



# UNC SON **ECHO** for MOUD

Addiction and Behavioral Clinic for Medication for Opioid Use Disorder Treatment

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## UPDATE on Methamphetamines: Part 1

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UNC  
SCHOOL OF NURSING



University of North Carolina  
at Chapel Hill  
School of Nursing

# Disclosures

NONE

# Objectives

1. Define the term “Meth” and its broader classification
2. Describe how it is different from other stimulants
3. Identify current treatments

# What is meant by METH?

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METH- induced disorders include anxiety, depression, cognitive impairments, insomnia and psychosis.

In addition, chronic METH use is a risk factor for developing Parkinson's disease.

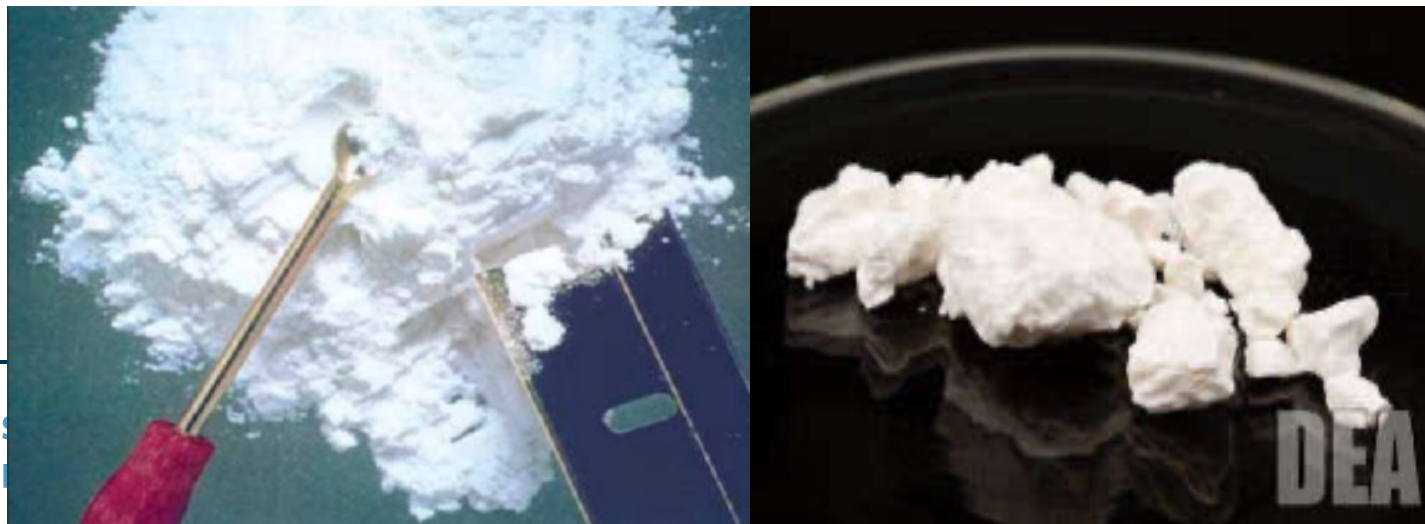


# The Broader Classification: Stimulants

Methamphetamine



Powder and Crack Cocaine



# Use and misuse

## United Nations World Drug Report (2020):

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## US (2021)

Among people aged 12 or older in 2021, 0.9% (or about 2.5 million people) reported using methamphetamine in the past 12 months.

# Prevalence

Overall, there has been an approximately 40% increase in METH use in the United States between 2016 and 2018 and a further increase between 2018 and 2019.

In the US, 0.7% of the population aged 12 and older, or 1.9 million people, reported the use of METH.

METH use declined among young adults (aged 18–25), but increased significantly among adults aged 26 and older from 0.5%.

