone	Acamprosate	Disulfiram
Reduces heavy drinking	X	X	
Manages cravings	X	X	
Supports abstinence	X	X	X
Blocks breakdown of alcohol, causes unpleasant symptoms if person drinks			X

"The most robust finding in the study is that those receiving any medication did much better than those who received no pills at all.... With **less than one percent of those seeking help for alcohol dependence receiving a prescription**, medication is underutilized. " -Barbara Mason, Scripps Research Institute

Why is MAUD essential in alcohol use disorder (AUD)?



Alcohol Facts Sheet CDC Health Report

The NIH identifies 5 signs to assess quality treatment*

Accreditation	• Is the program licensed/certified? • Good quality programs have a good inspection record, and the staff should have received proper training for substance use and mental disorders
Medication	• Does the program offer FDA approved medication for recovery from AUD (MAUD)?
Evidence Based Practices	• Does the program offer treatments that have been proven to be effective such as medication management therapies, motivational therapy, counseling, or education? • Does the program either provide or help obtain medical care for physical health issues?
Family	• Are family members incorporated into the treatment program? They have an important role in understanding the impact of addiction.
Support	• Does the program provide ongoing treatment and support beyond substance issues?

Quality programs offer a full range of services and should be matched to a person's needs. Cost of treatment does not necessarily indicate better quality.

*More info on quality can be found in the Quality Measurement section.

Most people who need treatment don't get it

People who needed and received treatment for SUD (including Alcohol) (2020)

Age	People who need treatment	People who received treatment
12-17	1.6 million	55,000
18-25	8.2 million	301,000
26+	31.3 million	2.3 million

People who needed and received treatment for AUD (2020)

Age	People who need treatment	People who received treatment
12-17	718,000	30,000
18-25	5.3 million	174,000
26+	22.7 million	895,000

Substance use treatment (including Alcohol) by setting (2020)

Site	Number of People (2020)
Self-help group (like AA)	1.0 million
Outpatient rehab	1.3 million
Outpatient mental health center	983,000
Inpatient rehab	683,000
Doctor's office	589,000
Hospital inpatient	396,000
ER	n/a
Prison or jail	113,000

- Less than 4% of people with AUD were prescribed a medication approved by the U.S. Food and Drug Administration (FDA) to treat their disorder

- Individuals with AUD more often seek care from their PCP for a medical problem related to their alcohol use, instead of directly asking for treatment relating to excessive drinking

2020 National Survey on Drug Use

Opioid Use Disorder (OUD)

Background

What are Opioids?

- Derived from opium poppy plants, opioids are prescribed for:
  - Chronic and acute pain
  - Active-phase cancer treatment
  - Palliative care and end-of-life care

- Generally, opioids fall into two main categories:
  - Licit prescription pain relievers (e.g., oxycodone, codeine, morphine which can also be sold illegally)
  - Illicit drug (e.g., heroin)

- Opioids can be naturally occurring or synthetic (produced in a lab). Synthetic opioids (primarily fentanyl) account for the highest proportion of overdose deaths, compared to other opioids.
  - See next slide for more information on fentanyl

Opioid Use Disorder ASAM Opioid Facts Overdose Death Rates

Fentanyl: One Pill Can Kill

- Fentanyl is 50x more potent than heroin, 100x more than morphine.
- Just 2 milligrams of fentanyl, which is about the size of 10-15 grains of salt, is considered a potentially lethal dose.
- Of the 107K overdose deaths that occurred in 2021, ~70% involved fentanyl.
- Fentanyl can be found in pills, vape pens, and other forms. Some pills with fentanyl come in bright colors ("rainbow fentanyl"), which appears to be an effort to make fentanyl look like candy.

DEA on Fentanyl DEA Graphic

DSM-5 criteria for diagnosis of Opioid Use Disorder (OUD) requires at least two symptoms over 12 months

Symptoms include but are not limited to*:

- "Opioids are often taken in larger amounts or over a longer period than intended.
- There is a persistent desire or unsuccessful efforts to cut down or control opioid use.
- A great deal of time is spent in activities necessary to obtain the opioid, use the opioid, or recover from its effects.
- Craving, or a strong desire to use opioids.
- Recurrent opioid use resulting in failure to fulfill major role obligations at work, school or home
- Continued opioid use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of opioids.
- Important social, occupational or recreational activities are given up or reduced because of opioid use.
- Recurrent opioid use in situations in which it is physically hazardous
- Continued use despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by opioids."

Symptoms of OUD

Not applicable for individuals taking opioids solely under appropriate medical supervision

The ORT and other tools are used in screening for OUD

- Opioid Risk Tool (ORT) is a self-report tool for opioid misuse screening among individuals prescribed opioids in primary care. Other tools include Current Opioid Misuse Measure (COMM®), Patient Medication Questionnaire (PMQ), and Screener and Opioid Assessment for Patients with Pain-Revised (SOAPP®-R)
- The severity scoring scale in ORT is:
  - Mild: presence of 2-3 symptoms
  - Moderate: presence of 4-7 symptoms
  - Severe: presence of 8 or more symptoms
- Severity varies due to frequency and/or dose of opioid as assessed b individual report, clinician observations or biological testing, leading t misinterpretation
- Urine toxicological tests remains positive after 12-36 hours for most opioids (except fentanyl, methadone, and buprenorphine).
- Prescription drug monitoring program (PDMP) data also helps in screening

Opioid Risk Tool

This tool should be administered to patients upon an initial visit prior to beginning opioid therapy for pain management. A score of 3 or lower indicates low risk for future opioid abuse, a score of 4 to 7 indicates moderate risk for opioid abuse, and a score of 8 or higher indicates a high risk for opioid abuse.

Mark each box that applies	Female	Male
Family history of substance abuse		
Alcohol	1	3
Illegal drugs	2	3
Rx drugs	4	4
Personal history of substance abuse		
Alcohol	3	3
Illegal drugs	4	4
Rx drugs	5	5
Age between 16—45 years	1	1
History of preadolescent sexual abuse	3	0
Psychological disease		
ADD, OCD, bipolar, schizophrenia	2	2
Depression	1	1
Scoring totals		

OUD Diagnosis – CDC , NIDA - ORT

Key Terms

- **Tolerance** is defined by either of the following: (a) a need for markedly increased amounts of opioids to achieve intoxication or desired effect or (b) markedly diminished effect with continued use of the same amount of an opioid

- **Withdrawal** is defined as either of the following: (a) the characteristic opioid withdrawal syndrome or (b) the same (or a closely related) substance are taken to relieve or avoid withdrawal symptoms

- **Remission** is defined as when a patient meets all OUD criteria previously, but none of the criteria for OUD have been met at least for 3 months but less than 12 months (**early remission**) and 12 months or more (**sustained remission**) except, strong desire to use opioids.

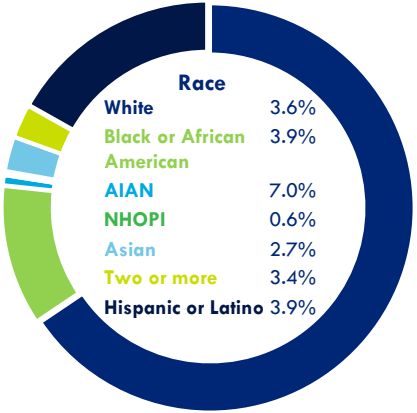
- **Misuse** is defined as the use of illegal drugs and/or prescription drugs in a way other than as directed by a doctor (e.g., greater amounts, more frequently, or longer) or using someone else's prescription.

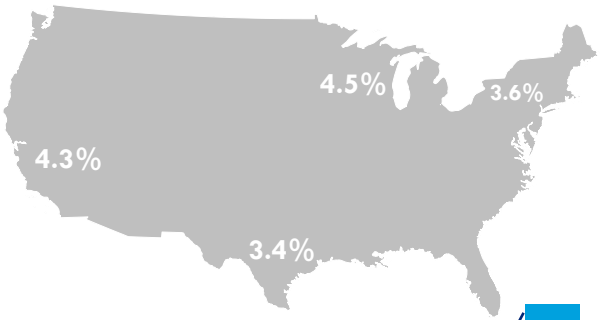
Prevalence and Trends

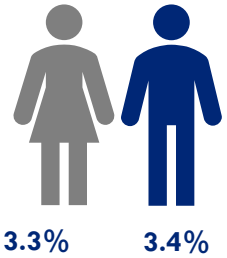
2.6 M (1.0%) people have OUD, with variation in rates across demographic traits and geography

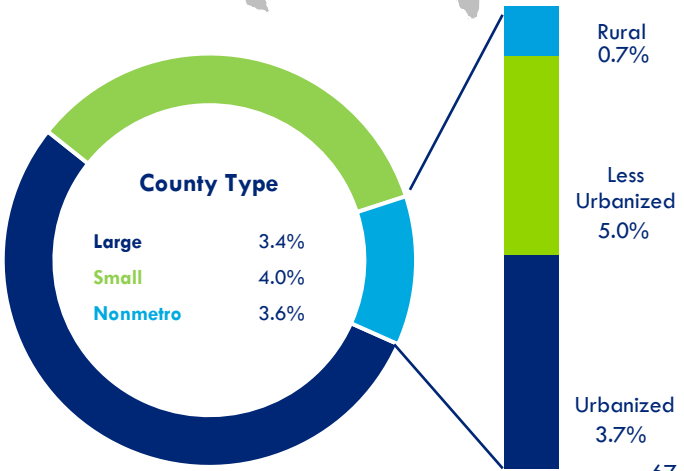
- Americans constitute 4.6% of the world's population, but consume approximately 80% of the world's opioid supply.
- 9.1M (3.6%) of adults over 18 years misuse opioids. Although prescribing opioids have decreased in recent years, misuse continues to intensify.
- Males have OUD at a higher rate vs. females.
- Healthcare providers in Alabama, the highest-prescribing state, wrote almost 3x as many prescriptions per person as those Hawaii, the lowest-prescribing state.

Prevalence of Past Year Opioid Misuse by Socioeconomic Factors, 2020









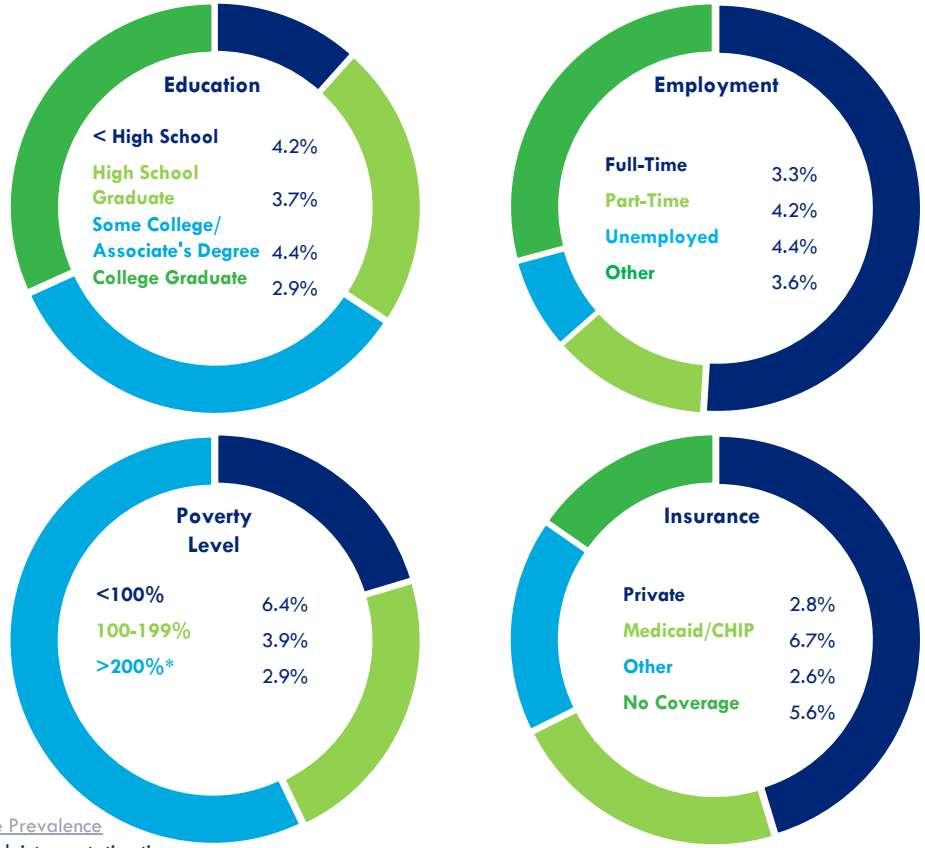
SAMHSA (2020)

Please refer slide 29 for graph interpretation tips.

There are differences in prevalence by sociodemographic factors

- People across income levels misuse opioids, but the prevalence is highest among people whose income falls below the federal poverty level.
- The prevalence of past year opioid misuse is highest among people with Medicaid coverage (6.7%), followed by no coverage (5.6%).
- Of those with OUD, approximately 42.7% have Medicaid, 41.4% have private insurance, and 15.9% have Medicare.

Prevalence of Past Year Opioid Misuse by Socioeconomic Factors, 2020



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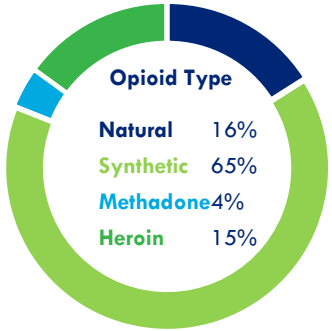
SAMHSA (2020) Opioid Use Prevalence

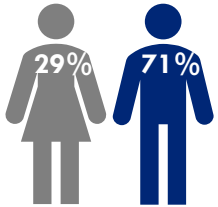
Please refer slide 29 for graph interpretation tips.

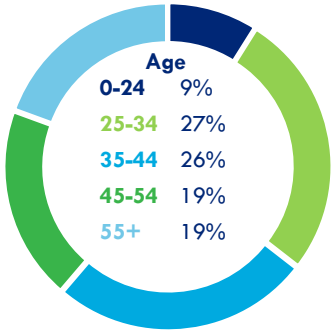
Opioid overdose deaths continue to rise, with provisional data for 2020 at 73% of the total drug overdoses

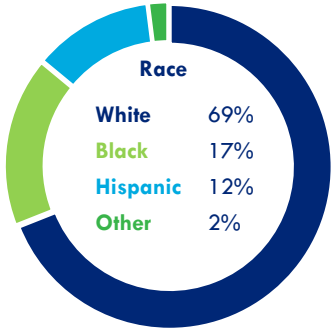
- In 2019, opioid overdose resulted in 71% of the total drug overdose deaths, an increase from 66% in 2016.
- From 2018 to 2019, death rates due to the involvement of opioids changed significantly:
  - Opioid-involved death rates increased by over 6%
  - Prescription opioid-involved death rates decreased by almost 7%
  - Heroin-involved death rates decreased by over 6%
  - Synthetic opioid-involved death rates (excluding methadone) increased by over 15% **(primarily fentanyl)**
- Illegally acquired heroin and synthetic opioids such as fentanyl have become the leading cause of overdose deaths.
- The death rate across the country stands at 15.5 per 100,000 population.
- Non-Hispanic White people show the highest death rates.

Opioid Overdose Deaths by Socioeconomic Factors, 2020









KFF Stats CDC Overdose Data

Please refer slide 29 for graph interpretation tips.

Economic cost of OUD ($471 billion) and fatal opioid overdose ($550 billion) during 2017 totaled $1,021 billion

Costs Incurred in Select States, 2017

				Cost components of opioid use disorder, $ (millions)					Cost components of fatal opioid overdose, $ (millions)		
	Total cost ($ M)	Cost of fatal overdose ($)	Cost per capita ($)	Health care	Substance use treatment	Criminal justice	Lost productivity	Reduced quality of life	Health care	Lost produc-tivity	Value of statistical life lost
Ohio	72,583	49,576	6,226	1,529	173	724	1,530	19,051	23	6,195	43,357
Florida	68,444	37,473	3,262	2,059	232	975	2,059	25,646	18	4,683	32,772
California	61,896	25,394	1,566	2,426	274	1,149	2,427	30,225	12	3,173	22,209
New York	60,016	37,231	3,024	1,515	171	717	1,515	18,868	18	4,652	32,560
Minnesota	8,413	4,873	1,509	235	26	111	235	2,931	2	609	4,262
Texas	49,135	16,837	1,736	2,147	242	1,016	2,147	26,745	8	2,104	14,725
Wyoming	985	543	1,701	29	3	14	29	366	0.3	68	474

Per capita combined costs of OUD and fatal opioid overdose were highest in states in the Ohio Valley and New England regions. In New England, Connecticut, Maine, and Massachusetts had high per capita combined costs in 2017.

(According to the CDC, "This study is limited to the 38 states and DC that met drug specificity requirements for mortality data, so the rankings of combined costs and per capita costs do not apply to all 50 states.")

