

A Brief Introduction to SUD/MAT

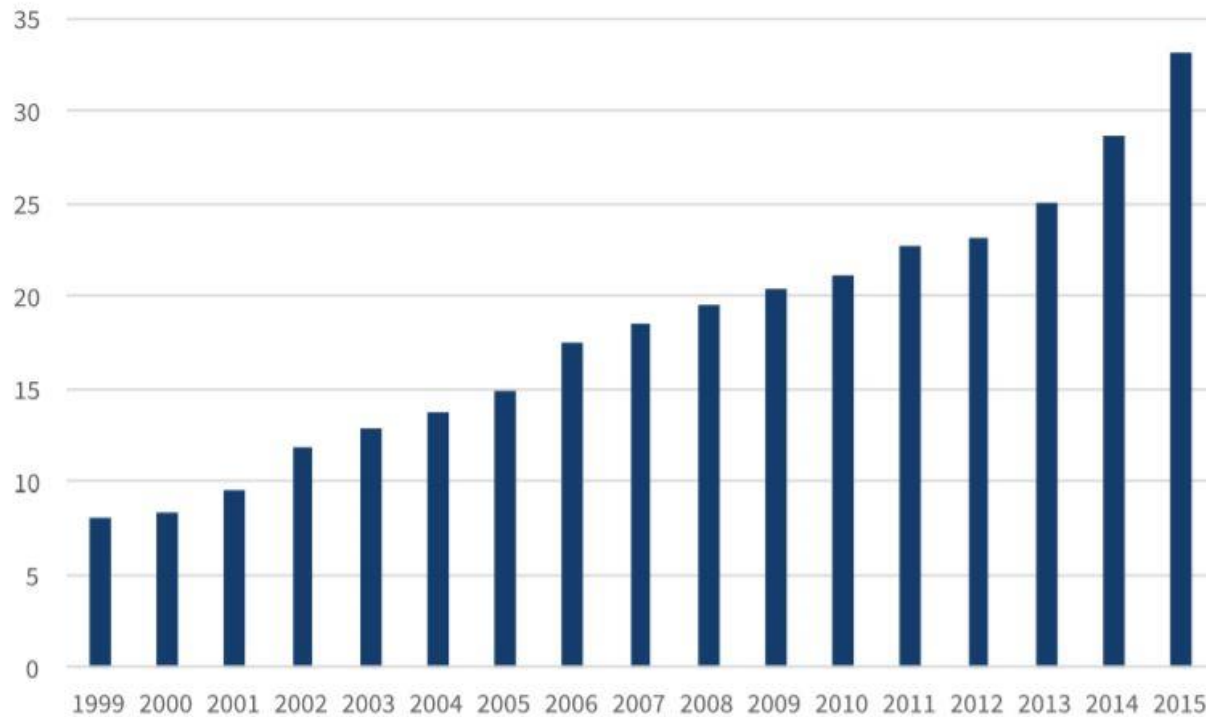
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Why is it a problem?

- 91 Americans die daily from opiate overdose
 - (~130 die daily from colon cancer)
- 1,000 visits daily to ER for not using opiates correctly
- It is a public health epidemic

