

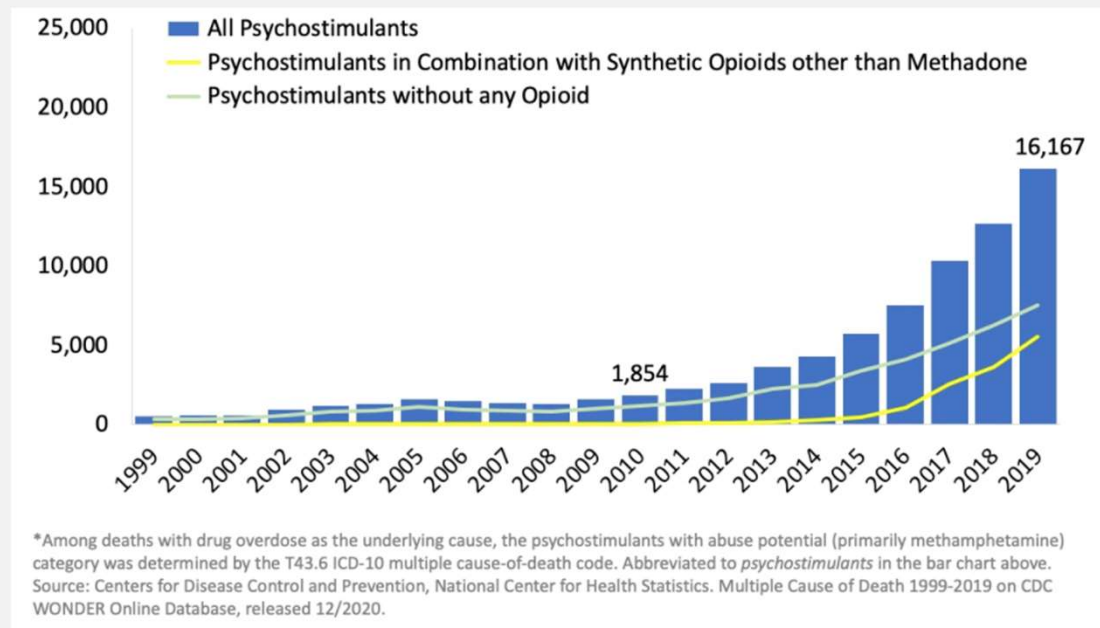
# METHAMPHETAMINES

Harm Reduction Approaches and  
the Latest Evidence on Treatment

## SUMMARY OF TODAY'S TALK

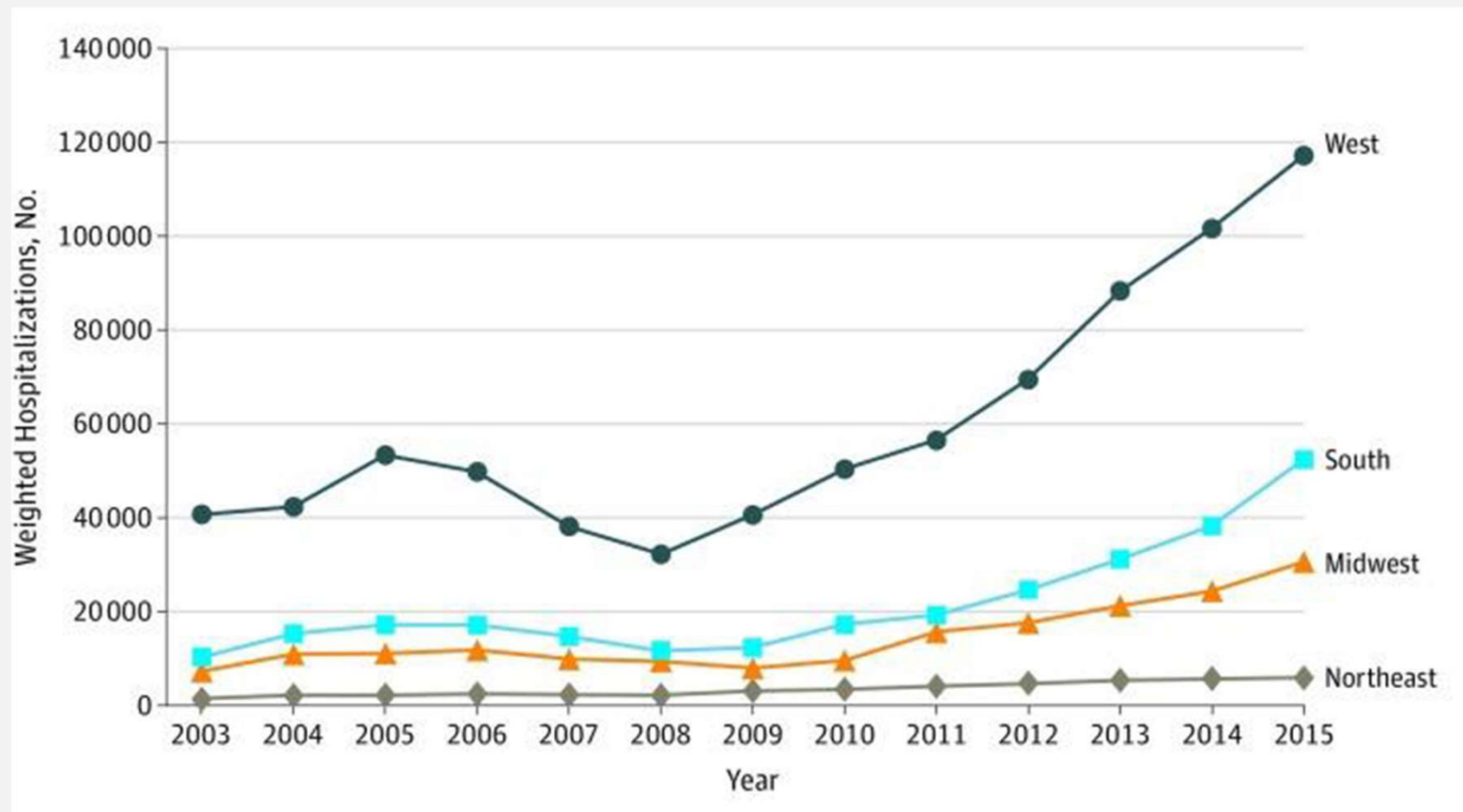
- Trends in methamphetamine use, before and after covid19
- Neurobiology of methamphetamine
- Sequelae of methamphetamine use
- Harm reduction approaches
- *Dr. Jocelyn James: updates in pharmacological treatment*