CDC State Level Data

Opioid overdose deaths increased during COVID-19 pandemic

- In 2021, there were an estimated **107K overdose deaths** in the US.
  - Overdose deaths increased by half as much as in 2020, but are still **up 15% from 2020.**
  - Overdose death rates **increased at a higher rate among people of color.**

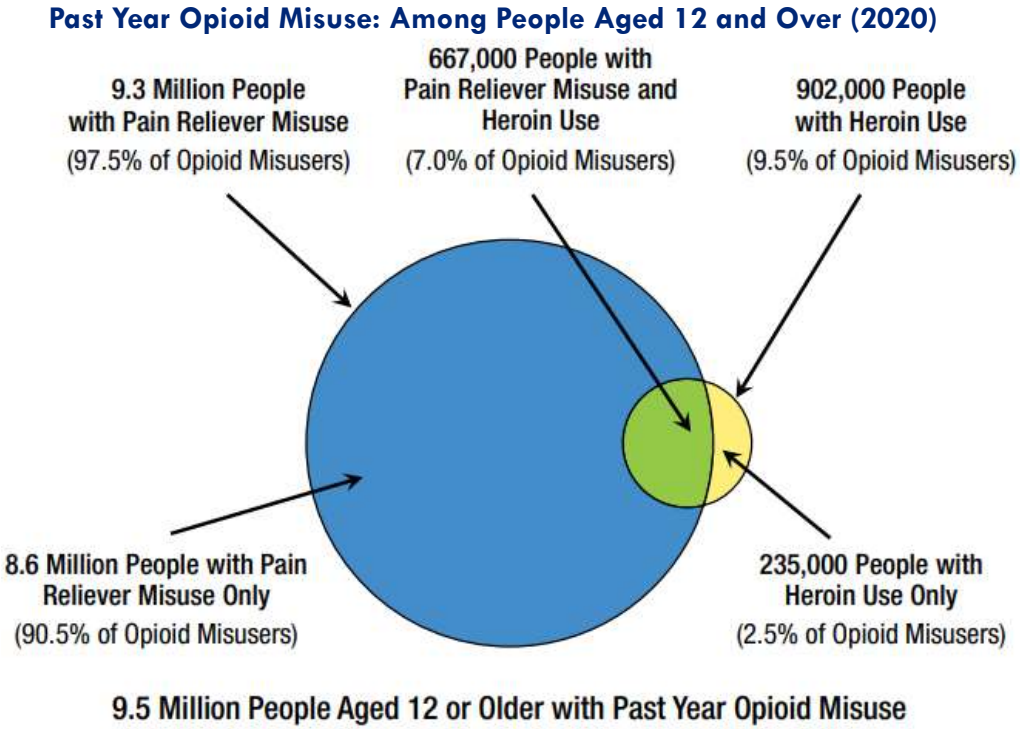
- There are many **physical and mental impacts** that may have contributed to the rise in overdose deaths, such as:
  - Job loss and financial strain
  - Altered living arrangements and rise in isolation
  - Increased stress
  - Increased depression and anxiety

- There were also **missed touchpoints for early intervention** and challenges in **access to treatment.**

- One positive change that arose during the pandemic was more **flexibility in OUD services,** such as take-home medications for OUD (MOUD), doorstep delivery without an in-person visit, and telehealth visits.

Patient Journey and Treatment

90.5% of those who misused opioids in 2020 misused prescription pain killers (not heroin)



Certain risk factors increase likelihood of opioid misuse and/or overdose

Risk Factors for Opioid Misuse and OUD

- Past or current drug misuse
- Untreated psychiatric conditions
- Younger age at initiation of use
- Adverse Childhood Events (ACEs) and other past trauma
- Environment that encourages misuse (whether family or other social environment)
- High dosage/potency of opioid

Risk Factors for Opioid Overdose*

- History of substance misuse (including illicit and prescription drugs and alcohol)
- Polysubstance use
- Co-occurring mental and physical conditions
- High opioid use
- Co-prescribing antidepressants
- Unemployment
- Recent release from prison
- Heart or pulmonary complications
- Middle-aged people

There are also protective factors which can help reduce risk of opioid misuse among young people

At the individual/community level, parents and other supportive adults providing:

- Addressing basic needs, such as access to healthy food and stable housing
- Maintaining a strong connection to school
- Building a sense of community attachment
- Ensuring appropriate parental supervision
- Educating children and adolescents on the risks of opioids (both legal and illegal)
- Implementing prevention programs in schools and other community organizations

At the policy/systems level, preventing Adverse Childhood Events (ACEs) through:

- Improving financial supports for families (e.g., family-friendly workplace policies)
- Promoting a culture that protects against violence (e.g., public education campaigns, men/boys as allies in prevention)
- Early education programs and skill development for children (e.g., social-emotional learning in schools, high-quality childcare)
- Connecting youth to caring adults and activities (e.g., mentoring programs)

CDC on Protecting from ACEs Community Factors

PDMPs intended to inform providers' prescribing decisions and prevent opioid misuse but have had mixed results

Prescribing behavior

+ Reduced opioids prescription rate, duration, and morphine milligram prescribed
– No change or increase in overdose frequency (surpassing 100,000 overdose deaths in 2021)

Nonmedical usage

– No effect on misuse, dependence, and initiation
– Increase in number of days of heroin use
– Small number of people switched to heroin who were prescribed opioids earlier

Drug access

+ Decline in doctor shopping among individuals to access drug
– Increased access barriers for those with medical needs

Journal of Urology, Journal of Arthroscopy MMWR Surveillance Summit Substance Abuse Journal

In addition to PDMPs, drug disposal products and other initiatives seek to reduce access to prescription opioids

Example: Walmart and DisposeRx Partnership

- Walmart Pharmaceuticals
  - Restricting **first time** acute opioid prescriptions to **no more than a 7-day supply**

- DisposeRx is a proprietary powder that converts unused opioids into biodegradable gel for environmentally friendly disposal
  - Patients now receive a free DisposeRx packet with any schedule II opioid
  - As of Jan 2020, Walmart has distributed 7 million packets

CDC PDMP Walmart

Naloxone is a life-saving medication that can reverse an overdose from opioids

Naloxone (aka Narcan) rapidly reverses the effects of an opioid overdose through a nasal spray or intramuscular injection

- Majority of naloxone administration is done by EMS, but nonmedical personnel administration still have high rates of reversal success (75-100%).
- Non-medical people can obtain naloxone from pharmacies and community organizations (some in free vending machines).
- See NEXT Distro to find Naloxone in your community.

Below are takeaways from a study on prescribing naloxone alongside opioid prescriptions to help mitigate overdose deaths:

- 1 naloxone prescription is dispensed for every 69 high dose prescription.
- 51% of Naloxone distributions were to commercial insurance holders.
- 57% of prescriptions required out of pocket costs.
  - $0.01-$50.00 range
- Lowest naloxone dispensing was observed in rural vs. metropolitan counties.

CDC Data Perception of Naloxone NIDA Drug Facts Narcan.com Naloxone Administration Naloxone Dosage for Reversal

Parts of OUD Treatment

There are many options for OUD treatment, ranging from outpatient (1-8 hours/week) to intensive outpatient (9+ hours/week) to residential (several days to 12 months) to hospital inpatient (24-hour care). Treatment typically includes:

Withdrawal Management and Detoxification

A patient's acute opioid withdrawal can be a markedly unpleasant and daunting hurdle to overcome, with symptoms such as fever, aches and pains, nausea, diarrhea, heart pounding, and excessive yawning. During detox, symptoms are monitored and medications (e.g., lofexidine) and other stimulation devices may be used to help reduce withdrawal symptoms (COWS score).

Medications for OUD (MOUD)

After the detox period, other medications may be used to address maintenance and recovery for the longer-term. These include buprenorphine, methadone, and naltrexone. This can be accompanied by therapy or not.

Therapy

Patients may participate in individual and/or group counseling sessions to help with changing behavior, addressing underlying issues and past trauma, and working towards recovery. Therapeutic interventions will draw from evidence-based techniques such as cognitive-behavioral therapy.

Groups and other Social Supports

Beyond clinical care, many find 12-step programs (e.g., NA) and other support groups (e.g., SMART Recovery) to providing essential social connection in a supportive and safe environment. People in recovery may also find benefit in a peer coach, who can help with navigating their recovery journey and share information on other resources, such as career counseling, housing, etc.

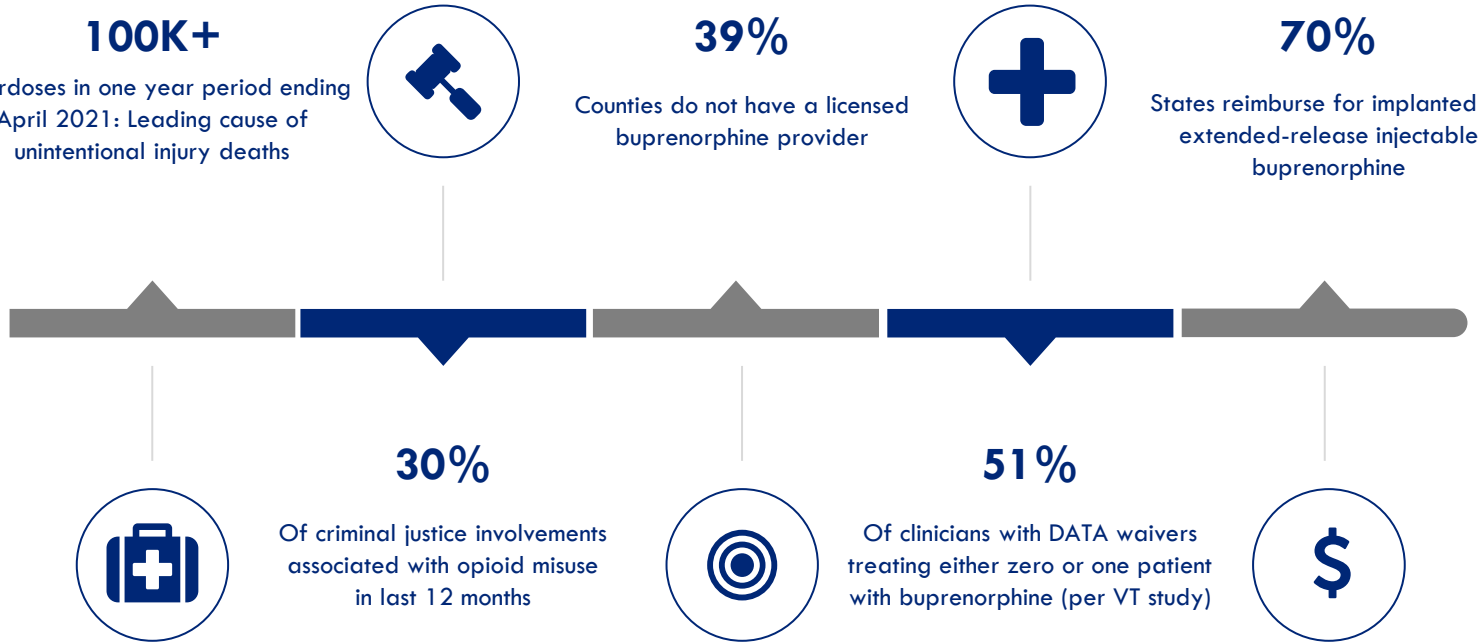
Medication is the evidence-based mainstay of OUD treatment

The FDA has approved three medications for treating OUD:

Methadone	"Prevents withdrawal symptoms and reduces cravings in people addicted to opioids. It does not cause a euphoric feeling once patients become tolerant to its effects. It is available only in specially regulated clinics."
Buprenorphine	Blocks the effects of other opioids, reduces or eliminates withdrawal symptoms and reduces cravings. "Buprenorphine treatment (detoxification or maintenance) is provided by specially trained and qualified physicians, nurse practitioners and physician assistants (having received a waiver from the Drug Enforcement Administration) in office-based settings."
Naltrexone	Prevents the feeling of euphoria by blocking effects from other opioids. It is available from office-based providers in pill form or monthly injection.

Fewer than half of private-sector treatment programs offer medications for opioid use disorders, and of patients in those programs who might benefit, only a third receive it. In many rural areas, for instance, no MAT prescribers are available.

By the Numbers: MOUD



Risk Factor Data Prescription Drug Misuse Criminal Justice Involvement Licensed Buprenorphine Providers Leading Causes of Death VT Study Community Buprenorphine

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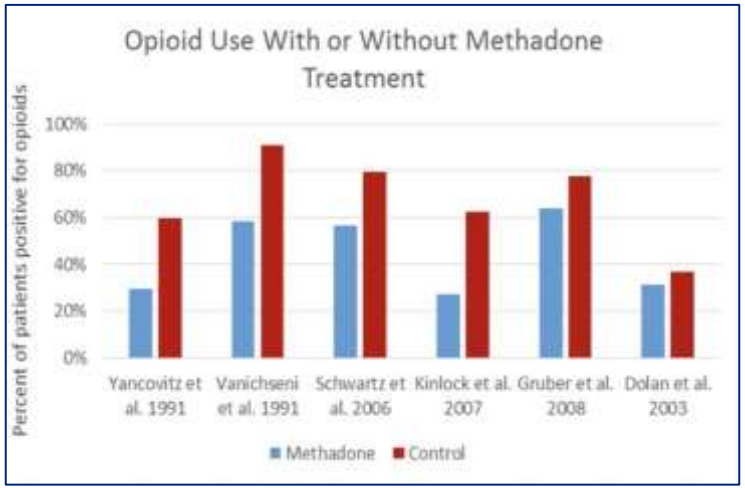
Studies find decrease in all cause mortality and other negative outcomes with MOUD

- A 2017 systematic review of 19 cohort studies including more than 120K patients treated with methadone and 15K with buprenorphine found substantial decreases in all cause mortality for patients receiving opioid agonist therapy vs. those out of treatment.
- Termination of pharmacotherapy is associated with high mortality rates in multiple large cohort studies, with a particularly high risk immediately after discontinuation of treatment.
- Treatment with methadone or buprenorphine is also associated with lower rates of other opioid use, improved social functioning, decreased injection drug use, reduced HIV transmission risk behaviors, reduced risk of HIV diagnosis, reduced risk of hepatitis C virus (HCV) infection, and better quality of life compared to individuals with OUD not in treatment.



Source: NIDA

Systematic Review Effectiveness of MAT NIDA

There are many psychosocial interventions that can be used with medications for OUD

Examples of psychosocial interventions include:

- **Contingency management approaches,** which use incentives or rewards to help meet goals such as sticking with medications or attending treatment
- **Cognitive behavioral approaches,** which address why a patient may be using drugs, builds patients' belief that they can address their problems, and teaches patients to cope with struggles more effectively
- **Motivational interviewing,** which helps patients identify reasons why they might not want to change their behavior and ways they can start to do so
- **Structured family approaches,** which bring in people who care to strengthen treatment

Contingency management and cognitive behavioral therapy are the most studied psychosocial treatment techniques for use in combination with MOUD. While the incremental utility varied in different studies and treatment environments, the efficacy of combining MAT with psychosocial interventions is apparent.

Evidence-based treatment for OUD is effective, but almost four in five Americans with OUD do not receive any form of treatment

The National Academy of Medicine identifies many barriers that limit access to evidence-based care, such as:

- **Provider Barriers**
  - Providers' stigmatizing attitudes toward people with OUD and MOUD
  - Insufficient training of physicians in evidence-based practices
  - Insufficient number of addiction treatment specialists
- **Institutional Barriers**
  - Non-standardized provisions of MOUD within medical and psychiatric care
  - Inadequate attention to developing patient-centered systems of care
- **Regulatory Barriers**
  - Some laws/regulations limit access to addiction treatment
  - Data sharing restrictions can impede quality care and care coordination
- **Other Barriers**
  - Financial barriers can limit access to care for some patients
  - More attention is needed on the rationale behind why people don't engage in treatment

National Academy of Medicine

In an FDA OUD study, patients share their perspectives on the stigma of receiving care and the need for holistic treatment

Personal burdens patients with OUD face:

- Disliked being labeled as an “addict”
- Negative associations of being labeled "dirty" and wanting to be "clean"
- Stigma of receiving care (fear of affecting employment and reputation)
- Emotional distress (depression and anxiety)

Medical barriers:

- Methadone was hard to access (long wait times, strict payment types, and requirement of a positive opioid urine test before treatment)
  - Negative side effects: profuse sweating, weight gain, sexual dysfunction
- Coping with underlying acute or chronic pain that leads to OUD in the first place
  - Lack of alternative pain medications
  - Is abstinence the best solution?

Participants stressed that "no one size of treatment fits all", the recovery journey needs to encompass a combination of several therapies to aid the recovery process to reach a "situation of stability" to prevent recurrence of use.

FDA Medications to Treat OUD

Impact of COVID on opioid overdoses and OUD care

FQA Institute for Social Impact

By the Numbers

107,622

Overdose deaths in US during 2021, Highest in any 12 months

>50%

Increase in deaths in 18 states in 2020

>98%

Increase in synthetic opioid-involved deaths in 10 western states in 2020

Key Takeaways

- During the pandemic, there was a rise in opioid overdose deaths in the US, disproportionately affecting people with low SES, urban neighborhoods, and Black and Hispanic populations.
- Synthetic opioids (fentanyl) were involved in the majority of the overdose deaths in 2020-2021.
- People with OUD and overdose history are at increased risk for adverse COVID-19 outcomes.
- As a policy response at the state and federal level, telehealth-based OUD services helped to mitigate the care gap and expand access to MOUD (which previously required an in-person visit).