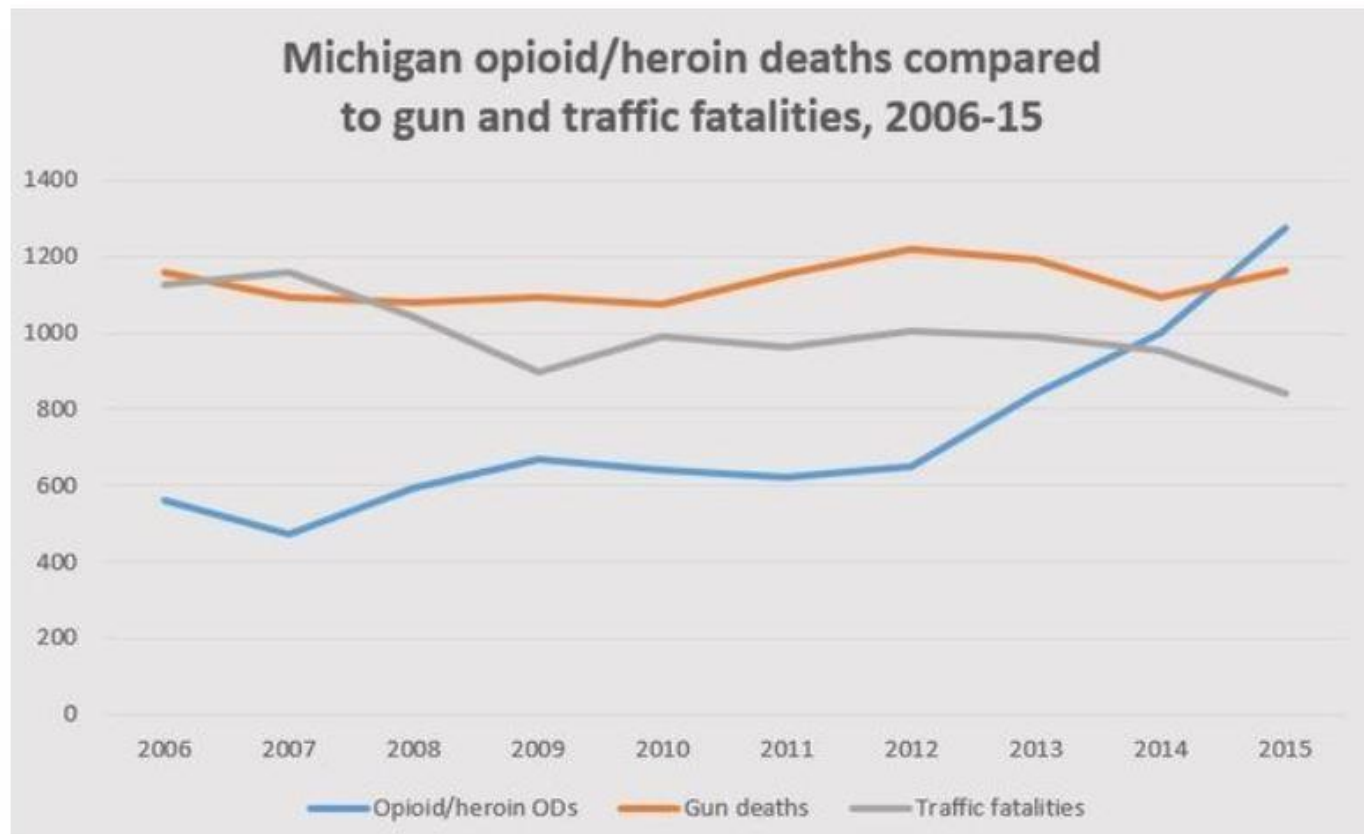
Opioid Overdose Deaths

Figure 1. Opioid-involved Overdose Deaths, 1999-2015
(Thousands of Deaths)