## HARMS OF METHAMPHETAMINE ARE INCREASING...

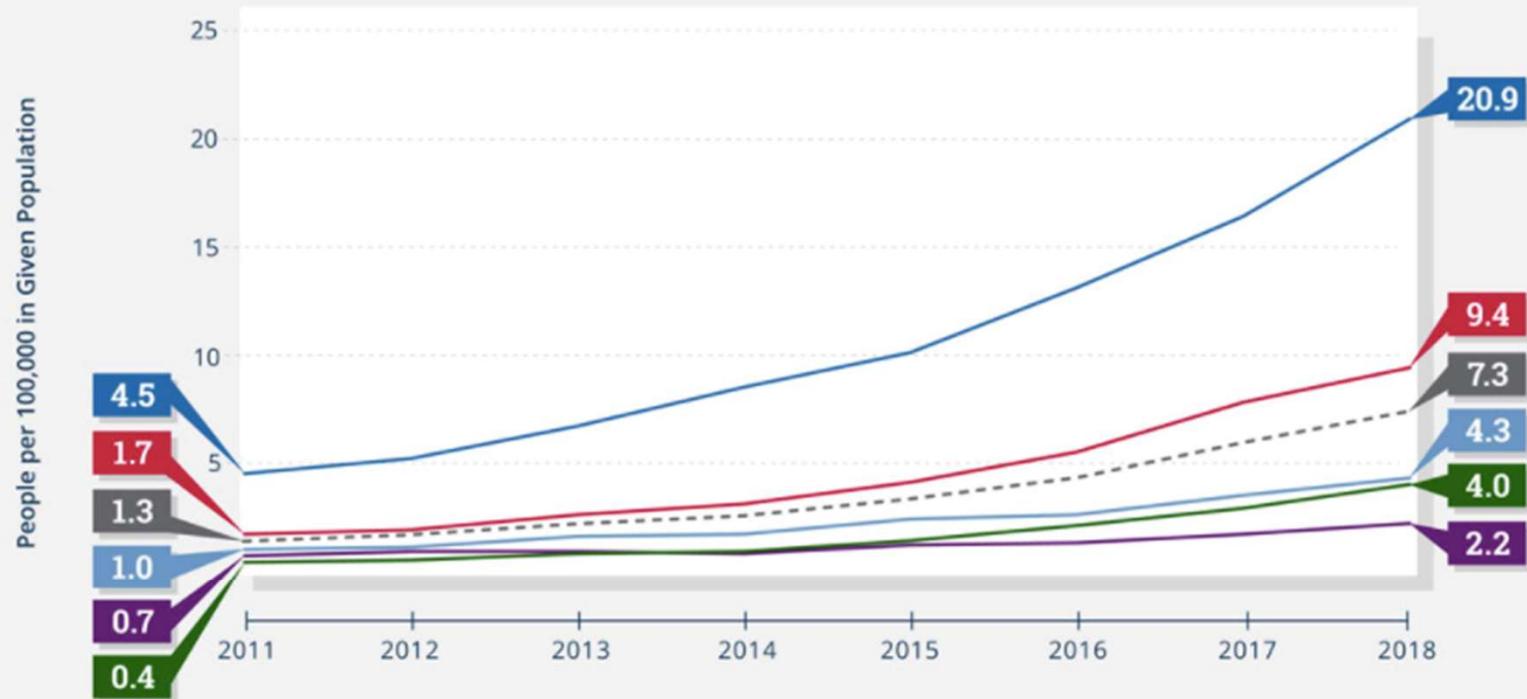


Overdose deaths involving psychostimulants: 1999-2019

## Psychostimulant Hospitalizations