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Opioid Overdose Deaths Telehealth CDC -Overdose Deaths Accelerating During COVID-19; CMS Data 2021 Provisional Data COVID Risk COVID Risk Study

Stimulant Use Disorder

Background

Background on Stimulants

Stimulants are a broad class of drugs that increase the activity of the central nervous system (CNS).

- **Amphetamines:** prescription stimulants such as Adderall, Ritalin, Concerta, etc.
  - Legal but can be misused illegally
  - Used to treat ADHD, narcolepsy, and obesity

- **Cocaine:** a stimulant made from coca plant leaves that is typically seen in powder or rock form.
  - Illegal drug that can be snorted, smoked, or injected into a vein
  - Also referred to as coke and crack

- **Methamphetamine/Crystal Meth:** potent, man-made stimulant
  - Illegal drug that can be smoked, snorted, injected or orally ingested
  - Commonly referred to as meth, ice, speed, and crystal

Note, MDMA is also a stimulant, as well as a hallucinogen; it will not be covered in these slides.

DSM-5 Criteria for Diagnosis of Stimulant Use Disorder requires at least two symptoms observed over 12 months

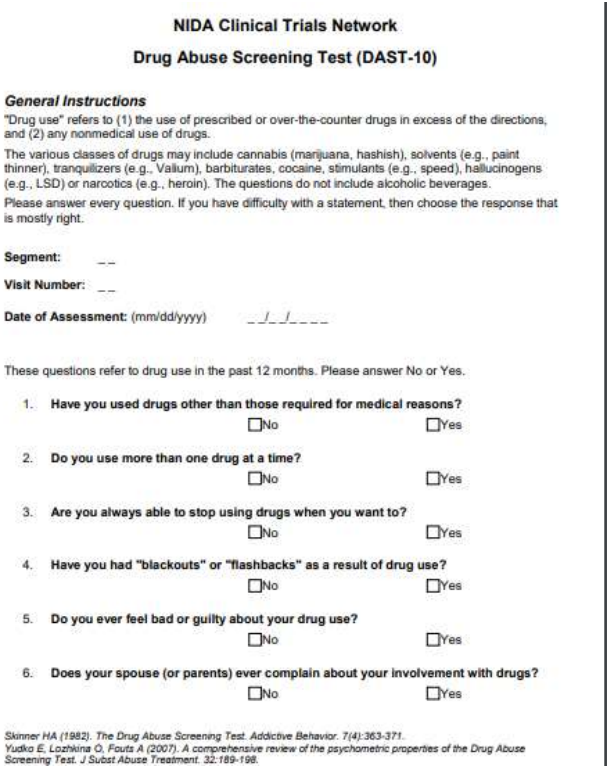
Symptoms include but are not limited to*:

- "The stimulant is often taken in larger amounts or over a longer period than was intended.
- There is a persistent desire or unsuccessful efforts to cut down or control stimulant use.
- A great deal of time is spent in activities necessary to obtain the stimulant, use the stimulant, or recover from its effects.
- Craving, or a strong desire or urge to use the stimulant.
- Recurrent stimulant use resulting in a failure to fulfill major role obligations at work, school, or home.
- Continued stimulant use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of the stimulant
- Important social, occupational, or recreational activities are given up or reduced because of stimulant use.
- Recurrent stimulant use in situations in which it is physically hazardous.
- Stimulant use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the stimulant."

Diagnostic and Statistical Manual, Fifth Edition (DSM 5) (American Psychiatric Association [APA], 2013)

Drug Abuse Screening Test (DAST-10) is self-report instrument

- It is used for solvents (e.g., paint thinner), tranquilizers (e.g., Valium), barbiturates, cocaine, stimulants (e.g., speed). Questions refer to drug use, ability to stop, family response, engagement in illegal activity and withdrawal symptoms in the past 12 months.
- The severity scoring scale in DAST is:
  - 0: No problems reported
  - 1-2: Low level
  - 3-5: Moderate level
  - 6-8: Substantial level
  - 9-10: Severe level
- Other tools such as Cocaine Selective Severity Assessment (CSSA), Amphetamine Withdrawal Questionnaire, Amphetamine Selective Severity Assessment (ASSA) and Stimulant Selective Severity Assessment (SSSA) useful to assess severity in case of withdrawal.



NIDA Clinical Trials Network

Drug Abuse Screening Test (DAST-10)

General Instructions

"Drug use" refers to (1) the use of prescribed or over-the-counter drugs in excess of the directions, and (2) any nonmedical use of drugs.

The various classes of drugs may include cannabis (marijuana, hashish), solvents (e.g., paint thinner), tranquilizers (e.g., Valium), barbiturates, cocaine, stimulants (e.g., speed), hallucinogens (e.g., LSD) or narcotics (e.g., heroin). The questions do not include alcoholic beverages.

Please answer every question. If you have difficulty with a statement, then choose the response that is mostly right.

Segment: __

Visit Number: __

Date of Assessment: (mm/dd/yyyy) __/__/____

These questions refer to drug use in the past 12 months. Please answer No or Yes.

1. **Have you used drugs other than those required for medical reasons?** ☐No ☐Yes
2. **Do you use more than one drug at a time?** ☐No ☐Yes
3. **Are you always able to stop using drugs when you want to?** ☐No ☐Yes
4. **Have you had "blackouts" or "flashbacks" as a result of drug use?** ☐No ☐Yes
5. **Do you ever feel bad or guilty about your drug use?** ☐No ☐Yes
6. **Does your spouse (or parents) ever complain about your involvement with drugs?** ☐No ☐Yes

Skinner HA (1982). The Drug Abuse Screening Test. Addictive Behavior. 7(4):363-371.
Yudko E, Lozhkina O, Fouts A (2007). A comprehensive review of the psychometric properties of the Drug Abuse Screening Test. J Subst Abuse Treatment. 32:189-198.

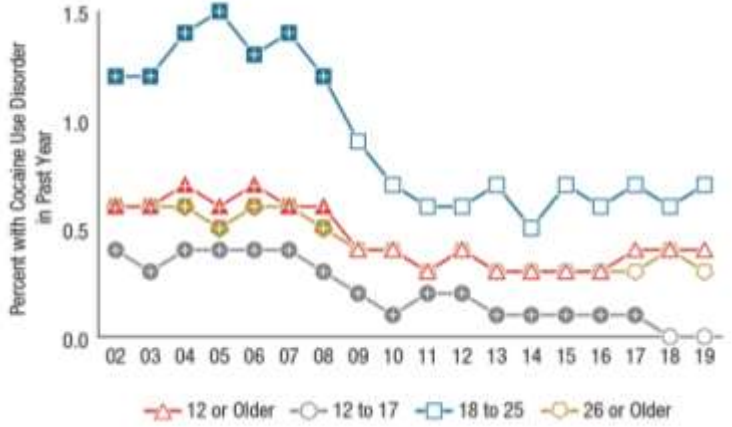
DAST10 – NIDA , Substance Use Misuse

Prevalence and Trends

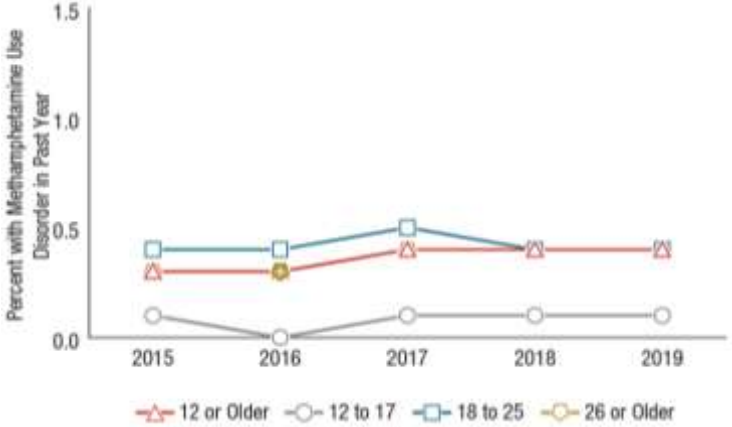
1.1% of people in the US have a stimulant use disorder

- Among people who use stimulants 12 and over, the percent with past year cocaine use disorder has decreased from 0.6% in 2002 to 0.4% in 2019. The decrease was significant from 2002-2009 but was similar form 2009-2018.
- The prevalence of cocaine use disorder is lowest among people 12-17 at 0.1% while young adults from 18-25 showed a prevalence of 0.7%.
- Methamphetamine use disorder has increased from 0.3% in 2016 to 0.4% in 2019. The prevalence was stable among young people while an increase was seen in adults older than 26.
- Prescription stimulant use disorder remained stable between 2015-19 at 0.2% (0.6 million).

Cocaine Use Disorder



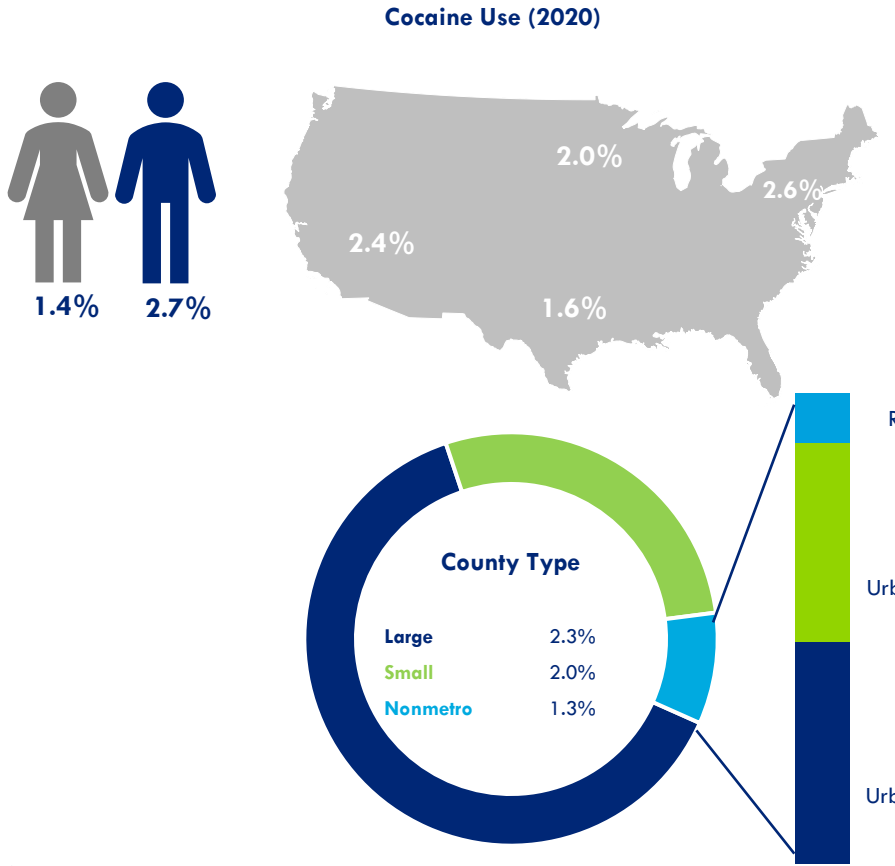
Meth Use Disorder



SAMHSA (2020) SAMHSA (2019)

Cocaine use prevalence is approximately 2% (5.1 million)

- According to SAMHSA, there are 39 million lifetime users of cocaine (23% are crack users) while 5.1 million are past years users and 1.8 million are past month users (current users) in 2020.
- The rate of prevalence is higher among males in the West of the country and are concentrated in large urban counties. It is more prevalent among individuals who identify with two or more races
- The number of cocaine initiators in the past year have decreased from 1 million in 2002 to 671K in 2019 but has been steady since 2015.



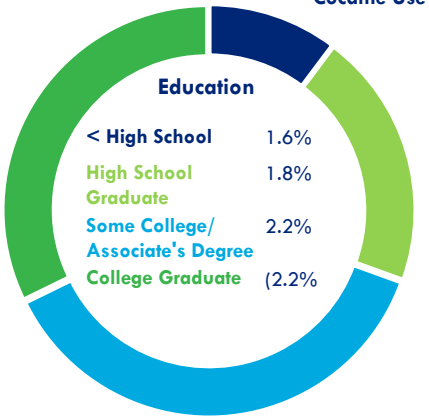
SAMHSA (2020)

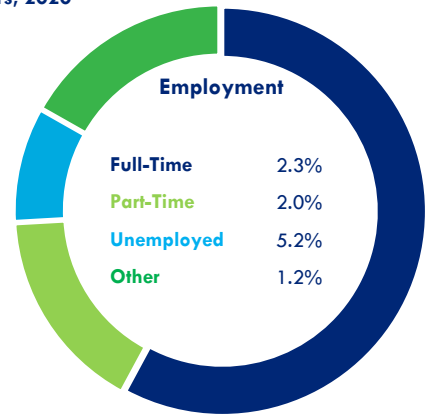
Please refer slide 29 for graph interpretation tips.

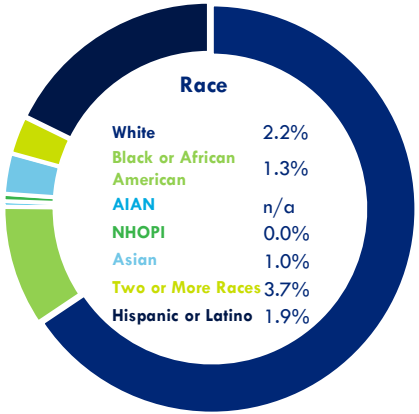
Use of cocaine remains stable over recent years

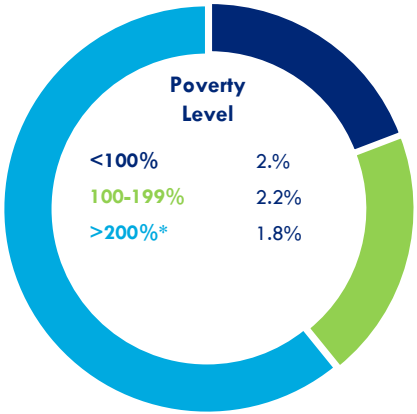
- Prevalence is high among college graduates. Most people who use drugs are employed.
- Consumption of cocaine has declined among young adults (12-17) while the use is steady among older adults (26+).

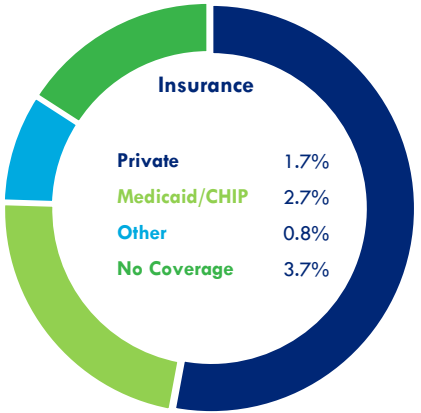
Cocaine Use by Other Factors, 2020











SAMHSA (2020)

Please refer slide 29 for graph interpretation tips.

Use of meth (0.9%) and prescription stimulants (1.8%) has remained relatively stable

- According to SAMHSA, there are 15.4 million lifetime users of meth, while 2.6 million are past years users and 1.7 million are past month users (current users) in 2020.
- Prescription stimulants have been misused by 5.1 million in the past year and 1.5 million are current users.
- Use of methamphetamine has dropped in the age categories of 12-17 and 18-26 but shows a steep rise in older than 26 which is a significant concern.