Source: CDC Wonder database, multiple cause of death files

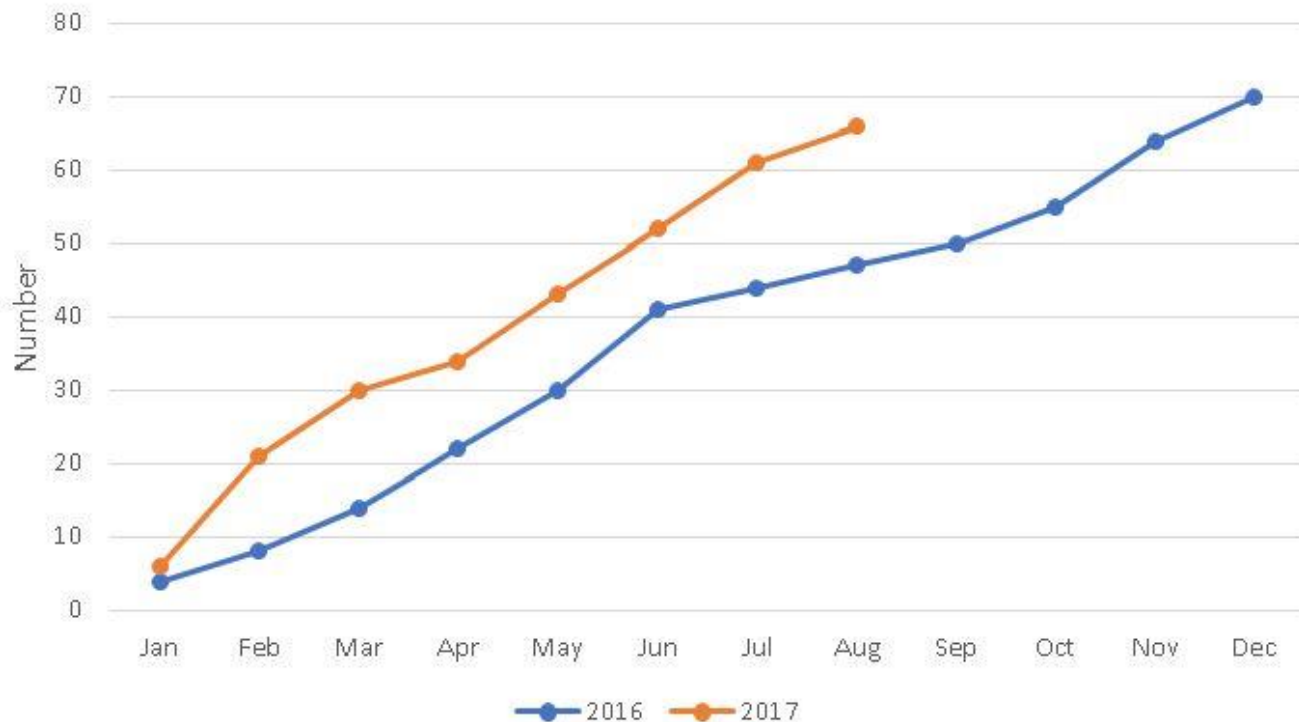
Deaths in Michigan



Source: Michigan Department of Health and Human Services

Deaths from Opioids, Kent County

Figure 2: Cumulative Number of Opioid-related Deaths, 2016-2017