# How do they differ?

Methamphetamine	Cocaine
Stimulant	Stimulant and local anesthetic
<b>Man-made</b>	<b>Plant-derived</b>
Smoking produces a long-lasting high	Smoking produces a brief high
50% of the drug is removed from the body in 12 hours	50% of the drug is removed from the body in 1 hour
Increases dopamine release and blocks dopamine re-uptake	Blocks dopamine re-uptake
Limited medical use for ADHD, narcolepsy, and weight loss	Limited medical use as a local anesthetic in some surgical procedures

# Methamphetamine



## Methamphetamine Powder

Users' Description: Beige/yellowy/off-white powder

## Base / Paste Methamphetamine

Users' Description: 'Oily', 'gunky', 'gluggy' gel, moist, waxy

## Crystalline Methamphetamine

Users' Description: White/clear crystals/rocks; 'crushed glass' / 'rock salt'

# Brief review of history

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However, methamphetamine differs from amphetamine in that, at comparable doses, much greater amounts of the drug get into the brain, making it a more potent stimulant.

It also has longer-lasting and more harmful effects on the central nervous system.

These characteristics make it a drug with high potential for widespread misuse.

# How is it misused?

Methamphetamine comes in several forms and can be smoked, snorted, injected, or orally ingested.

The preferred method of using the drug varies by geographical region and has changed over time.

# More about how & why it is misused

Smoking or injecting methamphetamine puts the drug very quickly into the bloodstream and brain, causing an immediate, intense "rush" and amplifying the drug's addiction potential and adverse health consequences.

The rush, or "flash," lasts only a few minutes and is described as extremely pleasurable.

Snorting or oral ingestion produces euphoria—a high, but not an intense rush.

Snorting produces effects within 3 to 5 minutes, and oral ingestion produces effects within 15 to 20 minutes.

# Short-term effects of METH may include:

- ❖ increased attention and decreased fatigue
- ❖ increased activity and wakefulness
- ❖ decreased appetite
- ❖ euphoria and rush
- ❖ increased respiration
- ❖ rapid/irregular heartbeat
- ❖ hyperthermia

# Binge & Crash & Run

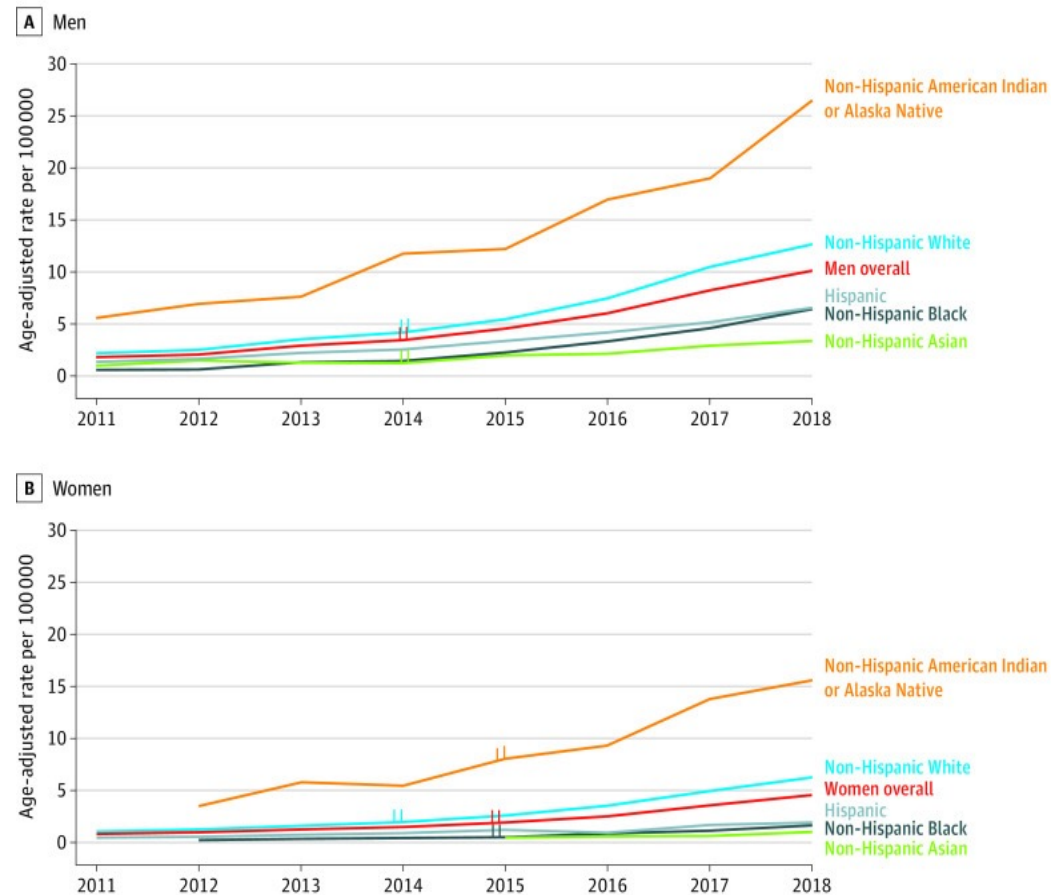
Pleasurable effects of methamphetamine disappear even before the drug concentration in the blood falls significantly