by Region in the US, 2003-2015

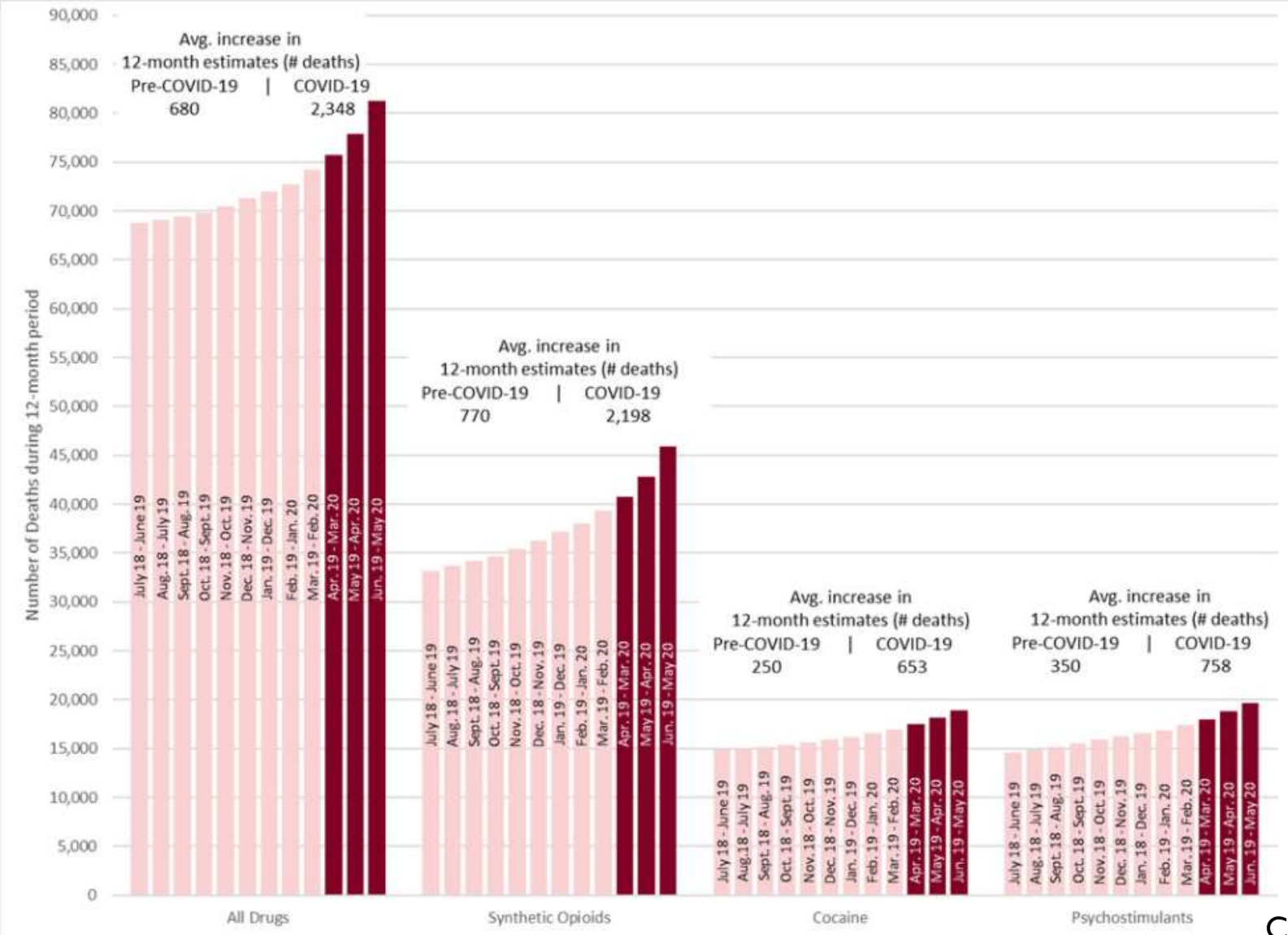


## U.S. Overdose Deaths Involving Methamphetamine in People Ages 25 – 54\*



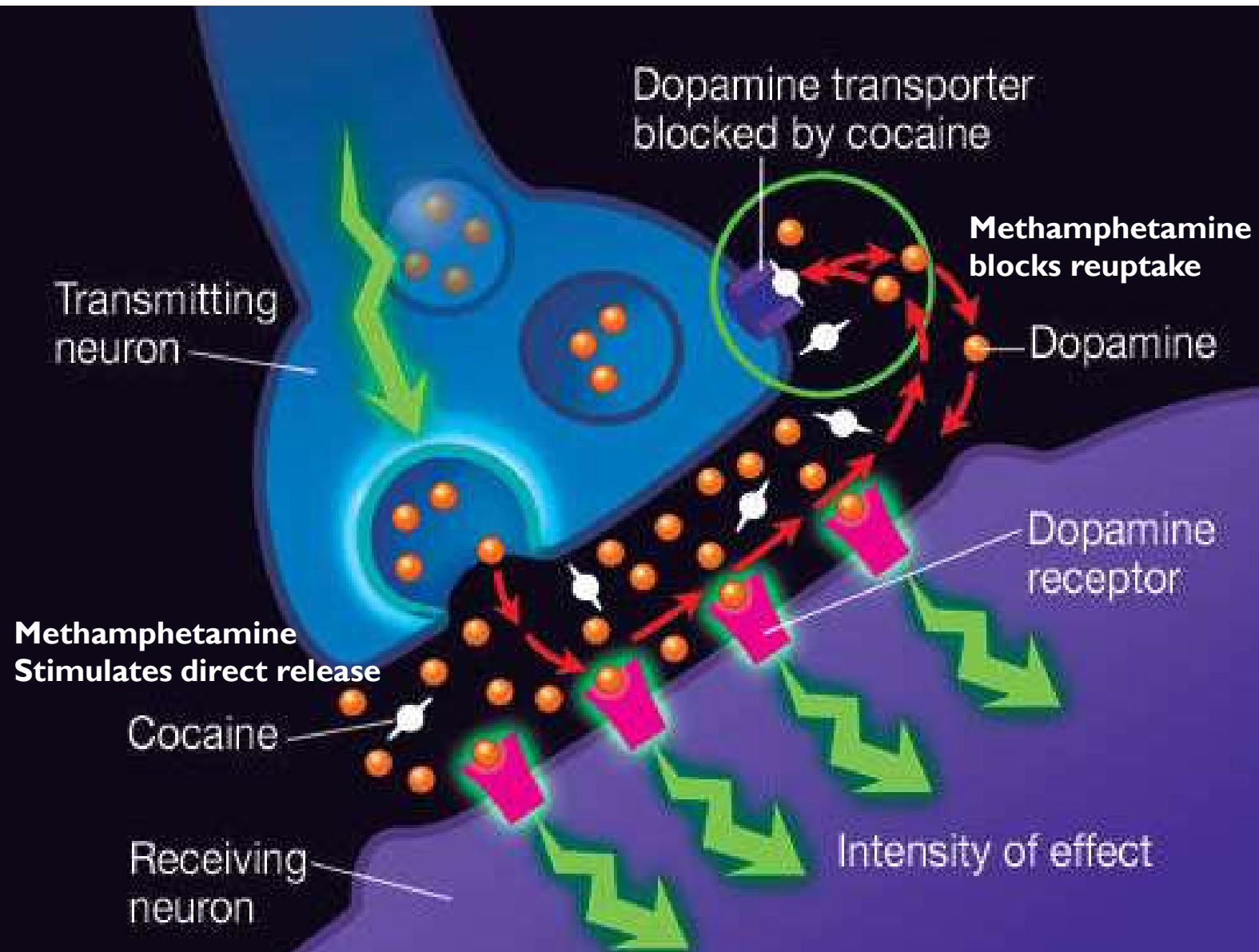
American Indian/Alaska Native (Non-Hispanic)
White (Non-Hispanic)
U.S. Average
Hispanic
Asian or Pacific Islander (Non-Hispanic)
Black (Non-Hispanic)