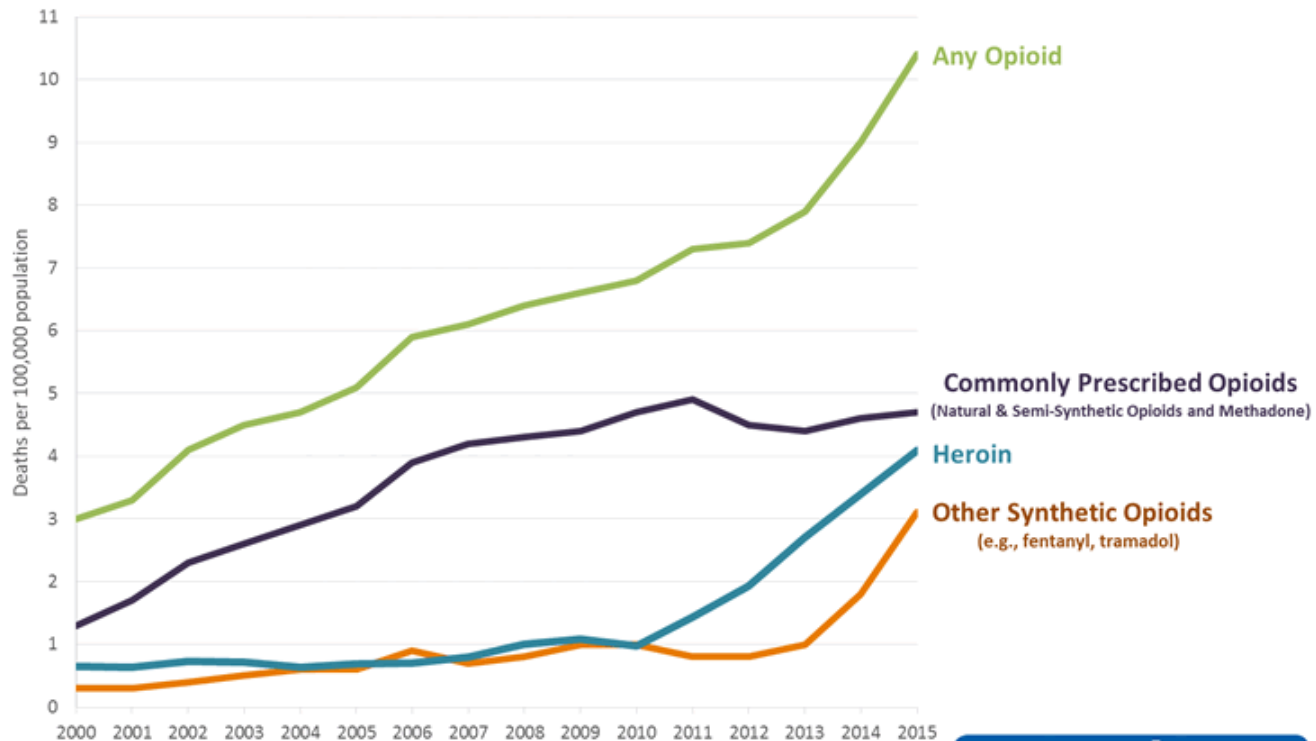


Source: Kent County Medical Examiner Records 2016-2017

*Data are current as of 11/8/2017

Opioid Deaths in US

Overdose Deaths Involving Opioids, United States, 2000-2015

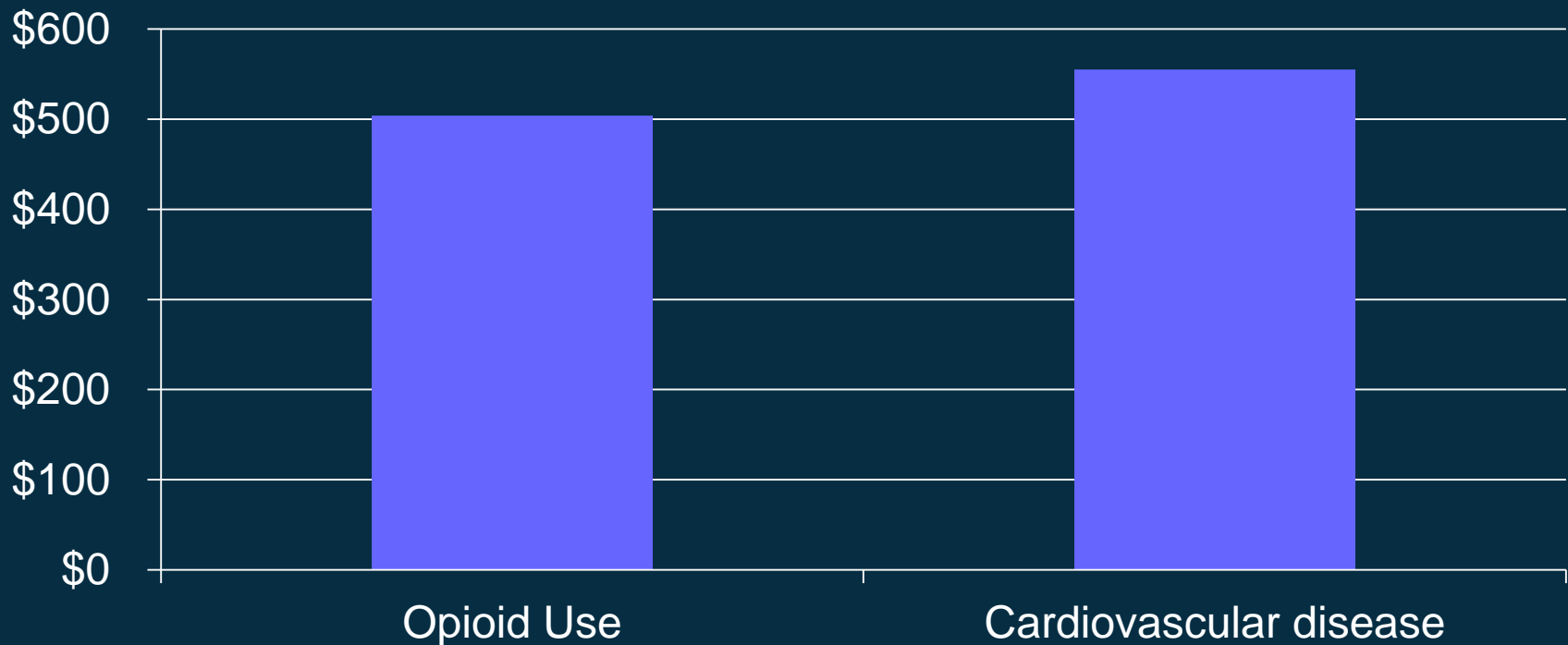