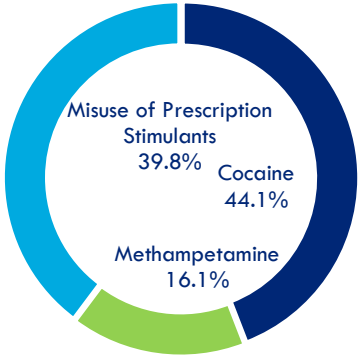


Figure 15. Past Year Methamphetamine Use among People Aged 12 or Older: 2015-2019

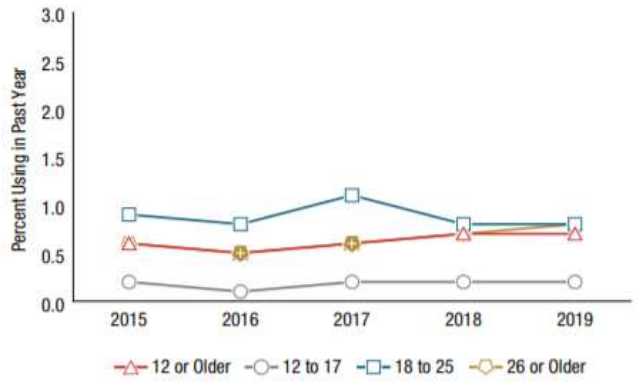
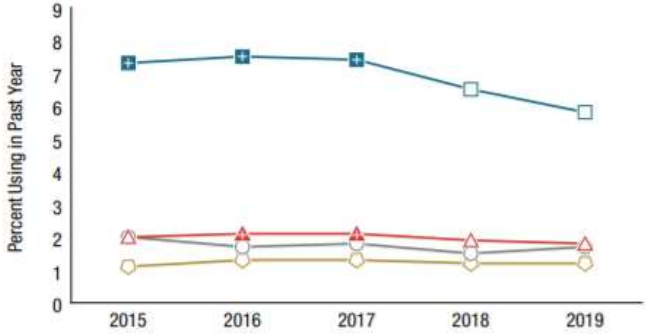


Figure 18. Past Year Prescription Stimulant Misuse among People Aged 12 or Older: 2015-2019



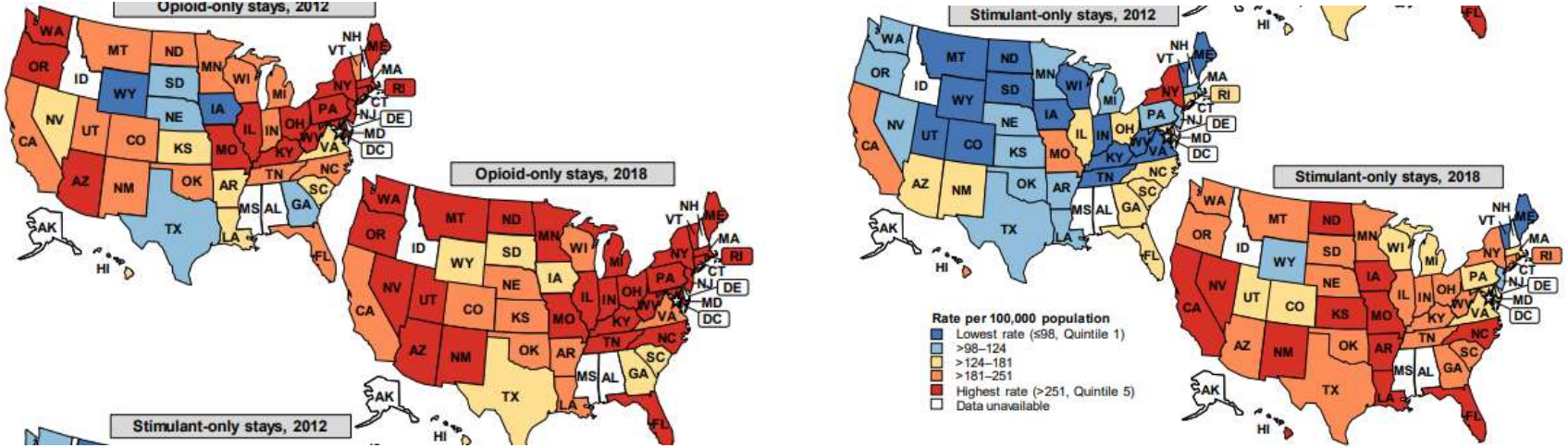
FQA Institute for Social Impact Proprietary and Confidential

SAMHSA (2020) SAMHSA (2019)

Please refer slide 29 for graph interpretation tips.

Geographic distribution of inpatient stays

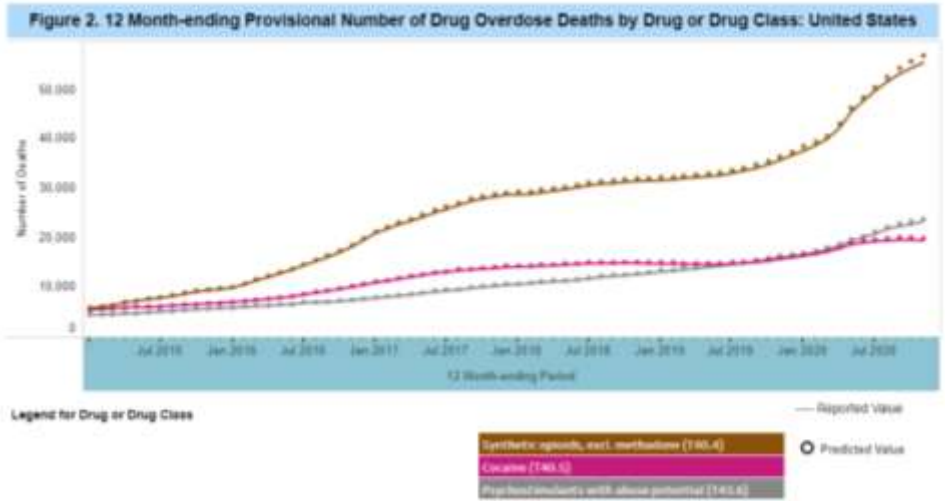
Opioid- and stimulant-related adult inpatient stay by state



- In 2018, none of the 44 states included in the above study had an opioid-only rate at or below 124 per 100,000.
- In 2018, 11 states had population rates of stimulant-only stays greater than 251 per 100,000 population.
- In 2018, the population rate of stimulant-only stays was higher than the rate of opioid-only stays (based on quintiles) in 10 States: Arkansas, California, Georgia, Hawaii, Iowa, Kansas, Louisiana, South Carolina, South Dakota, and Texas.

Overdose deaths involving cocaine increased by 26.5% in 2020

- Consumption of cocaine declined by 50% from 2006 to 2010, however, recent data indicates cocaine overdose deaths are increasing.
- From 2009 to 2013, cocaine overdose deaths were relatively stable. By 2018, they had jumped from about two to nearly five per 100,000 people.
- This may be attributed to two reasons:
  - The amount of land used to cultivate coca in Columbia nearly doubled from 2013 to 2015, and the price of the drug has come down.
  - Cocaine is being laced with Fentanyl to ease the effects of the drug. However, ignorant consumers can easily overdose from this type of drug.
- In 2018, those most likely to die from cocaine were men, adults aged 35 to 44, Black people and city dwellers in the Northeast.
- In 2015, the rural rate of 17.0 per 100,000 remained slightly higher than the urban rate of 16.2 per 100,000.



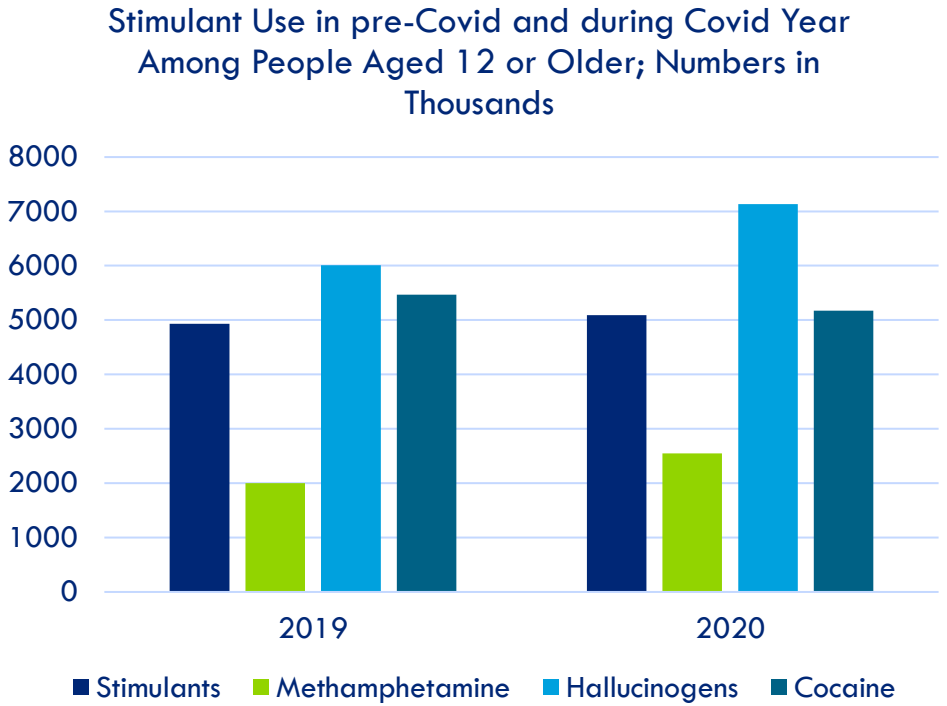
CDC Drug Overdose Data Cocaine Overdose Rural Overdose

Stimulant use increased during COVID-19

- Studies based on urine samples reports that the cocaine, fentanyl, heroin and methamphetamine usage increased in the first four months of the outbreak. High risk populations such as Hispanic people (37% increase), and patients with HIV observed increased use.

- During early stages of the pandemic, North America observed methamphetamine and fentanyl precursor supply shortages, resulting in price increase. This disruption especially affected methamphetamine trafficking more than other drugs in early lockdowns. Drug supply resumed at the same level or increased once lockdowns were relaxed, leading to higher availability and consumption.

- Studies report increase in overdose deaths involving psychostimulants; for instance, methamphetamine overdose deaths increased by 34.8% during COVID-19.



Overdose Deaths Accelerating During COVID-19 ; COVID-19 and drug supply chains; SAMSHA Survey

Patient Journey and Treatment

Certain risk factors increase likelihood of stimulant use disorder

Environment

- Being around community violence or around drug or alcohol use can impact an individual's decision to begin misusing stimulants.
- Chronic stress and history of trauma are also risk factors.

Age

- Peak age for cocaine dependence is 23-25.
- 11.1% of college students misuse Adderall (amphetamines used as a "study drug."
- After initial usage, 5-6% of people who use cocaine become cocaine dependent within the first year.

Alcohol and Other Drug Use

- Alcohol shares a common metabolite to stimulants that extends the "high."
- Personal history of misusing other substances is a risk factor.

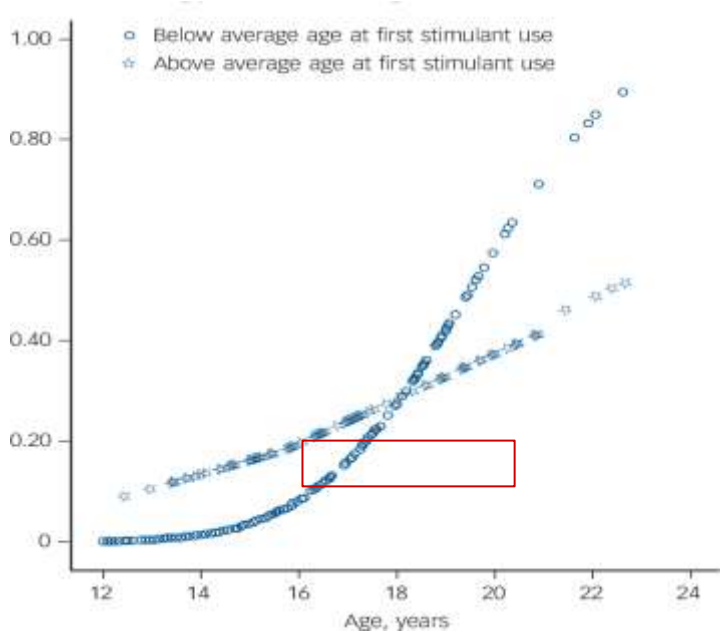
Psychiatric disorders

- People with depression, ADD, and other psychiatric disorders are more likely to misuse drugs, including stimulants.

Ages 18+ have the highest risk for stimulant misuse and reaching dependence

- Children who start a prescription stimulant medication at a younger age are better protected against the later development of SUD.
- However, the effect of age at first stimulant use on substance use disorder development diminishes with age, and reverses at the **age of 18.**

Predicted probability of SUDs among ADHD patients



British Journal of Psychiatry

Use of cannabis, alcohol, and nicotine can lead to use of cocaine among children

Cocaine, methamphetamine, and prescription stimulants are more commonly the fourth/fifth substance used. The earlier gateway drugs are used the higher frequency and likelihood for severe illicit drug usage.

Children (under 18) who use:

- **Marijuana:** are **85x** more likely to use cocaine than children who do not use marijuana
- **Alcohol:** are **50x** more likely to use cocaine than non-drinkers
- **Nicotine:** are **19x** more likely to use cocaine than nonsmokers

4% of high schoolers use cocaine, compared to 18.4% of college students.

Substances Ranked by Order of Use

	1st	2nd	3rd	4th	5th	6th
Alcohol	65.8%	23.1%	8.1%	0.7%	0.5%	0.3%
Marijuana	18.1%	43.8%	32.4%	3.8%	0.6%	0.5%
Tobacco	23.8%	39.6%	27.0%	4.7%	2.9%	0.7%
Hallucinogens	0.8%	2.8%	19.5%	39.0%	18.2%	10.6%
Prescription Opioids	3.5%	7.0%	13.3%	25.2%	20.3%	13.3%
Cocaine	0.7%	1.1%	9.9%	26.1%	25.0%	17.6%
Prescription Stimulants	2.0%	3.4%	7.9%	29.1%	22.2%	10.3%
Methamphetamine	N/A	2.2%	6.5%	18.3%	17.2%	22.6%

Survey of over 1,000 Americans
Created by American Addiction Centers

Mental disorder comorbidities are common with stimulant use disorder and should be accounted for in care for both conditions

Personality Disorders

- Stimulants can exacerbate impulsivity, mood disturbance, and anger in people with cluster B personality disorder.
  - Cluster B includes antisocial, borderline, histrionic, and narcissistic personality disorder. Individuals display dramatic, erratic and emotional behavior.

Eating Disorders

- Stimulants can be used for appetite suppression and weight loss, as well as to provide energy for exercise.
- In people with eating disorders, high rates of amphetamine and cocaine use have been observed.

Depression

- Depression is common in the days after heavy stimulant use and during withdrawal. The risk of depression increases with severity of stimulant use and dependence.
- Tolerance to stimulants' positive effects develops quickly, increasing the risk of dose escalation and dependence.
- Stimulants may worsen the sleep-wake cycle disturbances that are associated with depression.

Anxiety

- The incidence of anxiety typically increases following stimulant usage.
- Anxiety also occurs during stimulant withdrawal.
- ADHD (which amphetamines are used to treat) and anxiety have a 25% comorbidity rate with each other.
- Before anxiety symptoms can be evaluated, it is recommended to reduce or stop using stimulant use which will result in a reduction in anxiety symptoms in many cases.

Mental Illness & Comorbidity ADHD & OCD Comorbidity NIDA on Comorbidity ADHD and Anxiety Comorbidity

Stimulant use can have short- and long-term effects on health

Depending on substance used, potency, dosage, and level of prior use

Short-Term Effects

- Increased wakefulness
- Reduced appetite
- Feelings of euphoria from rapid release of neurotransmitters (e.g., dopamine, serotonin)
- Stress to the cardiovascular system (from accelerated heart rate, bronchodilation, etc.)
- Elevated body temperature which can result in deadly hypothermia
- Panic attacks, paranoia, and violence, as well as other adverse psychological/ neurological effects

Long-Term Effects

- Persistent hypertension
- Angina
- Valvular disease
- Stroke
- Increased risk for heart attack
- Permanently altered brain structure, resulting in impaired cognitive, emotional and neurological systems
- Fluctuations in mood
- Anxiety and depression
- Rapid tooth decay and gum disease (methamphetamine use)
- Secondary effects, such as HIV, Hepatitis B, and Hepatitis C from risky sexual behavior and injections

SAMHSA identifies four practices to treat Stimulant Use Disorders

Motivational interviewing

- This style of counseling is directive and client-centered, helping clients explore and resolve ambivalence in order to elicit behavior change.

Contingency Management (CM)

- Grounded in operant conditioning, this behavioral therapy reinforces desired behaviors with prizes, privileges, or cash.

Community Reinforcement Approach

- This behavioral therapy, which is often used in combination with CM, seeks to identify behaviors that reinforce stimulant use and make a sober lifestyle more rewarding.

Cognitive Behavioral Therapy (CBT)

- This psychotherapy treatment is short-term and goals-oriented, enabling people to understand their problems and past experiences in order to change their patterns of thinking and behaviors.

Practice	Motivational Interviewing	Contingency Management	Community Reinforcement Approach	Cognitive Behavioral Therapy
Review rating	Strong Evidence	Strong Evidence	Strong Evidence	Strong Evidence
Focus of the practice	Resolving clients' ambivalent feelings and insecurities and enhancing the internal motivation needed to change their behavior	Positively reinforcing desired behaviors	Identifying behaviors that reinforce stimulant use and making a substance-free lifestyle more rewarding than one that includes substances	Helping clients improve the quality of their lives not by changing their circumstances, but altering their perceptions of those circumstances
Can be used in outpatient healthcare settings	✓	✓	✓	✓
Can be used in inpatient healthcare settings	✓	✓	✓	✓
Specific training available	✓	–	✓	✓
Web-based version available	–	✓	✓	✓
Can be practiced by peers	✓	–	–	–
Has been used successfully with males and females	✓	✓	✓	✓
Special populations with whom the practice has been successfully implemented	Men who have sex with men	Men who have sex with men; Co-occurring opioid use disorder; Severe mental disorders	Adolescents	–
Intensity and Duration of Treatment	No prescribed intensity and duration	No prescribed intensity and duration; typically 12 weeks	No prescribed intensity and duration; recommended for 24 weeks	No prescribed intensity and duration; typical range of 5 to 10 months

Outcomes of SUD treatment practices

Practice	Studies show associated reductions in:
Motivational Interviewing	• # of days of stimulant use • Amount of stimulant used/day
Contingency Management	• # of days of stimulant use • Stimulant cravings • New stimulant use • HIV risk behaviors
Community Reinforcement Approach	• Cocaine abstinence • Addiction severity • Drug use
Cognitive Behavioral Therapy	• Quantity of stimulants consumed/week • Frequency of stimulants used/week • Risky sexual behaviors

The Matrix Model provides a framework for engaging people with stimulant use disorder in treatment

- Acknowledged by the NIDA and SAMHSA as an effective and evidence-based approach, strengths of the Matrix Model for people with stimulant use disorder include:
  - ❑ Nonjudgmental and supportive dynamic
  - ❑ High level of engagement with the patient, increasing patient retention
  - ❑ Strong bond formed between the patient and their counselor or group
- More than 42% of rehab facilities across the United States use the Matrix model, according to the 2016 National Survey of Substance Abuse Treatment Services

The Matrix Model is administered over the course of a structured, 16-week period

Matrix Model NIDA on Matrix Model

There are not currently medications to treat stimulant use disorder but recent studies show limited potential

While there are currently no pharmaceutical drugs established for treating stimulant addiction, some studies show potential for certain drugs that may reduce cravings and lead to a successful recovery. Two such drugs that may help are Prozac and Naltrexone.