\*Recent national data show that most people who use methamphetamine are between 25 and 54 years old, so investigators limited analysis to this age group.

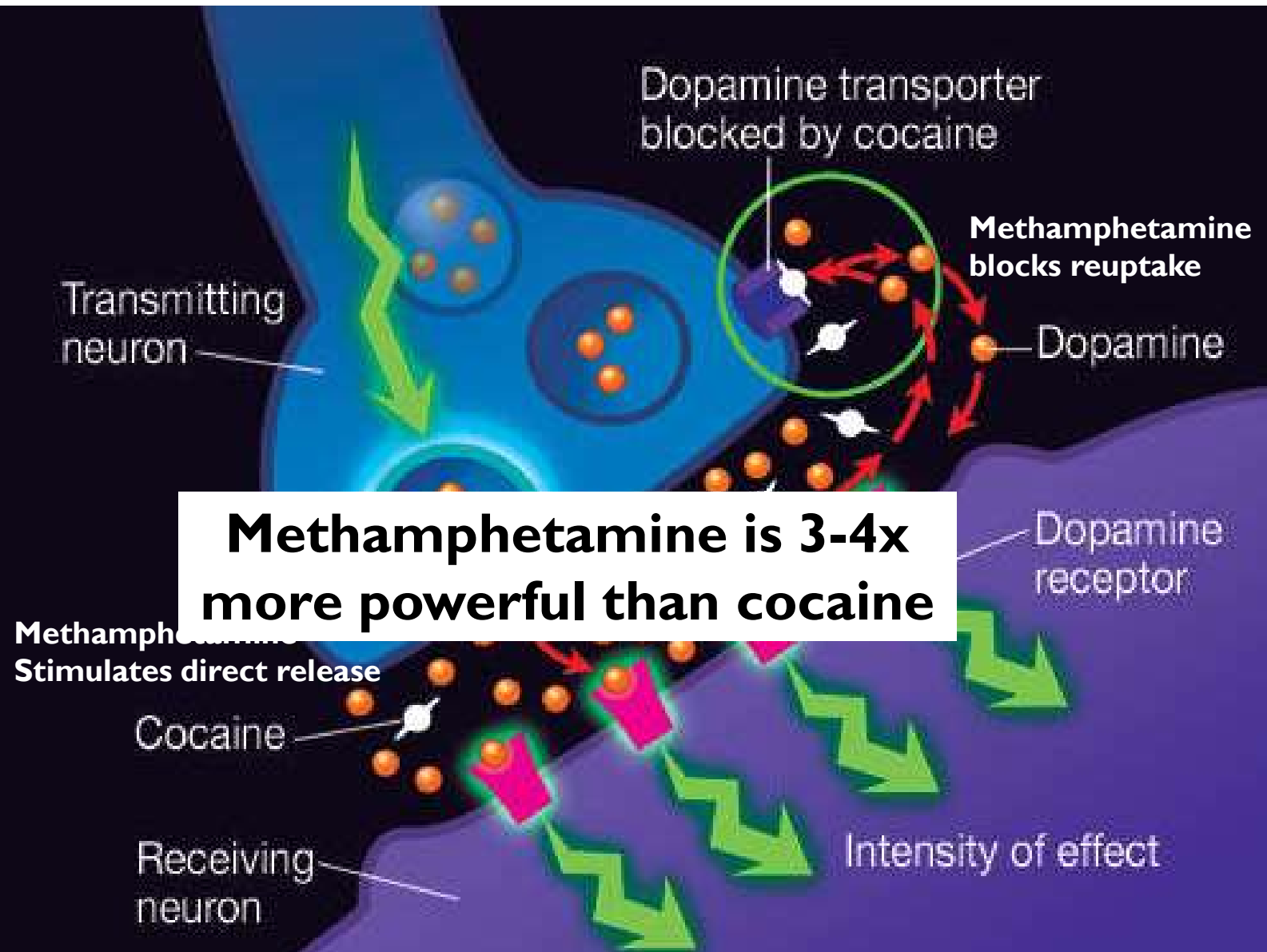


## REASONS FOR USING METHAMPHETAMINE

- Enhanced focus
- Enhanced productivity
- Euphoria
- To treat depression/loneliness
- Enhanced sexual activity/libido







## Intoxication

Euphoria

Dilated pupils

Increased heart rate

Decreased appetite

Increased attention, wakefulness



## Intoxication

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Dilated pupils

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Decreased appetite

Increased attention, wakefulness

## Withdrawal (daily users)

1-3 days: Extreme fatigue

3-14 days: mild fatigue, depression,  
increased appetite, SI

1-6 months: depressed mood, mood  
swings

6-12 months: cognitive impairment



## FORMS OF METH



**POWDERED METH**  
Snorting, ingesting



**METH ICE**  
Mainly for smoking



**METH CRYSTALS**  
Modified and injected

— DRUG ENFORCEMENT ADMINISTRATION

## PILLS



## HARMS OF METHAMPHETAMINE ARE RELATED TO...

- The dose (potency)
- The route
- The frequency of use
- Comorbid substance use (opioids)

## Acute Effects

### Neurological:

- agitation, confusion
- psychosis, visual hallucinations

### Oral:

- Dry mouth
- teeth grinding

### CV:

- Hypertension
- Arrhythmia
- CV collapse

### Infectious:

- abscesses from injection
- skin picking
- broken equipment



## Chronic Effects

### Neurological:

- Cognitive impairment\*
- Parkinsonian symptoms
- Depression