SOURCE: CDC/NCHS, National Vital Statistics System, Mortality. CDC WONDER, Atlanta, GA: US Department of Health and Human Services, CDC; 2016. <https://wonder.cdc.gov/>.

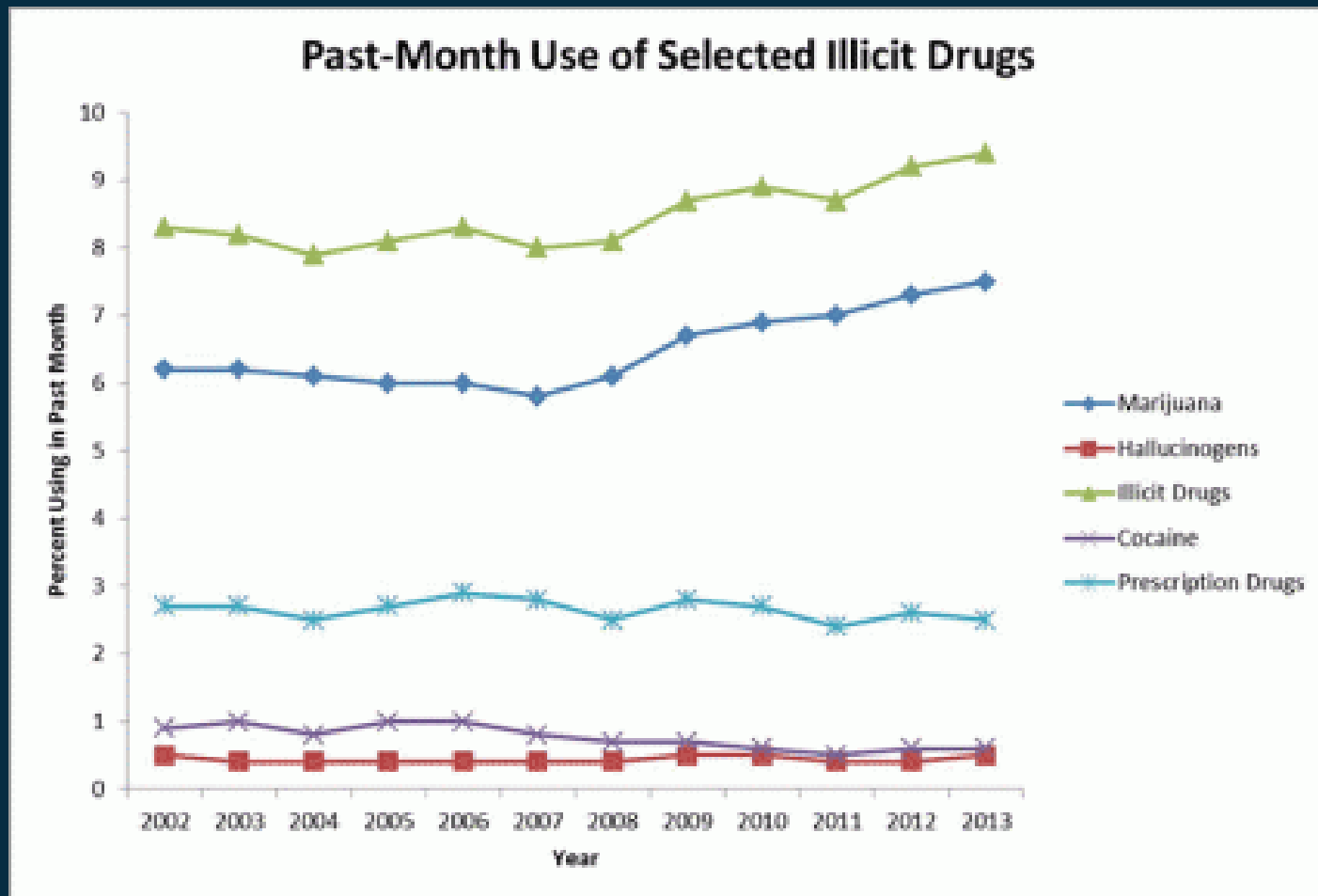
www.cdc.gov
Your Source for Credible Health Information