Users try to maintain the high by taking more of the drug.

In some cases, people indulge in a form of binging known as a "run," foregoing food and sleep while continuing to take the drug for up to several days.

# Methamphetamine Overdose Deaths in the US by Sex and Race and Ethnicity (2011-2018)

Han, B., Cotto, J., Etz, K., Einstein, E. B., Compton, W. M., & Volkow, N. D. (2021). Methamphetamine Overdose Deaths in the US by Sex and Race and Ethnicity. *JAMA psychiatry*, 78(5), 564–567.



# Manufacturing METH

- Why?
- Where?
- How?



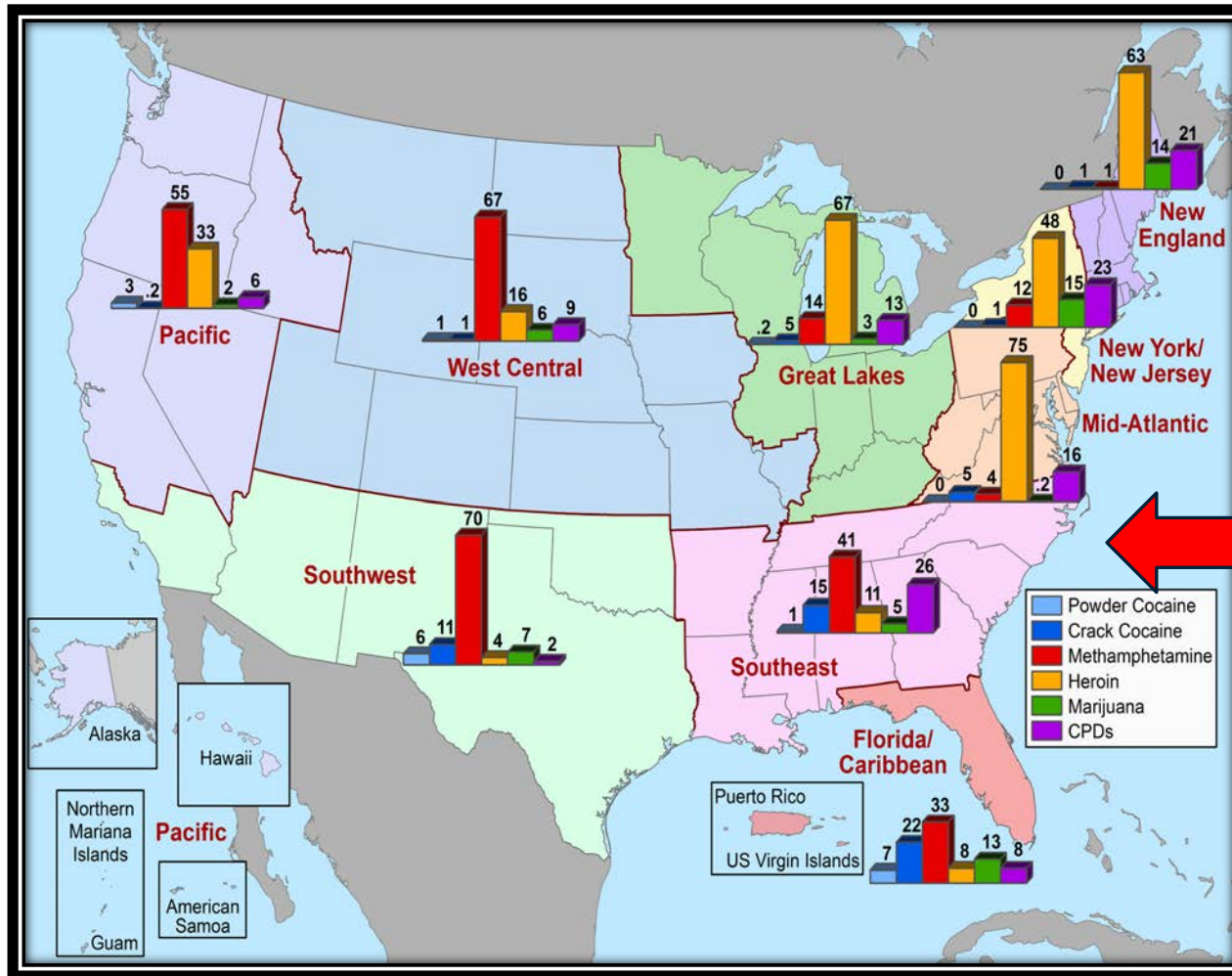
# Why?