- Hemorrhagic stroke

### CV:

- Atherosclerosis
- cardiomyopathy

### Infectious:

- HIV
- Hepatitis C

### Oral:

- Tooth decay\*
- \*(Poverty??)

### Pulmonary:

- Chronic bronchitis
- Pulmonary HTN

Paulus and Stewart, *JAMA Psychiatry*, 2019.



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*Overdose and death due to direct effects or polysubstance ingestion, esp. opioids*

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## HARMS OF METHAMPHETAMINE ARE RELATED TO...

- The dose
- The route
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HARMS OF METHAMPHETAMINE ARE  
RELATED TO...

*We can help people use less, more  
safely, and mitigate the damage of  
methamphetamine even if abstinence  
is not the patient's goal*

## CASE



- Patient, 37M using methamphetamine for 15 years
- Use is escalating, disturbing hallucinations
- Hospitalized with overdose

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“Can you tell me about your goals?”

## CASE



- Patient, 37M using methamphetamine for 15 years
- Would like to reduce use, not ready to stop
- Feels that it is helpful for concentration, sex

## CASE



- Patient, 37M using methamphetamine for 15 years
- First visit:
  - Engage in a non-judgmental way
  - Assess goals
  - Assess immediate risk
  - Consult addiction medicine

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## CASE



- Patient, 37M using methamphetamine for 15 years
- First visit:
  - Offer naloxone
  - Screen for HIV, offer Prep
  - Test for Hep C
  - Screen for other SUDs, esp opioids and treat!