Cost of the Opioid Epidemic

Chronic Disease Costs (billions)

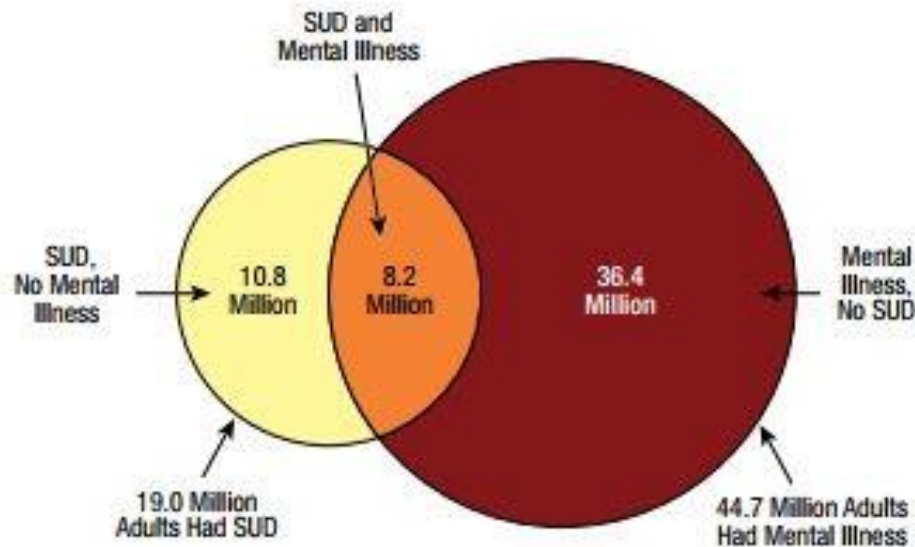


Use of Illicit Drugs

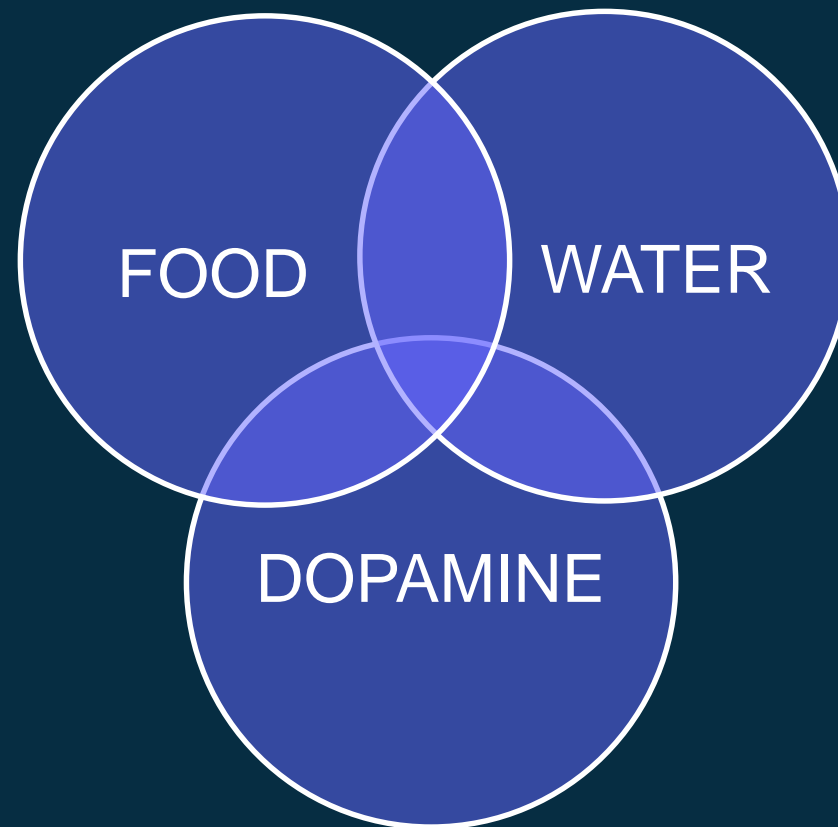


Prevalence of Substance Use Disorders

Figure 68. Past Year Substance Use Disorder (SUD) and Mental Illness among Adults Aged 18 or Older: Numbers in Millions, 2016