2020 Study: Potential use of psychostimulants

- "The strongest evidence-based approach for the treatment of stimulant use disorder at this time remains contingency management interventions. While treating stimulant use disorder with psychostimulants has shown some favorable results, high quality clinical trials and meta-analyses are needed to determine the clinical utility of psychostimulants and other pharmacotherapies to address the growing need for stimulant treatments."

2018 Study: Evidence for and against potential medications

- "We found no strong, consistent evidence that any drug class was effective in increasing abstinence, reducing use, or improving retention rates. We found moderate to high strength evidence that antidepressants, disulfiram, and anticonvulsants (with the exception of topiramate) are unlikely to be effective in non-abstinent patients. There are several promising areas deserving of further research including the use of bupropion, topiramate, treatment of abstinent patients to prevent relapse, and treatment of patients with comorbid opioid use disorder."

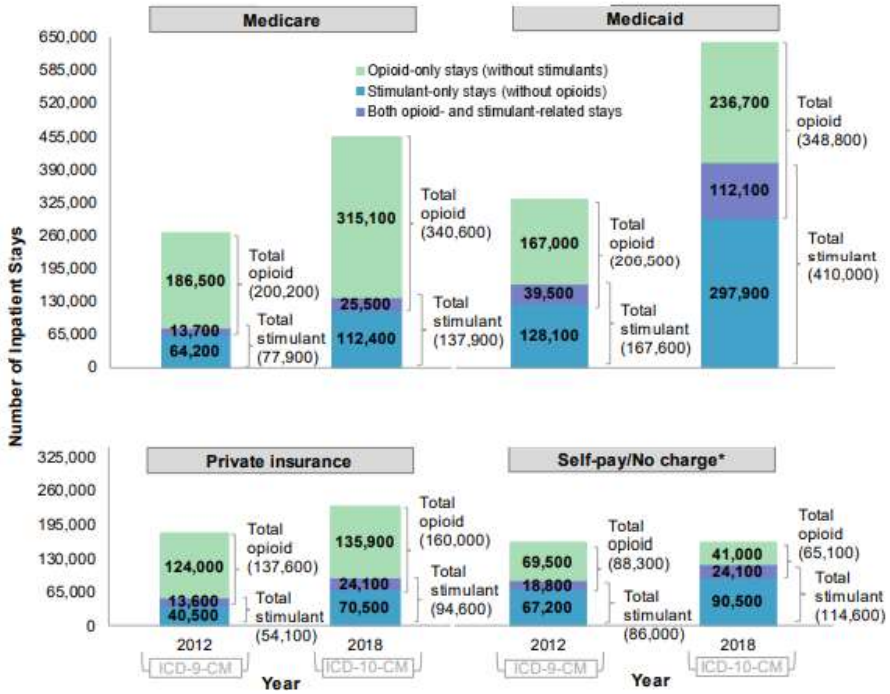
Barriers to care delivery in stimulant use disorder

Practice Selection	• Choosing the right intervention based on the severity of client's illness and stage in addiction cycle • Depends on issue of psychosis and brain functioning related to active and recent substance use
Funding, Financing, and Program Cost	• Many state Medicaid, Medicare, and private insurance entities may not reimburse contingency management and computer-based cognitive behavioral therapy (CBT) treatments
Program Staffing	• High staff turnover and limited time for staff to become familiar with the program leads to challenge in building new capacity for new program
Coordination of Care	• Frequently associated other health care needs such as HIV or life situations affecting their health, social determinants and recovery
Cultural Adaptation of Practices	• Challenges in adherence to the fidelity of the practice

SAMSHA Treatment of Stimulant Use Disorders

Medicaid remains predominant payer; the Section 1115 waiver could provide opportunity

Care Coverage for Opioid- and Stimulant-related Adult Inpatient Stays



- In 2018, the number of stimulant-only stays with a primary expected payer of Medicaid exceeded the number of opioid-only stays with Medicaid (297,900 vs. 236,700 stays, respectively).
- In 2018, among stays involving opioids or stimulants with primary payer as Medicare or private insurers, more than 50% of stays were related to opioids only and 25% were related to stimulants.
- Medicaid is predominant payer for amphetamine-related hospitalizations (51.2%). Additional funding can come from Medicaid expansion and Section 1115 waivers.
- From the beginning of 2020, more flexibility by allowing uses of State Opioid Response (SOR) grants for SUD, support evidence-based treatment, CM strategies ($15 contingency, totaling not more $75 in value/patient/year).
- Federal funding through Substance Abuse Prevention and Treatment Block Grants (SABGs) administered by SAMHSA.

Inpatient Stays 2012 Healthcare Utilization Project

Quality Measurement

How are outcomes assessed?

1

Addiction Quality Overview

- Current state of SUD and AUD quality
- Outcome measures

2

Resources Available

- To find quality AUD treatment
- To find quality SUD treatment

3

Consistency of Care

- Among providers and rehab centers

4

Accreditation Organizations

- Requirements
- Special distinctions

What is Quality?

The World Health Organization (WHO) defines quality care as whether services increase the likelihood of desired outcomes and are consistent with current evidenced-based practice.[1]

- Quality care encompasses health care delivery that is safe, equitable, patient-centered, evidenced-based, timely, and efficient
- The healthcare system uses quality measures to compare, improve, and evaluate care over time
  - Various organizations, such as health plans, use quality measures to evaluate care delivery
- Quality measures are created by payers, providers, federal entities, organizations, and regulators
  - The IOM states there is a heavy burden on providers when reporting large, inconsistent number of measures to different organizations
- The US health system currently lags in comparison to other industrialized countries in key outcome measures such as premature deaths

1. NCBI BCBS PubMed WHO NCBI Harvard Health System Tracker

The Current State of Quality

Addiction and Behavioral Health

Limited Policy and Research

- A recent study argues that mental health quality currently lags other measures in medicine[1]
  - Limited policy, technology, and scientific evidence for mental health quality[1]
- The mental health landscape, which includes substance use disorder, currently *lacks consistent outcome measures* and tools that are embedded in current information systems[2]

Inconsistent Care Outcomes and Improvements

- The American Society of Addiction Medicine Immediate-Past-President, Dr. Paul Earley, reported to NPR that the "addiction treatment industry suffers from a lack of standards"
  - A recent study shows that meeting the continuity of care outcome measure did not show any patient-level improvements[3]

Though there is a current lack of consistency in outcome measures, The National Quality Forum is working to bring measure uniformity in the United States

1. NCBI 2. NCBI 3. PubMed 4. NPR

National Quality Forum (NQF)

Hallmark organization for endorsing quality measures in healthcare

Who is NQF?

- The National Quality Forum is the only consensus-based healthcare organization in the United States as defined by the Office of Management and Budget
  - This allows the government to rely on NQF-defined measures or healthcare practices as the best, evidence-based approaches to improving care
- NQF does not create measures. They review and approve/deny measure endorsement applications from organizations who have created a measure
  - These applications are reviewed by the Consensus Standards Approval Committee

Measure Steward

- A Measure Steward is an organization that creates a measure approved by NQF
  - 123 organizations including medical groups, health plans, public agencies, and national associations have developed measures that are now approved by NQF
- The measure steward is responsible for providing the required measure information for the measure maintenance process
- The measure maintenance process occurs every three years
  - The steward is responsible for making the updates to the measure

NQF Today

- 300 NQF endorsed measures are used in 20 federal public reporting and pay-for-performance programs as well as in private and state programs
- Measure Applications Partnership: NQF has a partnership with CMS to help guide them on selected measures for pay-for-performance programs
  - Provides quality input to CMS for care given to Medicare and Medicaid patients
  - Helps establish uniformity in quality care measures

FQA Institute for Social Impact Proprietary and Confidential

1. Qualityforum.org

Quality of care is determined by measures that are defined by various programs[1]

NQF Measure Stewards come from different backgrounds*

Accreditation Programs	Government Programs	Organizations	Providers	Payers
• Joint Commission	• CMS • New York State Department of Health	• American Nurses Association • American Medical Association	• Cleveland Clinic • Children's Hospital of Philadelphia • Mathematica Policy Research • Pharmacy Quality Alliance	• United Health

**Not an exhaustive list. There are currently 123 measure stewards endorsed by NQF.*

Endorsed by NQF

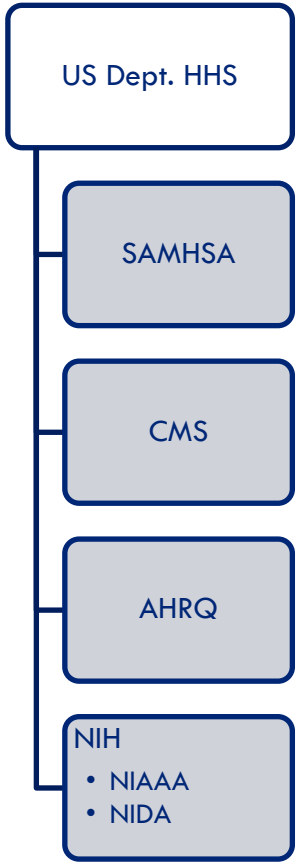
Outcome measures are used for:

- Quality care advancement
  - Benchmark data
- Accreditation
- Certification
- Specialty recognition
- Public Reporting
- Distinction
  - Payer contracts
  - Funding

1. Health Affairs 2. Qualityforum.org

Government Agencies Involved in Addiction Quality

Government Programs	Description	Uses Outcome Measures	Measure Steward
CMS	CMS provides: • Data • Programs • Education	Yes	Yes
SAMHSA (Substance Abuse and Mental Health Services Association)	In relation to behavioral health, SAMHSA offers: • Search engine for treatment • Training • Grants • Data	Yes	No
AHRQ (Agency for Healthcare Research and Quality)	AHRQ creates and provides: • Materials to train healthcare professionals • Grants for research • Measures and data to be used by providers and policymakers	Yes	Yes
NIAAA (National Institute on Alcohol Abuse and Alcoholism)	NIAAA conducts: • Biomedical and behavioral research on AUD and alcohol related problems	Yes	No
NIDA (National Institute on Drug Abuse)	NIDA supports research on drug use and addiction through: • Grants • Training	Yes	No



1. Health Affairs 2. NIAAA 3. Drugabuse.gov 4. SAMHSA 5. CARF 6. Qualityforum.org

Third Party Organizations Involved in Addiction Quality

Organization	Type	Description	Uses Outcome Measures	Measure Steward
Joint Commission	Independent Non-Profit	• The US's oldest and largest accrediting body in health care	Yes	Yes
CARF (Commission on Accreditation of Rehabilitation Centers)	Independent Non-Profit	• The largest accrediting organization for addiction and rehab centers	Yes	No
NCQA (National Committee for Quality Assurance)	Independent Non-Profit	• Offers certification, accreditation, and recognition programs • Provides HEDIS (Healthcare Effectiveness Data and Information Set) benchmarks • Contracted with CMS	Yes	Yes
Mathematica Policy Research	Policy Research Organization	• Organization focused on research in health, education employment, justice, and disabilities	Yes	Yes
Pharmacy Quality Alliance	Independent Non-Profit	• Research organization with a focus on medication safety and adherence • Provides education	Yes	Yes

1. Health Affairs 2. Mathematica 3. PQAlliance.org

Addiction Care Quality

NQF Endorsed Outcome Measures

Individual Practitioner

Outcome	Measure Steward
Use of Pharmacotherapy for opioid use disorder	CMS
Initiation and Engagement of Alcohol and Other Drug Abuse or Dependence Treatment	NCQA

Rehab Centers and Inpatient

Outcome	Measure Steward
Continuity of Care after Inpatient or Residential Treatment for SUD	CMS
Continuity of Care after Medically Managed Withdrawal from Alcohol and Drugs	CMS
Follow-Up After Emergency Department Visit for Alcohol and Other Drug Abuse or Dependence	NCQA
Follow-Up After Emergency Department Visit for Mental Illness	NCQA
Continuity of Care after Inpatient or Residential Treatment for Substance Use Disorder (SUD)	CMS
Continuity of Care After Receiving Hospital or Residential Substance Use Disorder (SUD) Treatment	CMS
Continuity of Care After Medically Managed Withdrawal from Alcohol and/or Drugs	CMS

Outpatient

Outcome	Measure Steward
Preventive Care and Screening: Unhealthy Alcohol Use: Screening & Brief Counseling	NCQA
Annual Monitoring for Persons on Long-Term Opioid Therapy (AMO)	Pharmacy Quality Alliance

Only 0.7% of outcome measures endorsed by NQF are related to substance use disorders[1]

1. NQF

Behavioral Health Care Quality

NQF Endorsed Outcome Measures

Individual Practitioner

Outcome	Measure Steward
Adherence to Antipsychotic Medications for Individuals with Schizophrenia	CMS
Antidepressant Medication Management	NCQA

Rehab Centers and Inpatient

Outcome	Measure Steward
30-day Rehospitalizations per 1000 Medicare fee-for-service (FFS) Beneficiaries	CMS
Thirty-day all-cause unplanned readmission following psychiatric hospitalization in an inpatient psychiatric facility	CMS
Follow-Up After Hospitalization for Mental Illness (FUH)	NCQA

Outpatient

Outcome	Measure Steward
Adult Major Depressive Disorder (MDD) Suicide Risk Assessment	Mathematica Policy Research

After a national review of quality of behavioral health quality measures, ***only 10% were endorsed by the National Quality Forum*** and ***only 5% used in reporting systems***[1]

1. NQF

Organizations vary in what is considered "a sign of a high-quality program," but some overlap exists

NIDA, NIAAA, and SAMHSA identify the following as signs of a higher quality program:

1) Evidenced-based behavioral health therapies
2) **Medications for addiction offered***
3) Accredited
4) Attends to mental health and physical health needs
5) Recovery support services
6) Readily available when needed
7) Treatment plan personalized for each patient
8) Treatment period adequate and patients receive continuous monitoring with adjustments to the treatment plan as needed

*Research has shown this is the strongest indicator of a high-quality program

1. WHO 2. NCBI

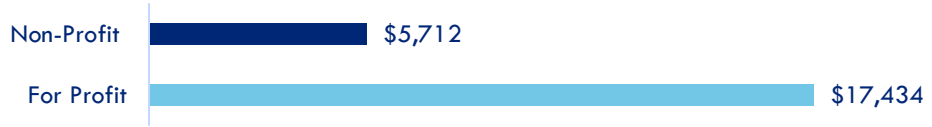
A recent peer reviewed article questions the incentive some quality measures bring[1]

NPR interviewed previous addiction patients, a state attorney, and the president of the American Society of Addiction Medicine and found:

- The system is hard to navigate
- Accreditation for a fee creates the wrong incentive
- The system is very unregulated, with rules being highly variable from state to state
- The American Society of Addiction Medicine president reports that fraudulent billing and deceptive marketing practices is an existing problem in the industry

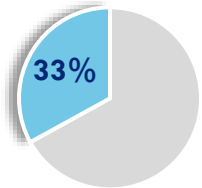
A peer reviewed research study called 613 addiction residential programs and found the following[2,3]:

Inpatient Facility Charge



For profit organizations charge twice as much as non-profits. ***These for profits use pools, massage and horse back riding amenities, and chefs to attract patients***

No Clinical Evaluations before Admission



Inpatient facilities offered a rehab ***treatment bed before a clinical evaluation***

Facility Medication Maintenance

Less than 33% of facilities contacted use mediation maintenance *(Buprenorphine and Methadone), the gold standard of treatment*

1. ResearchGate 2. NPR 3. Healthaffairs.org

Resources Available

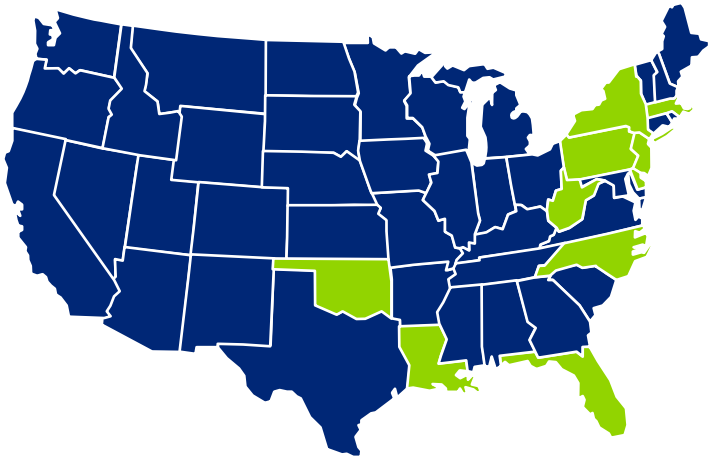
to find high quality treatment

Shatterproof

Atlas

Helps people find and compare AUD and OUD treatment facilities to make an informed choice