## CASE



- Patient, 37M using methamphetamine for 15 years
- Treating methamphetamine use disorder
  - Any reduction in harms is a valid goal!
  - Contingency management
  - Cognitive behavioral therapy
  - Group therapy



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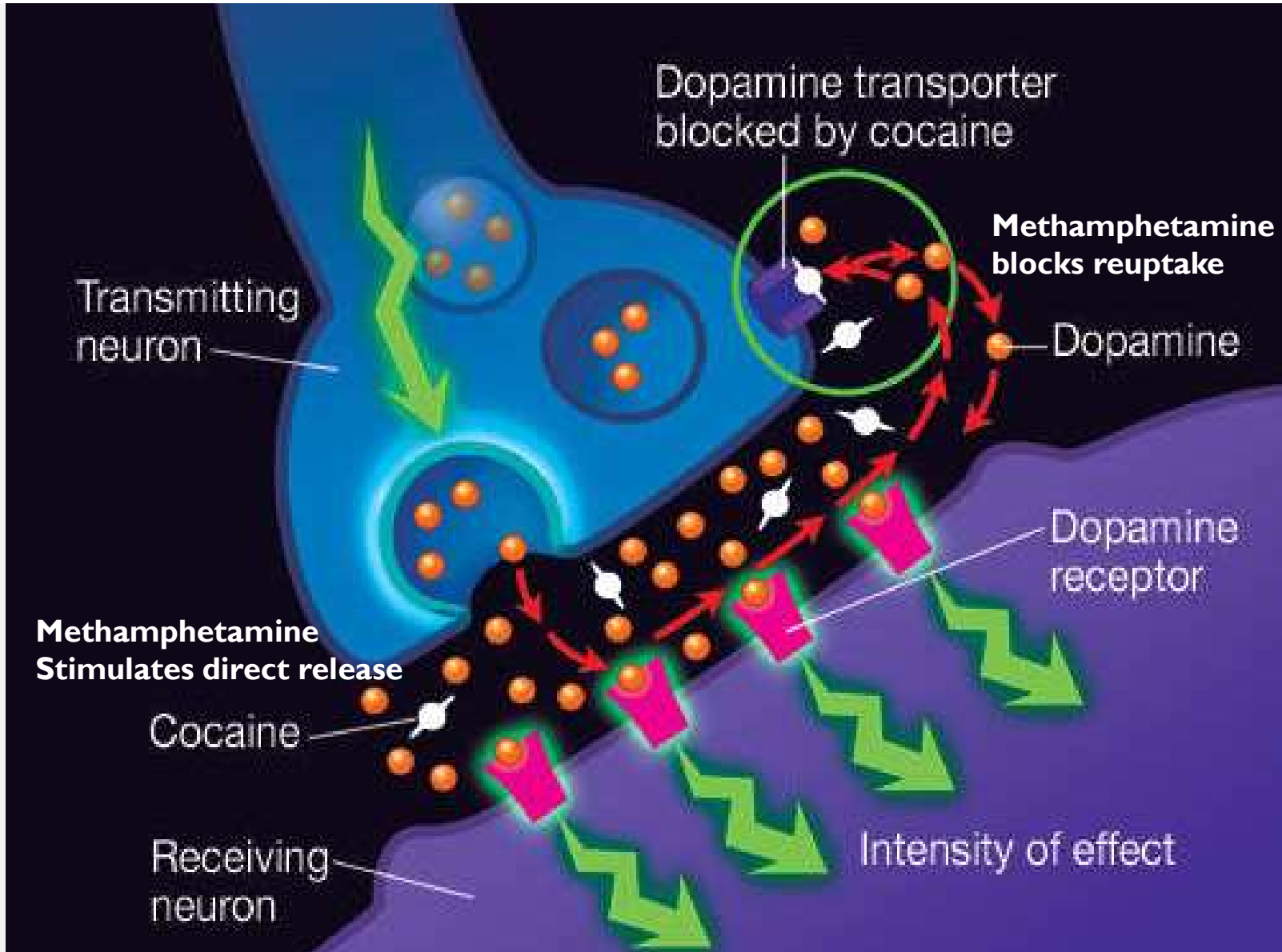
- **Trends in methamphetamine use, before and after covid19**
  - Increasing across the country, especially West Coast
  - Increasing for all racial groups
  - More rapid increases since covid19

## SUMMARY OF TODAY'S TALK

- Trends in methamphetamine use, before and after covid19
- **Neurobiology of methamphetamine**
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- **Neurobiology of methamphetamine**



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- First visit:
  - Engage in a non-judgmental way
  - Assess goals
  - Assess immediate risk
  - Consult addiction medicine

## HARM REDUCTION

- For all patients:
  - Offer naloxone
  - Screen for HIV, offer Prep
  - Test for Hep C
  - Screen for other SUDs, esp opioids and treat!

## REFERENCES

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