Survival

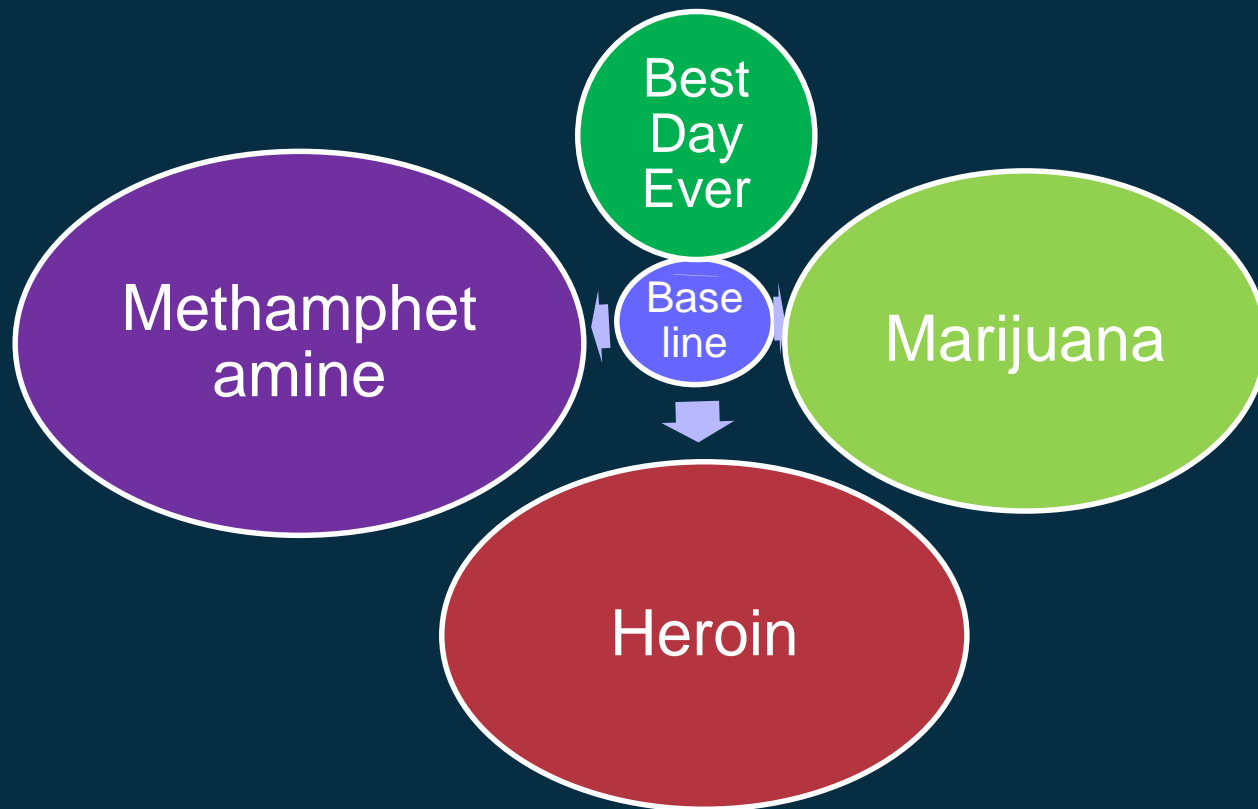


Responses to Dopamine

- Motivation and Drive
- Pleasure
- Food, Water,
- Chocolate



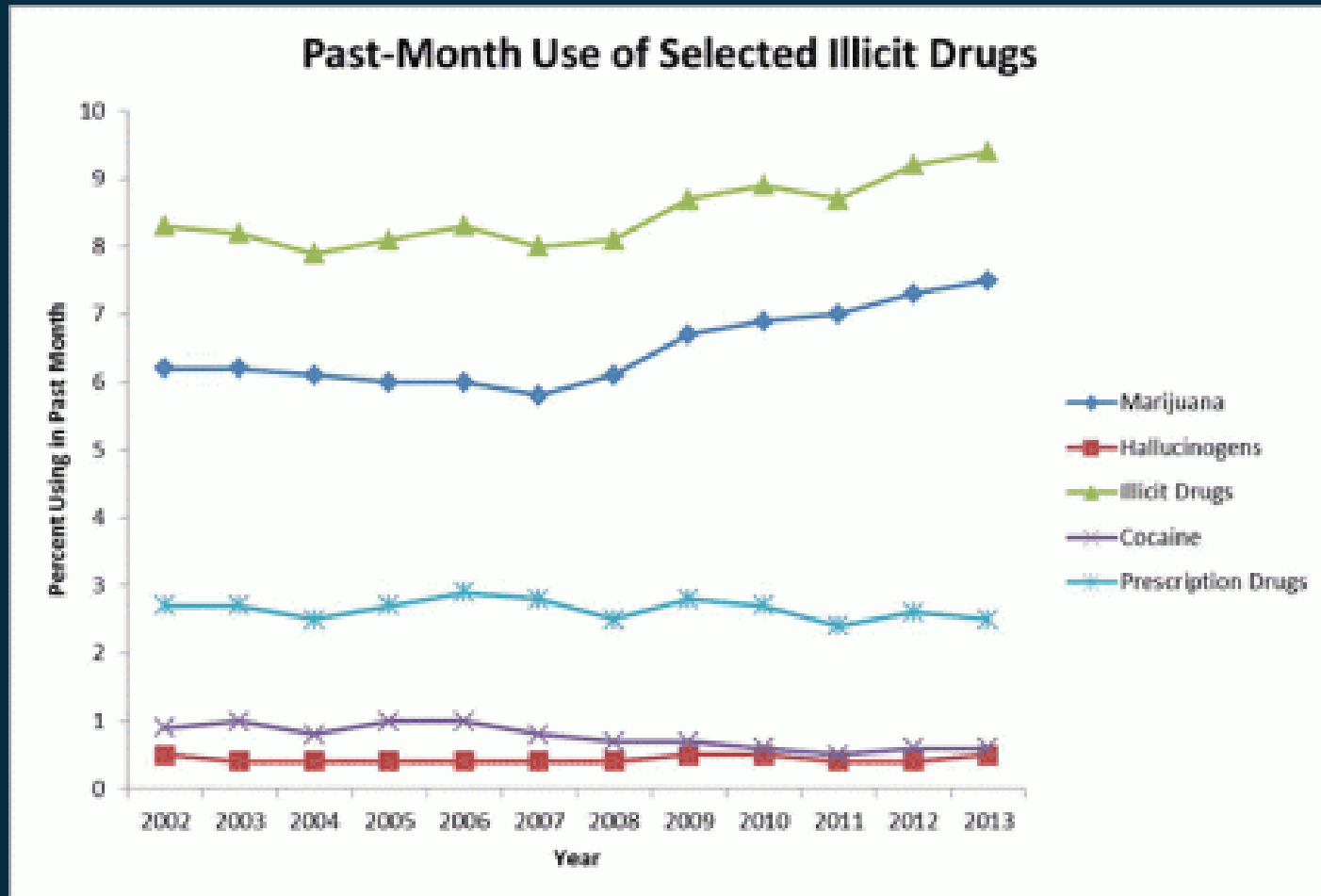




Why is it a problem?

- Binge drinking in the last month
 - Men: 30.2%
 - Women: 16.0%
- Heavy ongoing alcohol use
 - Men: 9.5%
 - Women: 3.3%