Simply put:

- Cocaine is expensive
- METH is cheap

# Greatest Drug Threat Represented Regionally as Reported by State and Local Agencies

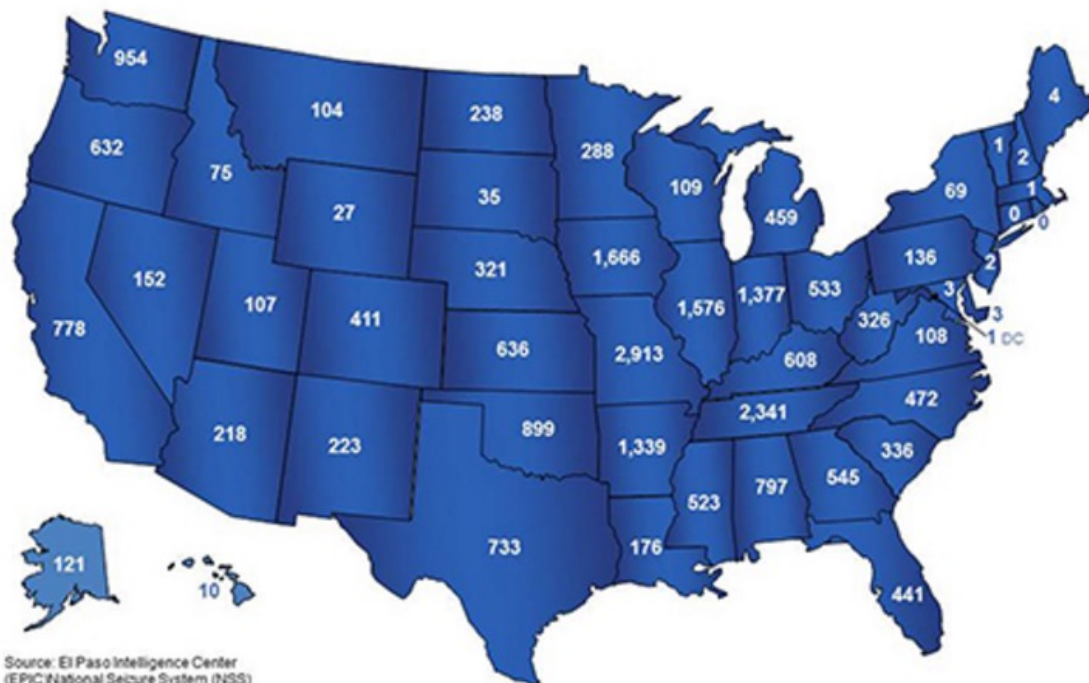
Where?