Atlas is available in 10 states



1. **Take assessment to find the treatment type that will be right for you**
   - 13 Questions: what substances, how often, what would happen if you stopped, etc.
2. **Enter your zip code or facility name**
3. **Takes you to a list of facilities in your area**
   - Filters for substance focus including heroin, alcohol, cocaine, barbiturates, benzodiazepines, inhalants, marijuana, methamphetamines, OTCs, and hallucinogens
4. **Compare tool:**
   - Compare up to 3 facilities
   - By facility features
   - By Shatterproof "Signs of High-Quality Care"

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1. Shatterproof 2. Atlas

Shatterproof: Atlas Comparison Tool

Shatterproof Standards for Treatment

1. Routine screenings in every medical setting
2. Personal plan for every patient
3. Fast access to treatment
4. Long term disease management
5. ***Coordinated care for every illness****
6. ***Behavioral health care from legitimate providers****
7. Medications for addiction treatment
8. Support for recovery outside the doctor's office

****Unique from NIDA, NIAAA, and SAMHSA***

Comparison Tool

Shatterproof receives quality data from patient surveys, facility surveys, and quality measures informed by health insurance claims from both the public and private sector

SAHMSA: Behavioral Health Treatment Services Locator

SAMSHA's Locator is available in all states and run by HHS

1. Enter zip code
2. Map shows list of facilities
3. "More Information" for each facility

Specifies
- Substance Use
- Mental Health
- HC Centers
- Buprenorphine

Lists
- Insurance accepted
- Setting
- Treatment Provided
- Payment Assistance
- Quality Info

SAMHSA uses info from National Survey of Substance Abuse Treatment Services (N-SSATS) to describe the services offered by each provider

SAMHSA does not provide quality information on their service locator

1. SAMHSA

NIAAA: Alcohol Treatment Locator

NIAAA's Alcohol Treatment Locator is self directed for quality

1. Search for treatment
2. NIAAA gives patient questions to ask the provider to determine quality treatment
3. Patient chooses quality care

Directory

- Programs
- Therapists
- Physicians

Also Listed

- Gives patient resource to know what to listen for when asking questions

Important To Note

- Patient or loved one interviews each provider to determine quality of care

NIAAA uses info from National Survey of Substance Abuse Treatment Services (N-SSATS) to describe the services offered by each provider

The NIAAA Alcohol Treatment Locator gives resources to patients to find quality care

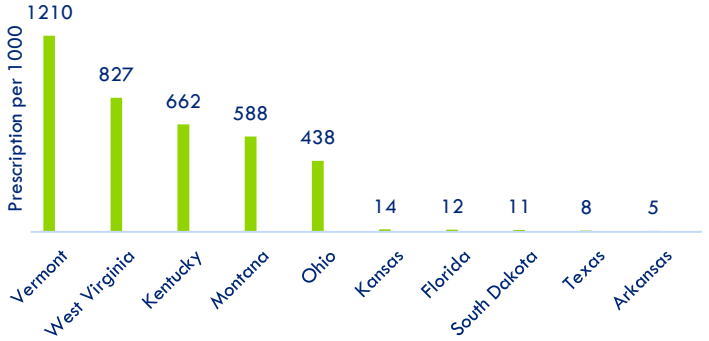
Consistency of Care

There is wide care variation in SUD care across states

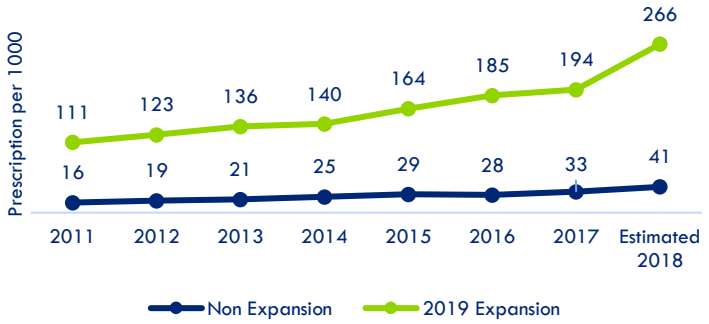
- Addiction care regulation and policy is left mainly up to the states and is highly variable. Provider practice for addiction care has been shown to be highly variable between states as well.
  - The prescription rate of buprenorphine is *200x more in Vermont* than in Arkansas[1]
  - Rates of substance-related stays *varied two-fold* across states[2]
  - There is a *3-fold difference* in opioid prescription rate among states[1]

There is opportunity in legislation and policy to enable quality care consistently nationwide[3]

Medicaid Prescriptions for Buprenorphine[1]

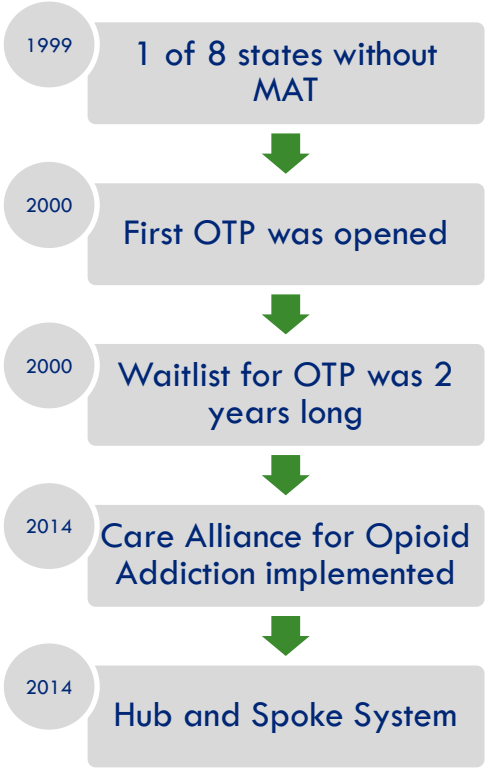


Buprenorphine Maintenance Treatment Prescriptions by State Medicaid Expansion[1]



1. Opioid Library 2. HCUP 3. NCBI

Vermont has eliminated their OTP waitlist through a Hub and Spoke System[1,3]



Current State after Hub and Spoke Implementation

- ***Wait list down to 0***
- 64% increase in providers waivered to prescribe buprenorphine
- Lowest death rate from OUD in New England
- Consideration of decriminalizing buprenorphine

Hub and Spoke Integrated Addiction Treatment[2]

- The Hub and Spoke system creates a network of providers and treatment centers to improve access to addiction care
- The Hub is a regional treatment center where initial assessment, care coordination, medication maintenance therapy, and consultation takes place
  - Hubs typically have a waiver for buprenorphine and methadone, allowing patients to receive medication therapy immediately
- The Hub directs patients to spokes, where they receive specialty treatment
  - Specialty treatment includes mental health services, residential services, patient management clinics, etc.

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1. NCBI 2. Vermont.gov 3. OpiodLibrary

Consistency in treatment is encouraged by insurance billing, policy, and clinical decision support tools

Care Bundling[1]

- The CY 2020 Physician Fee Schedule has a monthly bundle of services for the treatment of OUD, which includes:
  - Overall management
  - Care coordination
  - Individual and group psychotherapy
  - Substance use counseling
  - Add-on code for additional counseling

Policy[4,5]

- Federal Policy
  - 2017 Support Act: HHS issued best practices for recovery housing
  - Federal Regulation 42 CFR Part 8: accreditation and certification-based system for opioid treatment programs
- Federal Regulations
  - Mental Health Block grants to states to help build their mental health services
  - Charitable Choice: if receiving federal funding you must follow certain regulations
- State Policy: varies

Clinical Decision Support[2,3]

- ASAM Continuum decision engine
  - Computer-guided, structured interview for assessing patients with addictive, substance-related, and co-occurring conditions, built from The American Society of Addiction Medicine Criteria
- National Institute of Drug Abuse Clinical Decision Support Tool
  - 28 questions
  - To be used by PCPs for identification and referral for SUD

1. CMS 2. CMS 3. ASAM 4. ECFR 5. SAMHSA

ASAM's Continuum helps clinicians determine the appropriate level of care for addiction patients[1-3]

Includes
- DSM-5 criteria and diagnoses
- Addiction Severity Index (ASI) composite scores
- CIWA-AR (alcohol/sedatives)
- CINA (opioids) withdrawal scales

Standardized and computer guided assessment for SUD

Determines medical necessity of SUD services and appropriate treatment level

Currently used by
- Clinicians
- 10 managed care organizations

Dimensions of Assessment
1. Acute Intoxication and/or Withdrawal Potential
2. Biomedical Conditions and Complications
3. Emotional, Behavioral, or Cognitive Conditions and Complications
4. Readiness to Change
5. Recurrence of Use, Continued Use, or Continued Problem Potential
6. Recovery/Living Environment

Continuum Return on Investment
- 25% fewer no shows
- Patient retention rate increased by 30%
- Potential savings from proper placement for prior authorization

Continuum is the only product authorized by the American Society of Addiction Medicine to produce a level of care recommendation

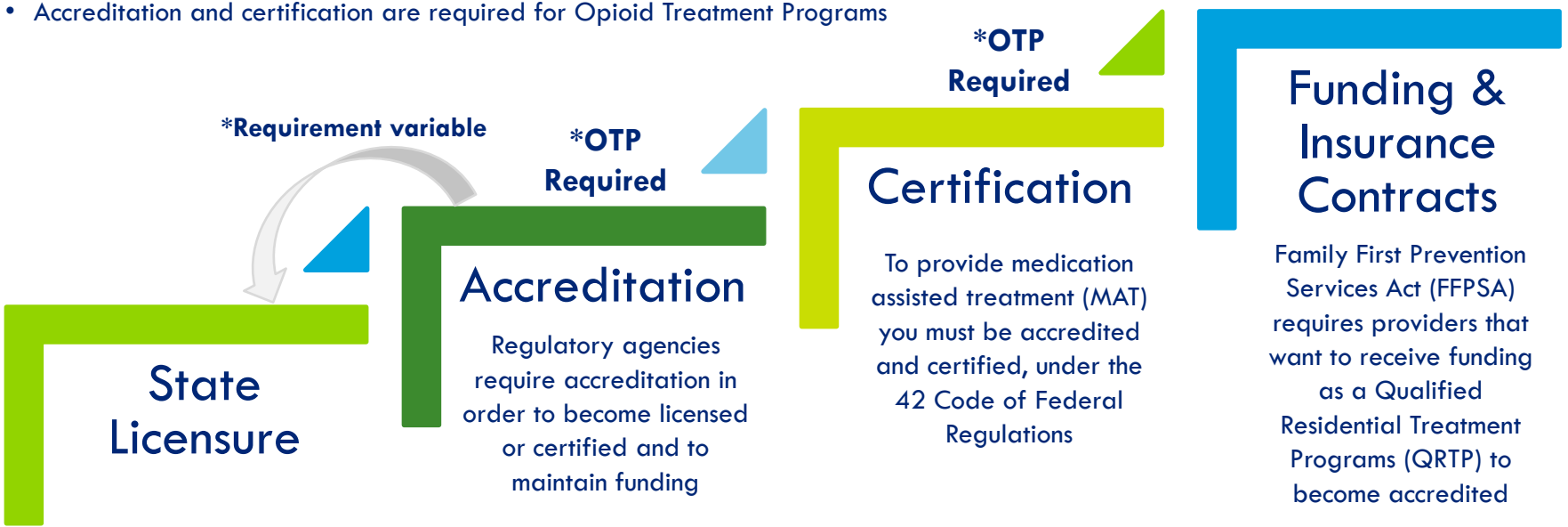
1. LA County 2. ASAM 3. ASAM Continuum

Accreditation

Accreditation is not always required but is necessary in most cases[1-3]

Why become accredited?

- Sets clinic/provider apart
- Accreditation, certification, and licensing are all different processes
- Accreditation and certification are required for Opioid Treatment Programs



1. SAMHSA 2. SAMHSA 3. CMS

Accreditation and certification are required for Opioid Treatment Centers

Approved Accrediting Bodies for OTPs[1]

1) Commission on Accreditation of Rehabilitation Centers*
2) Council on Accreditation
3) The Joint Commission*
4) Missouri Department of Mental Health
5) National Commission on Correctional Health Care
6) Washington State Dept. of Health

SAMHSA's Role[1]

- SAMHSA is within HHS
- Approves accrediting bodies for Opioid Treatment Programs (OTPs)
- Certifies OTPs[2]
  - Medication compliance (proper dosing, dispensing, disposal)
  - Appropriate business hours
  - Comprehensive treatment planning
  - Diversion control plan

What is Required?[1]

- Since 2001, to provide medication assisted treatment (MAT) you must be:
  - Certified and accredited under the 42 Code of Federal Regulations
  - Licensed by the state in which they operate
  - Registered with the DEA
- Treatment required
  - MAT
  - Counseling and behavioral therapies
  - Counseling on the prevention of HIV

*Details can be found on slides that follow.

Opioid Treatment Program

A program or practitioner engaged in opioid treatment of individuals with an opioid agonist medication

1. SAMHSA 2. Lake View Health

Commission on Accreditation of Rehabilitation Centers (CARF)

Largest Accrediting Organization for Addiction and Rehab Centers

About CARF

- Nonprofit accreditation body that evaluates substance use disorder and dual diagnosis programs in the United States, Canada, South America, Asia, and Europe
- Why CARF? Shows:
  - Financial stability
  - Marketing advantage
  - Risk management
  - Access to an international network
- In addition to growing the number of accreditation programs, CARF has also quadrupled the number of behavioral health services it accredits to about 31% of all such accredited services[3]

Specific Accreditations

- Has accredited 60,000 programs worldwide
- CARF accredits programs for:
  - Detoxification treatment
  - Inpatient treatment
  - Day treatment
  - Intensive outpatient treatment
  - Office-based opioid treatment
  - Outpatient treatment
  - Partial hospitalization
  - Residential treatment
  - Case management/services coordination
  - Crisis intervention and stabilization

Fees are Required

- Must pay for a "standards manual" to know what measures you must meet for accreditation
- Fees:
  - Flat fee: $995
  - # of surveyors needed: $1,525/surveyor/day

1. CARF 2. CARF

The Joint Commission

Second Largest Accrediting Organization for Addiction and Rehab Centers

About JC

- Largest accrediting body for hospitals and medical facilities
- 6-to-9-month process
- 21,000 programs
- Accreditation lasts 3 years
- Offer numerous disease specific certifications

Specific Accreditations

- Standards for OUD treatment centers are listed in the Comprehensive Accreditation Manual For Behavioral Health Care
  - The manual identifies standards for 26 populations
- OTP Accreditation
  - Must be accredited under Joint Commission's Behavioral Health Care Accreditation Program
- Unique characteristics of OTP survey include the observation of
  - Medication procedure
  - Business hours
  - Treatment planning
  - Diversion Control Plan

Fees are Required

- Pricing is not disclosed

Quality Check

Organizations that have achieved The Gold Seal of Approval® from The Joint Commission®

1. Joint Commission 2. Joint Commission

Blue Cross Blue Shield Distinction Centers for Substance Use Treatment and Recovery Program

About BCBS Distinction

- Purpose: to differentiate SUD providers and set a practice apart in terms of quality
- This program will be offered to facilities delivering substance use treatment programs in one or more of the following settings: residential, inpatient, intensive outpatient, or partial hospitalization services
- Outcomes are measured by readmission
- Data from is collected from
  - Applicants
  - Claims Data (info purposes only)

Specific Accreditations

Distinction from a quality point-based system based on an online provider survey:

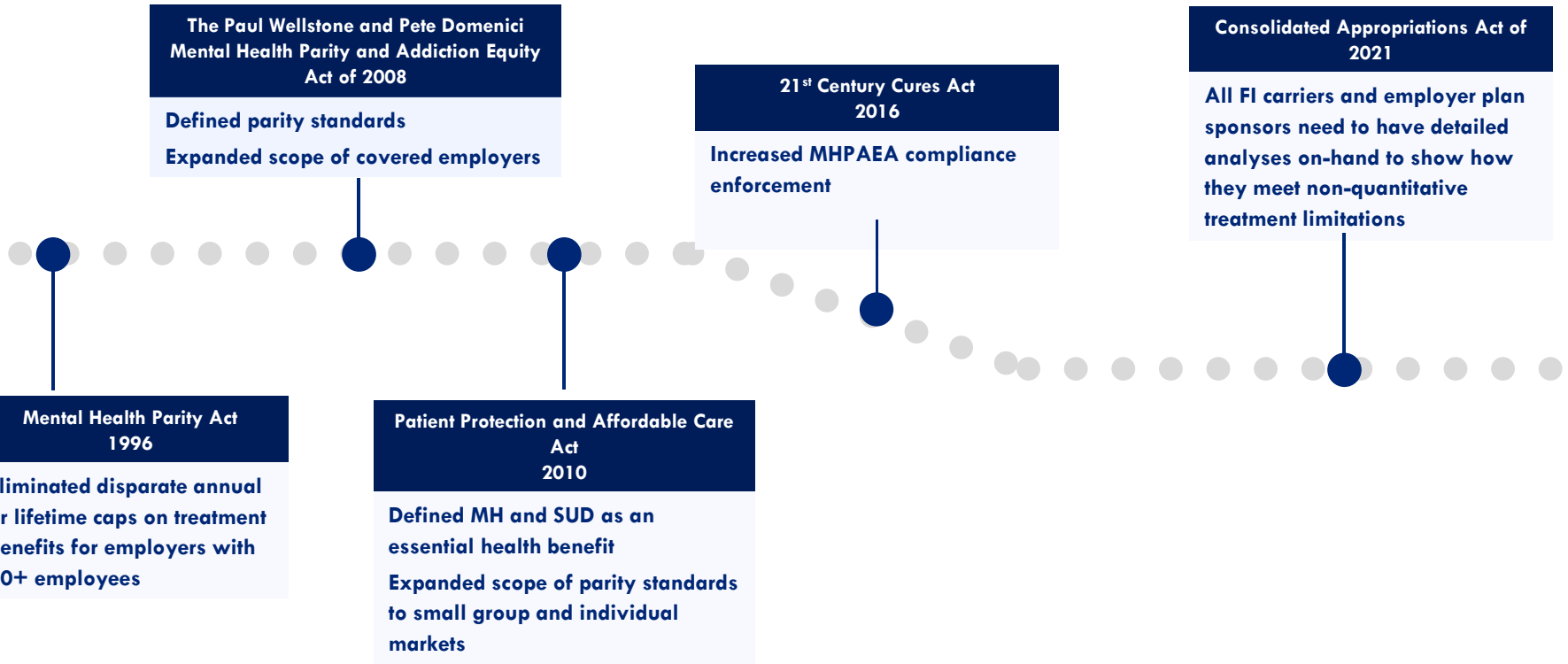
- 4 required: level of care distinction, MAT for OUD, coordinated multidisciplinary care to patients, fully accredited by at least one program
- 13 of 18 other criteria met:
  - Evidenced based therapies, patient and family centered long term goal planning, quality measurement, quality improvement program, multidisciplinary care discipline types, continuum of care, industry standard assessment/screening tool, individualized care plans, coordination of MAT following discharge, discharge planning, family engagement at discharge, community resource identification, flow of necessary information, shared decision making model, standardized patient satisfaction and experience, notification of patient's portion of treatment costs, drug testing, and participation in value based or alternative payment program

1. BCBS 2. BCBS

Payer Coverage

What role do payers and insurance coverage play in addressing addiction?

Payer coverage for SUD has expanded through federal legislation over the past 30 years*



Political History of Parity 21st 0enture Cures Act Consolidated Appropriations Act

*More information on policy can be found in the next section.

The 2008 Mental Health Parity and Addiction Act created federal regulation mandating benefits for substance use disorder

- This legislation is formally named The Paul Wellstone and Pete Domenici Mental Health Parity and Addiction Equity Act of 2008 and referenced by its acronym (MHPAEA). It applied to employer sponsored plans 50+, Medicare Advantage, MCOs, CHIP (children's health insurance), and state and local governments that did not opt-out

- Specifically, MHPAEA benefit limitations for mental health treatment or substance use disorder could not be less favorable than benefits for medical/surgical healthcare limitations across multiple dimensions, if mental health or substance use disorder coverage was provided:
  - Financial – co-pays must be equal
  - Treatment – limits to the number of treatments must not be less
  - Access – prior authorization or other utilization management tools must not be more restrictive

- In 2010, the Affordable Care Act extended this regulation to the small group and fully insured employer group segments and the individual market inclusion of mental health and substance use disorder services as an essential health benefit
  - State Departments of Insurance define what specific coverages are mandatory within this category
  - This legislation also imposed a ban on lifetime dollar limits for treatment

Determining if MHPAEA applies to employer plans remains tricky because of federal-state oversight and funding variation

- ✓ Employer must offer MH/SUD benefits
- ✓ Employer must be 50+ or offering qualified small group plans
- ❑ Retiree health plans do not quality for MHPAEA

	Self-Insured	Fully Insured
Subject to State Laws		X
Subject to State DOI	Variable state by state	X
Subject to Federal Laws	X	X
Overseen by Dept of Labor	X	

All states have at least one law on the topic of MH/SUD treatment access though scope and population subject to the law vary

Medicaid coverage for SUD is complicated

- Medicaid's Institutes of Mental Diseases (IMD, referring to hospital, nursing facility or other provider with 16+ beds) exclusion limits the federal funding that can be used for inpatients aged 21-64 at some facilities dedicated to mental health services, enacted as part of the Social Security Administration legislation in 1965, with the goal of promoting a state role (not federal one) in funding psychiatric facilities
  - Federal Medicaid funding *is* permitted for facilities 15 beds or smaller and to institutions that do not primarily serve behavioral health
- CMS guidance has encouraged states to utilize 1115 waivers in differing ways to allow payments to IMDs for Medicaid members in different specific scenarios
- The 2018 SUPPORT Act also impacted the scope of permitted benefits for Medicaid beneficiaries
- Further compounding this patchwork landscape, only states that deliver Medicaid services through MCOs are held to the parity standards established by MHPAEA

Medicare access and barriers to care for SUD vary between traditional and MA

The 2008 Medicare Improvements for Patients and Providers Act created the requirement for coinsurance for mental health/substance use treatment to be the same as for medical/surgical care. However, parity gaps for seniors remain, primarily:

Medicare Advantage

- Covered by MHPAEA with "actuarially equivalent" standard rather than no more restrictive parity
- Can utilize a benefit design with dedicated MH/SUD co-pays

Traditional

- 190-day lifetime limit on inpatient treatment
- Restrictions on location of care, excluding community-based settings and case rate payments for time-bound treatment series effectively prevent coverage for Intensive Outpatient Programs, Partial Hospitalization Programs, and Residential Programs

The impact of SUD on insurance coverage depends on topics including severity, geography, and income

- The majority of Americans, ages 18-64, receive insurance through employers
  - Those with severe SUD may experience barriers to maintaining employment
  - Payers conducting experience rating for group renewals are likely only to flag cases for review of high-cost claimants, which would typically not include those with SUD

- For those without employment, eligibility for insurance coverage through Medicaid or the individual exchanges depends on geography and individual agency
  - 12 states did not expand Medicaid to adults with incomes up to 138% FPL (Federal Poverty Level)
  - Subsidies are available through the exchanges for those who have very limited income, but navigation requires understanding of the system

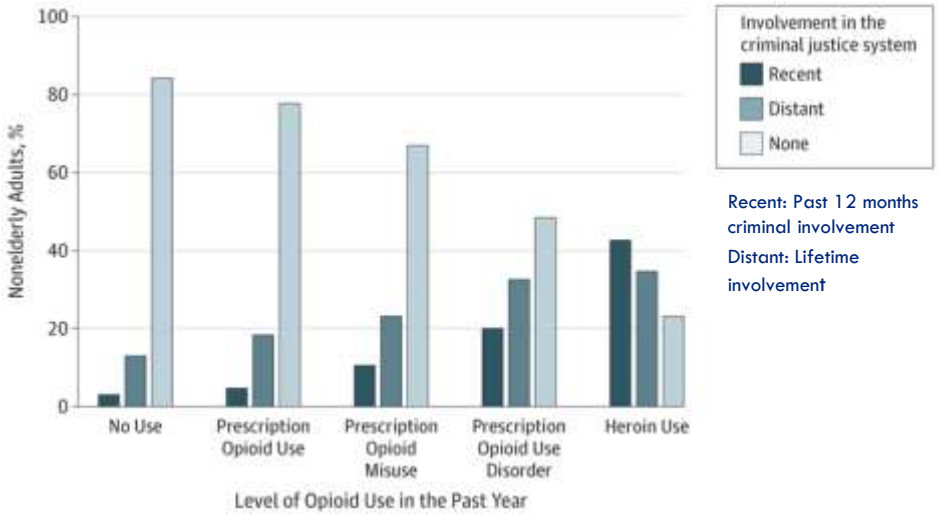
The Medicaid Inmate Exclusion Policy bars federal funding for incarcerated persons limiting their access to treatment for OUD

30% of criminal justice involvements (arrest, parole, probation) in the past 12 months among adults have a prescription opioid misuse or use disorder.

Due to the Exclusion Policy, inmates who are on Medicaid receive inadequate access or treatment in correctional facilities.

- There is a high risk of overdose deaths after release from prison
- Studies show initiating medication while incarcerated is effective and reduces mortality
    - Implementation within the justice system is difficult given financial barriers and stigma

Criminal Justice Involvement by Level of Opioid Use, 2015-2016



Recent: Past 12 months criminal involvement

Distant: Lifetime involvement

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Payers have many opportunities to impact members with SUD

Develop, Price, & Implement Products & Services

- Are benefits designed such that evidence-based care is covered and easily accessed?
- Is mental health and addiction covered at parity with physical health?

Develop & Maintain Provider Networks

- Are a sufficient number of addiction-related providers in-network?
- Is network adequacy achieved?
- Are telehealth options available for those where there is a provider shortage?
- Are there opportunities to pursue a FFV arrangement?
- How is provider quality assessed and shared with members?

Quote & Sell Products & Services

- Are there any customized vendor that a payer is partnering with on behalf of a national account (e.g., digital health solution focused on addiction/mental health)?
- How does the payer talk about addiction? Does their language contribute to stigma reduction?

Manage Medical Care & Wellness

- Are there care management (CM) programs dedicated to people with SUD and/or family members?
- Do CM and UM coordinate their outreach to members/providers to help enable continuity of care?
- Do any UM requirements (or medical policy) limit access to evidence-based care (e.g., PAs for MAT), which could be adjusted?
- Do care managers connect members to relevant social service providers?

Manage Claims

- How are claims checked for fraud, waste and abuse?
- Do payment integrity programs limit access to evidence-based treatment?
- Is claims data readily accessible to those interacting with members (across Rx/ medical/BH), so they can ID issues early?

Provide Customer Service

- Are staff trained on bias and stigma related to addiction, as well as the importance of language/word choice?

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Policy Landscape

What is the current and expected future state of policy on addiction?

Mental Health Parity and Addiction Equity Act

Summary

- **The Mental Health Parity Act of 1996** prohibited large group health plans from **imposing annual or lifetime dollar amounts on mental health benefits** that are **less favorable than the limits placed on medical/surgical benefits.** This includes but is not limited to deductibles, copays, out-of-pocket maximums, and treatment limitations.

MHPAEA Applies to

- Health insurers and plans that cover Mental Health (across fully insured group, government, and individual)

Changes to MHPAEA

- Later parity requirements extended to substance use disorder
- ACA established mental health and substance use disorder coverage to be required for non-grandfathered small group and individual plans as one of ten essential health benefits (EHB) categories

MHPAEA SAMHSA

SUPPORT Act of 2018

Summary

- Legislation passed **to address the nation's opioid overdose epidemic through provisions to strengthen the behavioral workforce.** Such provisions include increasing addiction medication education, standardizing addiction medication delivery, expanding access to high-quality and evidence-based care, and covering addiction medication that facilitates the delivery of coordinated and comprehensive treatment.

SUPPORT Act Applies to

- Federal programs such as Medicare and Medicaid
- Directs the Department of Health and Human Services
- State governance over federally offered programs

Key Provisions

- First Responder Training – program that trains first responders to administer proper drugs (naloxone) for opioid overdose incidents and fentanyl safety training
- Comprehensive Opioid Recovery Centers – a grant program to establish centers that will provide individuals with holistic OUD care, including all FDA-approved MOUD, counseling, recovery housing, job training, etc.
- Requires HHS to issue best practices for recovery housing and to identify common indicators of potential fraudulent recovery housing operators

21st Century Cures Act

Summary

- Addressed issues in **leadership and accountability for behavioral health disorders at federal level.** The act emphasized the **importance of evidence-based programs and prevention of mental and substance use disorders.** It also aligned efforts across government departments and leadership regarding MHSUD.

Cures Act Applies to

- Provides new authority to FDA to improve recruitment and retention of scientific, technical, and professional experts that develop medical products and innovations for patients
- Coordinate activities in major disease areas between drugs, biologics, and device centers

Initiatives and Roles Established

- Cures Act codified the Chief Medical Officer role to provide a clinical perspective at the national level for sound stewardship and implementation of high-quality, effective services
- Established Interdepartmental Serious Mental Illness Coordinating Committee (ISMICC) to ensure coordination across the entire Federal Government to address needs of individuals with serious mental illness and/or emotional disorders
- Established the National Mental Health and Substance Use Policy Laboratory to evaluate and promote evidence-based practices and services

Consolidation Appropriations Act of 2021

Summary

- Requires fully-insured carriers and employer plan sponsors to conduct comparative analyses of the nonquantitative treatment limitations (NQTLs) used for medical and surgical benefits as compared to mental health and substance use disorder benefits. The act also requires health plans to hold patients harmless from surprise medical billing for instances such as emergency care out-of-network (OON).

Act Applies to

- Regarding mental health and substance use disorders, the act applies to any group health plan and/or health insurers that offer coverage for MHSUD benefits in the individual and group space

Specifications for MHSUD

- The act requires health plans to only charge the INN cost-sharing amount when receiving emergency care, OON services at an in-network facility without consent, and certain ancillary services by OON providers at INN facilities
- The act requires secretaries of the HHS, DOL and Treasury to request comparative analyses of at least 20 health insurance plans per year that involve potential violations of mental health parity, complaints regarding noncompliance with mental health parity, and any other instances in which the secretaries determine appropriate.

American Rescue Plan Act of 2021 – MH/SUD

Key Considerations of American Rescue Plan

- The law allocated $3.5B for block grants for behavioral health disorders and several million more for other behavioral health programs and workforce issues
- The law provides $15M for planning grant funds for states to develop a mobile crisis service program
- The law directs $80M to pediatric mental health services

MH/SUD Grant Category	Grant Amount
Mental Health	$1.5 Billion
Substance Use Disorder	$1.5 Billion
Clinics participating in Certified Community Behavioral Health Clinic program	$420 Million
Behavioral health workforce education and training	$100 Million
Health professional schools, academic medical centers, local government, and nonprofits for training in evidence-based strategies to decrease behavioral health disorders among health care personnel	$80 Million
Health care providers promoting good behavioral health among personnel	$40 Million
Local gov, nonprofits, and health orgs for overdose and harm prevention	$30 Million
Education for health care personnel and first responders for identification and prevention of behavioral health disorders	$20 Million
Programs addressing community-based child and adolescent mental health	Over $100 Million

Proposed legislation addresses "pill mills," a contributor to the opioid crisis

Pill Mill States Shatterproof Data Sharing Act

Potential Future Legislation and Policy

Legislation and Policies in Discussion

- EQUAL Act – Federal Sentencing Parity act on crack cocaine and powered cocaine
- "Preventing Pill Mills Through Data Sharing Act" – Provide DEA more tools to stop "pill mill" clinics

EQUAL Act

- If enacted, the EQUAL Act would end the prison sentencing disparity between crack cocaine and powdered cocaine
- Currently disparity is 18 to 1 (e.g. 36 grams of powdered cocaine would receive the same sentencing as 2 grams of crack cocaine)
- Passing the EQUAL Act would lead to a reduction in over-incarceration and free up resources to support evidence-based treatments for substance use disorders

Preventing Pill Mills Through Data Sharing Act

- If enacted, the act would require drug manufacturers and distributors to report the sale, delivery or disposal of controlled substances on a monthly basis (current law requires quarterly)
- Extends penalties and reporting requirements to pharmacies
- Requires DEA to provide quarterly reports in a manner that better facilitates the identification of suspicious orders
- Requires DEA to provide same reporting to Congress that includes unusual volumes of controlled substances that are disposed of and unusual numbers that are deleted

White House National Drug Control Strategy

Background

Recently addressed in the State of Union was the Biden Administration's National Drug Control Strategy. The administration's strategy focuses on two of the epidemic's key drivers :

- *Untreated Addiction and Drug Trafficking*

The strategy is aimed at prioritizing actions that will save lives, provide people the care they need, target traffickers' profits, and utilize data to guide all of these efforts

Strategy Highlights

- Addressing untreated addiction for those who are at-risk of overdose
- Expand high-impact harm reduction interventions like naloxone
- Ensure access to evidence-based treatment for those particularly at-risk of an overdose
- Improve guidance for drug policy via research and data systems
- Targeting drug trafficking and illicit drug profits
- Obstruct and disrupt financial activities of transnational criminal organizations (TCOs) that manufacture illicit drugs and traffic them into the U.S.
- Lower the supply of illicit drugs smuggled across US borders by facilitating domestic and international coordination

International Approaches

What are other countries with lower rates of SUD doing differently?