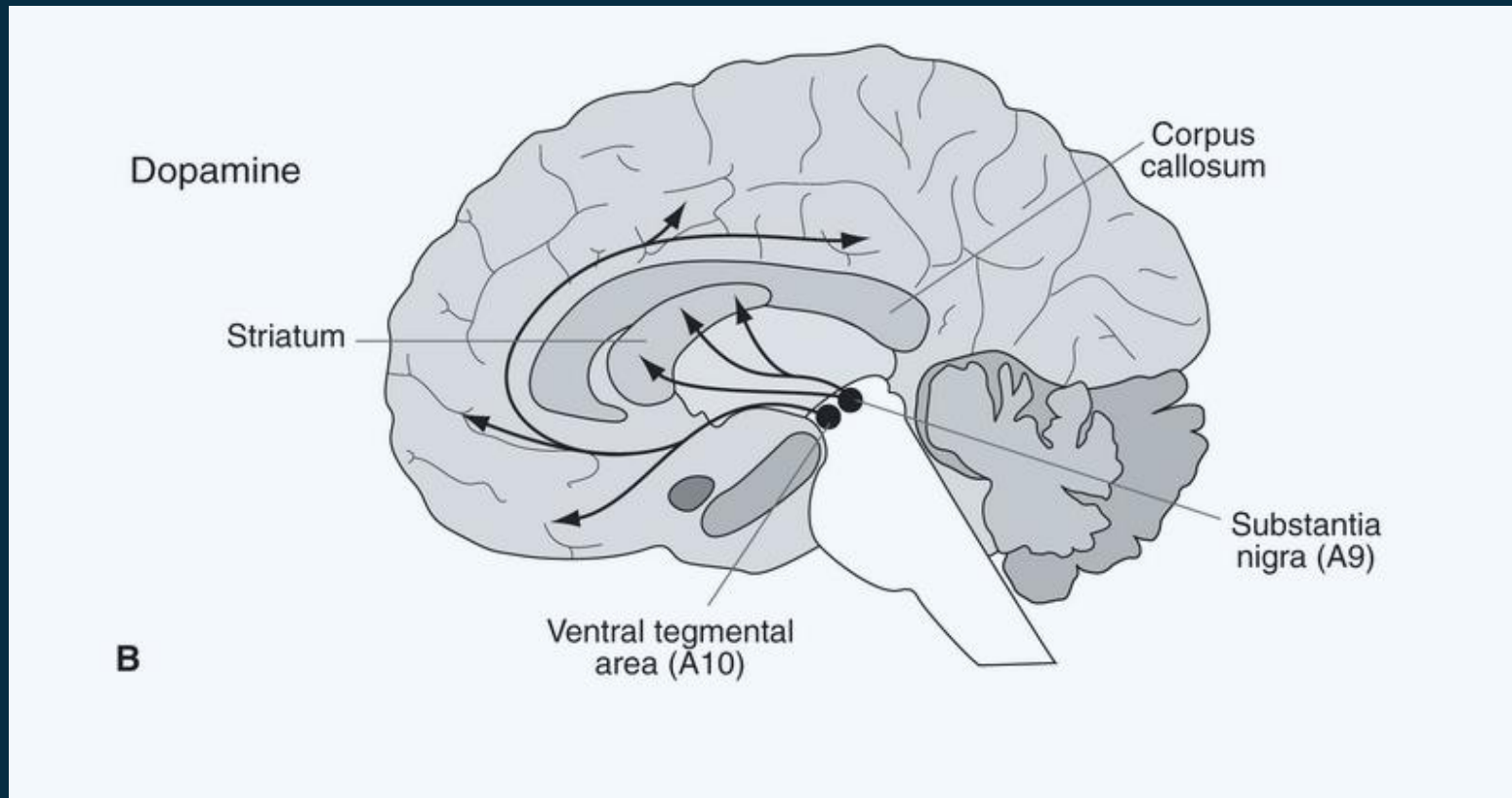
Use of Illicit Drugs



Biopsychosocial model of SUD

- Biologic
- Psychological
- Social

Dopamine Reward Pathway



Pharmacotherapy for SUD

Alcohol

- Naltrexone (PO & IM)
- Topamax
- Acamprosate
- Disulfiram

Opiates

- Suboxone
- Methadone
- Naltrexone

Stimulants

- Citalopram

Marijuana

- N-acetyl cysteine
- Chantix (?)
- Bupropion (?)

Cocaine

- Citalopram (?)

Acamprosate

Mechanism of Action

- Not fully understood.
- Thought to stabilize brain chemistry by binding to GABA receptors and inhibiting NMDA (glutamate) receptors.

Dosing Range

- 666mg three times daily (oral tablet).



Disulfiram

Mechanism of Action

- Alcohol abuse deterrent medication
- Blocks the breakdown of alcohol which triggers unpleasant reaction (e.g. vomiting, upset stomach)

Dosing Range

- 500mg once daily for first two weeks (oral tablet).
- 250mg once daily after first two weeks as



Naltrexone

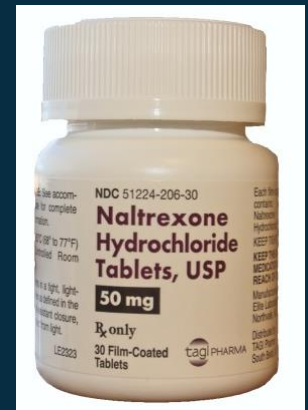
Mechanism of Action

- Not fully understood.
- May prevent excessive dopamine release by blocking the binding of beta-endorphins, to mu-opioid receptors.



Dosing Range

- 50mg daily (oral tablet).
- 380mg monthly (extended release injection).



Methadone

Mechanism of Action

- Full mu agonist.

Dosing Range

- 80-120mg daily.

Monitoring

- Administered by licensed Methadone Treatment Program (MTP).
- Daily dosing at the MTP in the beginning.
- Take home dosing when



Buprenorphine (Suboxone)

Mechanism of Action

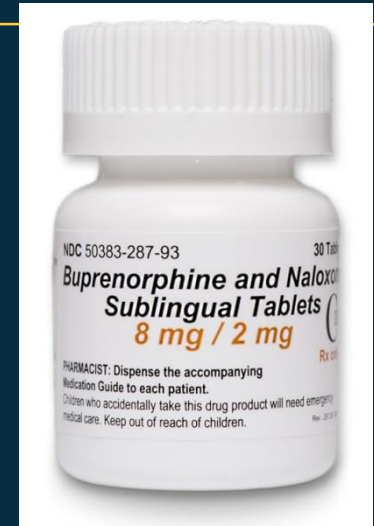
- Partial mu agonist.

Dosing Range

- 2/0.5mg–24/6mg (divided up to 4x daily).

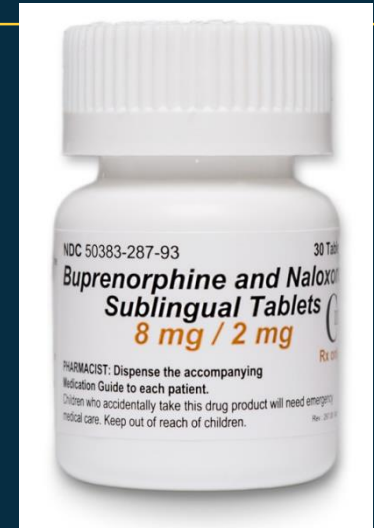
Monitoring

- ~~Physician~~ must have DEA authorized “x-license.”
- ~~Physician~~ limited to number of clients prescribed at a given time.



Buprenorphine (Suboxone)

- CARA 2016: Non-physician prescribers eligible for buprenorphine waiver
- 24 hours of training
- Submit application
- Can treat 30 patients in first year
- Submit waiver application after first year to treat up to 100 patients.



Methadone vs. buprenorphine

- Availability
- Location
- Stigma
- Frequency of visits
- Diversion potential

Addiction is a Chronic Relapsing Disorder

Similar to diabetes, asthma, hypertension

Key factors for all four:

- Adherence to treatment recommendations
- Family and social support
- Poverty factors

Stigma influential in determining attitudes towards addiction (e.g, re-occurrence vs relapse)

(McLellan et al, JAMA, 2000)

Relapse

- Low rates (50%) of continuous abstinence at 3 months following treatment
- Common context: social situation, peer influence, negative intra- or interpersonal states
- Access to treatment is a key

Motivational Enhancement

- Motivation is amenable to clinical intervention (vs “come back when you are ready”)
- Assess stage of motivation and select intervention accordingly
- Remember that motivation is a variable state, not a fixed trait
- Combination of internal motivation and external pressure is helpful

Questions?

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