## 10-year span nationally

**Calendar Year 2004**  
Total: 23,829

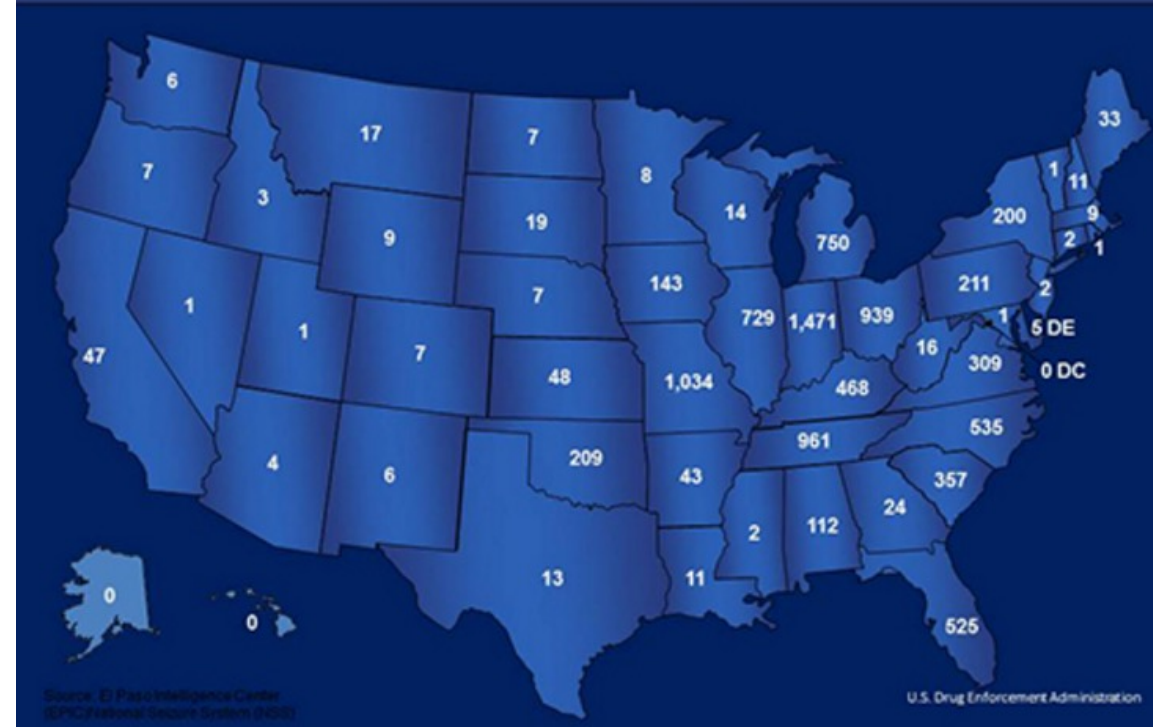
**Total of All Meth Clandestine Laboratory Incidents Including Labs, Dumpsites, Chem/Glass/Equipment**



Source: El Paso Intelligence Center  
(EPIC National Seizure System (NSS))  
Query Date January 29, 2013

**Calendar Year 2014**  
Total: 9,338

**Total of All Meth Clandestine Laboratory Incidents Including Labs, Dumpsites, Chem/Glass/Equipment**



Source: El Paso Intelligence Center  
(EPIC National Seizure System (NSS))

U.S. Drug Enforcement Administration

**NC: n=472 (2004) and n=635 (2014)**

# There is no FDA approved treatment (yet)

Clinical trials

CBT

# Treatment options

## Extended observation of reduced methamphetamine use with combined naltrexone plus bupropion in the ADAPT-2 trial

Li, M. J., Chau, B., Belin, T., Carmody, T., Jha, M. K., Marino, E. N., Trivedi, M., & Shoptaw, S. J. (2024). Extended observation of reduced methamphetamine use with combined naltrexone plus bupropion in the ADAPT-2 trial. *Addiction (Abingdon, England)*, 119(10), 1840–1845.

# More to come if interested

Let us know your questions and Part 2 will be planned!!

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# Questions??

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FILL OUT THE SURVEY AND LET US KNOW IF YOU HAVE AN INTEREST IN  
MORE INFORMATION ON STIMULANT USE AND MISUSE