We can learn from approaches in other countries, which have a lower rate of SUD than the US (1 of 2)

Country	Laws/Policies/Programs	Description
Canada	Good rehabilitation policy	• In Canada, with its largely single-payer system, most people with addiction and psychiatric disorder are insured • Wait times for private facilities are generally shorter than in the US or nonexistent
Portugal	Decriminalization law	• Officially abolished all criminal penalties for personal possession of drugs • The consumer is now regarded as a patient and not as a criminal
Finland	Drug Consumption Rooms (DCRs) and Employer-Based Interventions	• DCRs designed to reach isolated people who use drugs (PWUDs) at risk of death by overdose and the spread of infectious diseases • Several interventions aim to create safe and risk-reducing environments in school settings, while universal prevention activities aimed at substance use prevention are a part of compulsory health education

We can learn from approaches in other countries, which have a lower rate of SUD than the US (1 of 2)

Country	Laws/Policies/Programs	Description
Switzerland	Four pillars law	• Four pillars of the Swiss law are harm reduction, treatment, prevention and repression (or law enforcement)
Germany	Harm Reduction Treatment	• Germany has introduced harm reduction strategies for the treatment of substance use disorder and non-medical drug use for decades. Strategies include safe injection facilities, safe syringe programs, MOUD, fentanyl test strips and naloxone

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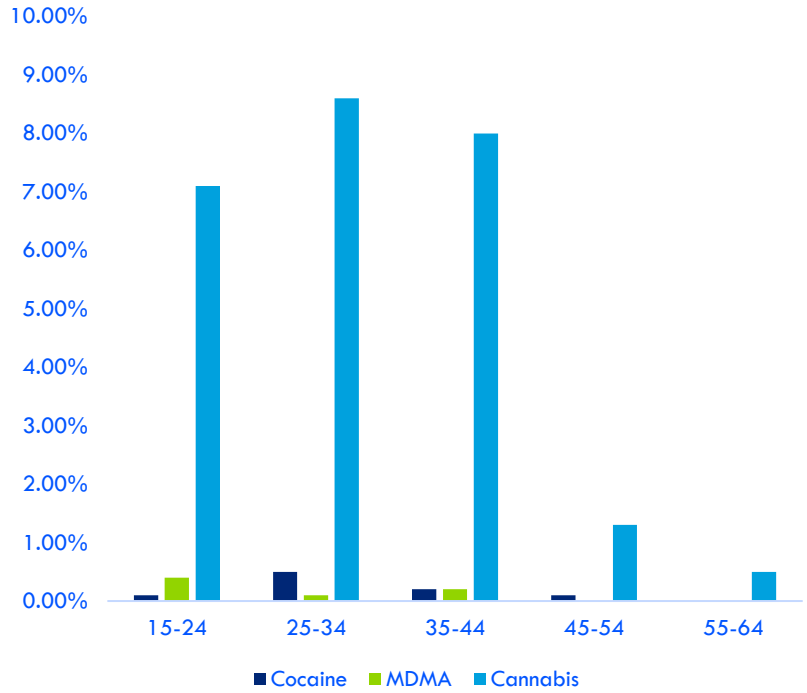
In Portugal, cannabis is the major illicit substance among different age groups

- Cannabis is the most frequently used illegal substance in Portugal, followed by MDMA/ecstasy and cocaine.
- Use of illegal substances is more common among people aged 15-34 years.
- There were 33K high-risk opioid users in Portugal in 2015, which is about 5.2 per 1000 of the adult population.
- In 2015, the number of people who inject drugs was estimated at about 13K (2 per 1000 people aged 15- 64).
- The drug-induced mortality rate among adults (aged 15-64 years) was 4 deaths per million in 2017, which is lower than European average of 22 deaths per million

Drug Use Prevalence in Portuguese, 2017



2022 European Drug Report

FQA Institute for Social Impact

New drug policies and programs have reduced drug usage

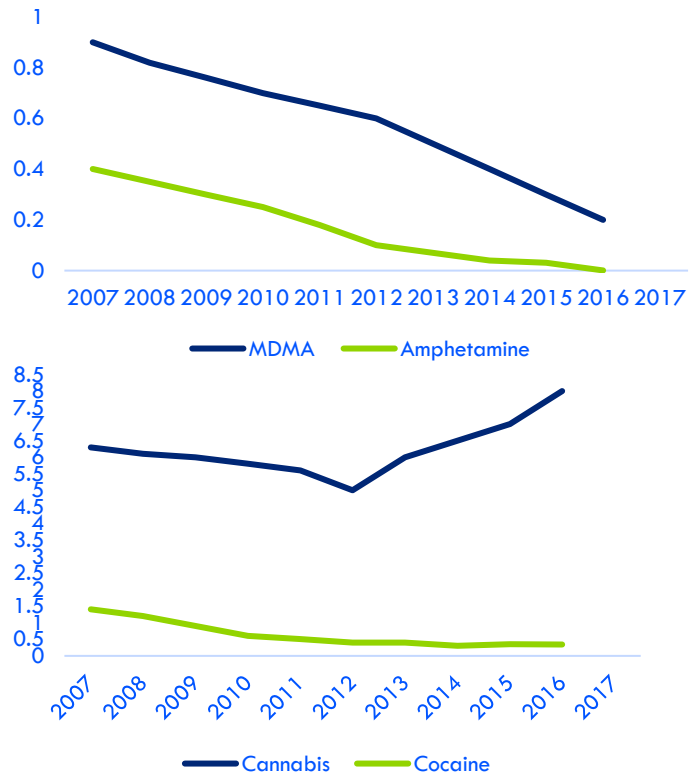
Decriminalization

- In 2001, personal possession of all drugs was decriminalized in Portugal
- Possessing drugs for personal use is instead treated as an administrative offense so it is no longer punishable by imprisonment and does not result in a criminal record (or associated stigma)
- As an administrative penalty, it is still confiscated, and possession may result in fines or community service

Harm reduction interventions

- Aim is to prevent drug-related risks such as infectious diseases, social exclusion and delinquency
- Portugal has a network of harm reduction programs nationwide, including safe syringe programs

Drug Use Trend (15-34) Age



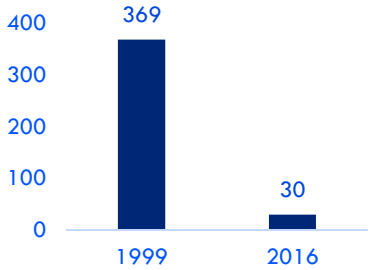
2022 European Drug Report

FQA Institute for Social Impact

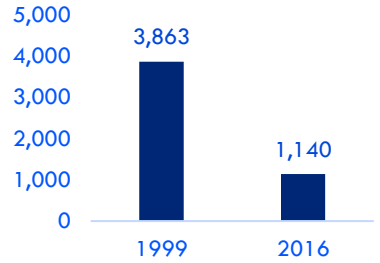
Drug use, HIV transmission, and drug offenses have decreased

- Portugal went from having one of the highest rates of problematic drug use in Europe before decriminalization, to having a rate of overall drug consumption that is low in comparison with that of other European countries.
- Drug deaths have risen but remained below 2001 levels.
- There are 6 deaths per million among people aged 15-64 in Portugal, compared to the EU average of 23.7 per million.
- In 2001, 40% of the Portuguese prison population was sentenced for drug offences, and this reduced to 15.7% in 2019.
- Overdose deaths decreased by over 80%.
- Incarceration for drug offenses decreased by over 40%.
- The prevalence rate of people who use drugs with new HIV/AIDS diagnoses fell from 52% to 6%.

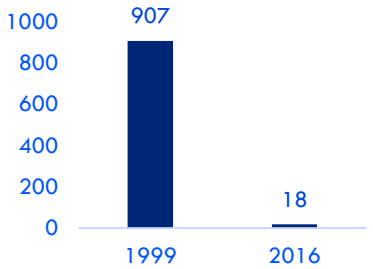
Overdose Deaths



New HIV Diagnoses due to Injecting



People incarcerated for Drug Offenses



Transformdrugs.com Portugal national website Drug Policy

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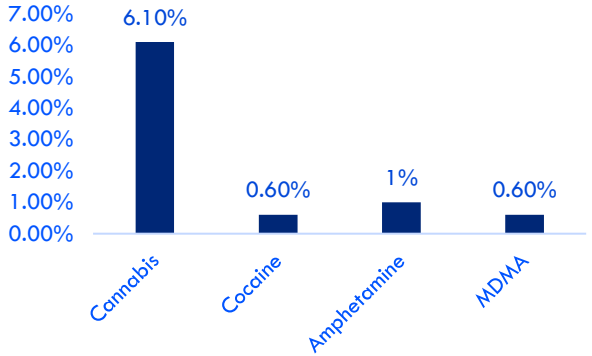
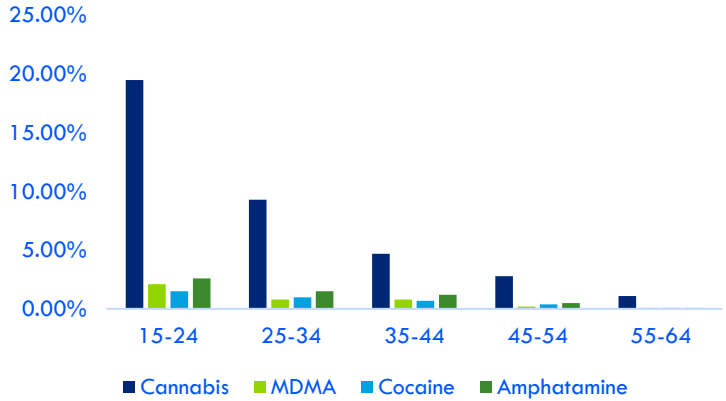
Germany drug policy focuses on treatment as well as on criminalization

- Germany's drug and addiction strategy is based on four pillars:
  - Prevention
  - Counselling, treatment and help in overcoming addiction
  - Harm reduction measures
  - Supply reduction
- Cannabis is the most common illicit drug used among both adults and adolescents
- Illicit drug use is more common among males than females and higher among young adults (ages 18-25)
- Based on 2016 treatment data, high-risk use of amphetamines and/or cocaine was 1.64-1.95 per 1,000 inhabitants aged 15-64 years.

Prevalence of Drug Use Among Adults (2015)



Prevalence of Drug Use By Age (2015)



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Prevention, counselling, harm reduction and supply reduction are pillars of German drug policy

Prevention	Counselling	Harm Reduction	Supply Reduction
Targets vulnerable groups that may be at greater risk of developing substance use problems	Opioid substitution treatment (OST)	Clean needle and syringe program	To prevent illicit cultivation/production and trafficking of illicit substances
Environmental protection	Outpatient counselling centers	Outpatient treatment centers	Organized crime groups and money laundering
School-based prevention activities	Psychiatric facilities	Drug consumption rooms	
Selective and indicated prevention program			

Germany Country Drug Report 2019

In Czech Republic, drug usage has been declining since 2014

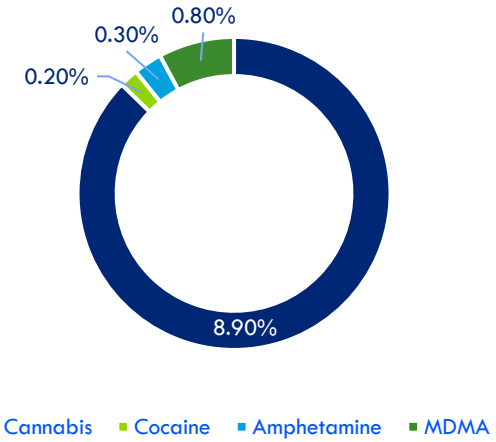
- The prevalence of illicit drug use in Czech Republic has been relatively stable in recent years, with cannabis being the most used substance.
- The drug-induced mortality rate among adults aged 15-64 years was 5 deaths per million in 2017, which is below the latest available European average of 22 deaths per million.

45,000 Injecting Methamphetamine and Opioids, 2019

125,000 Cannabis Users, 2019

8,500 Drug Seizures, 2017

Drug Prevalence Czech Republic,2017



Czechia Country Drug Report 2019

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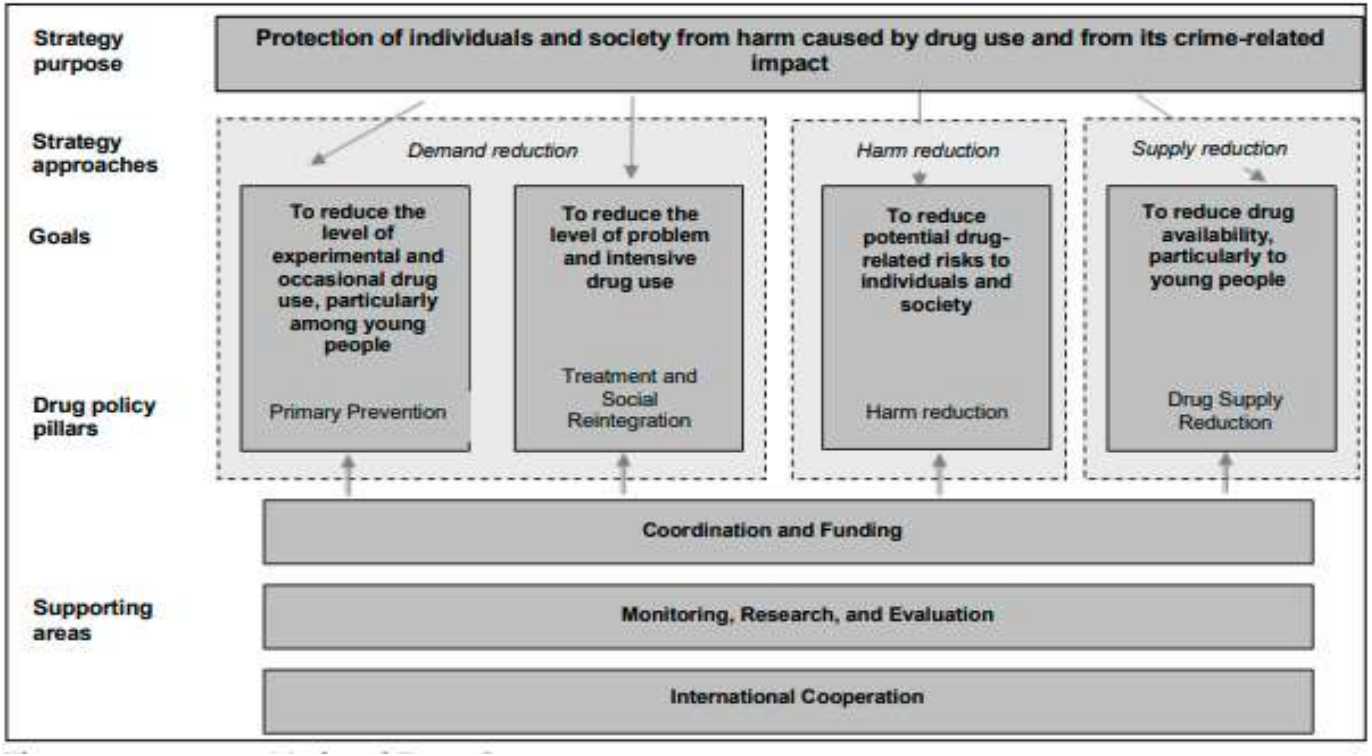
Fundamental pillars of the Czech Republic's Drug Policy



Finland emphasizes treatment policy more than prevention policy

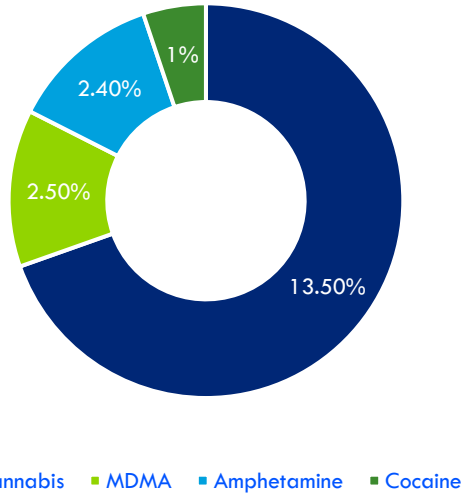
Prison-Based Drug Treatment

- The Finnish national drug strategy emphasizes the need to increase the availability and quality of drug treatments in prison, with the goal of reducing substance use among inmates.

Harm Reduction

- Harm reduction services are delivered through outreach work and local health counselling centers.
- Needle and syringe programs at health counselling centers almost doubled over 2001-2015.

Finland Drug Use Snapshot (15-34), age 2018



The “four pillars” law helps address drug issues in Switzerland

The four pillars of the Swiss law are harm reduction, treatment, prevention and repression (or law enforcement). 70% of Swiss citizens voted in favor of the law

Since its passing in 1994, the law has seen significant outcomes:

- In the past two decades, the number of opioid-related deaths was reduced by **64%.**
- In 1986, more than 3,000 people tested positive for HIV in Switzerland. In 2017, there were **fewer than 500 new positive HIV tests** in a country of 8.4 million.
- **75%** of people actively using drugs in Switzerland are in treatment on a given day.
- **~95%** have been in treatment at some point.

Contact Us

If you have questions, comments or suggestions, please reach out to us at Socialimpact@fqahealth.com.

https://www.fqadvisory.com/social-impact