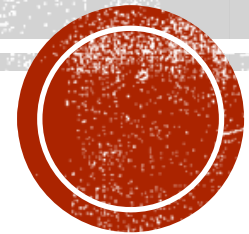


FENTANYL

David Mendez MD

Family and Addiction Medicine

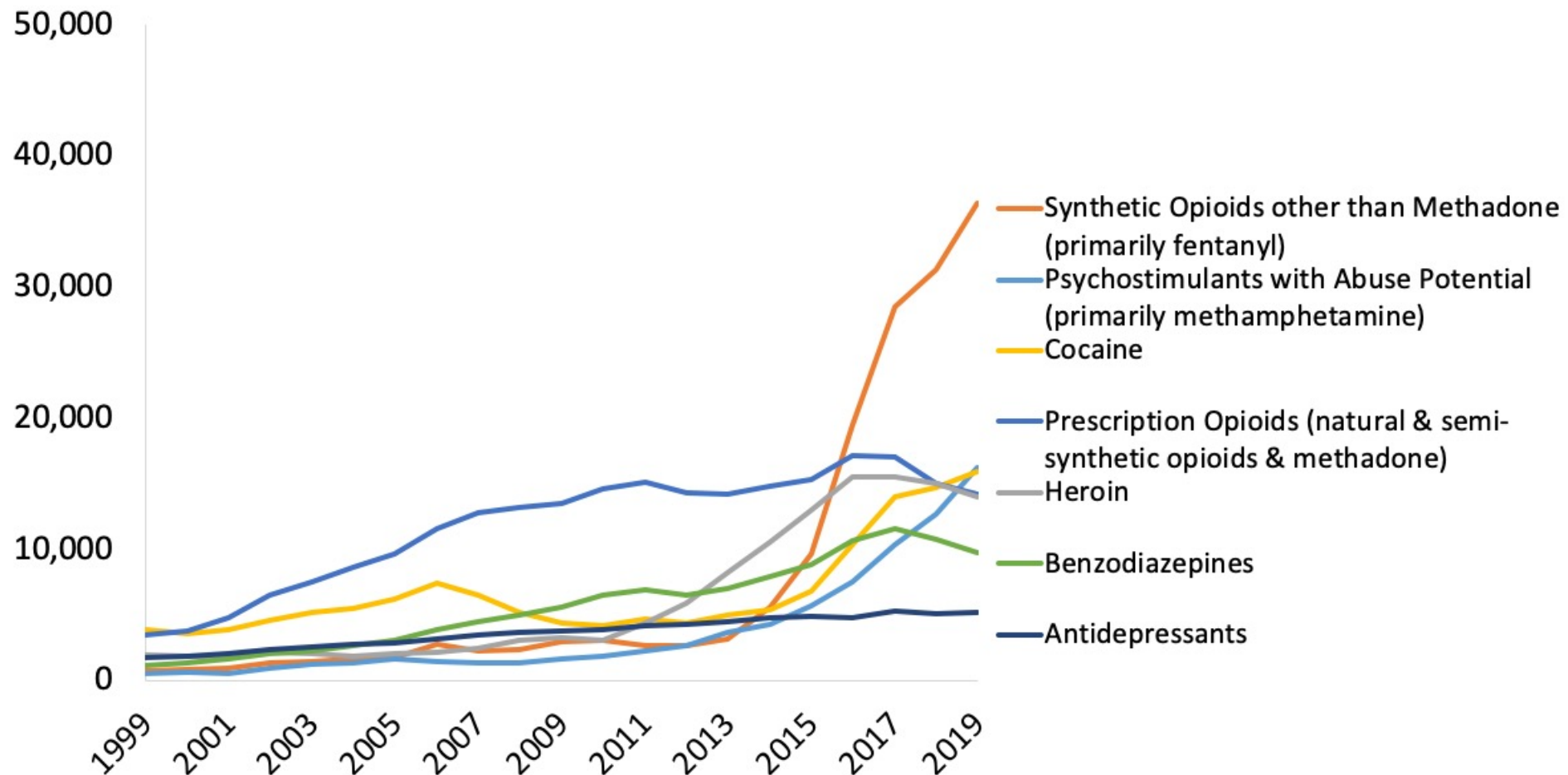


CDC UPDATES

- Overdose deaths increased over 4% from 2018-2019
 - Opioids involved in 70% of overdose deaths
 - 72.9% of these involved synthetic opioids
 - Death rates involving synthetic opioids increased by 15%
 - Deaths declined for heroin and prescription opioids



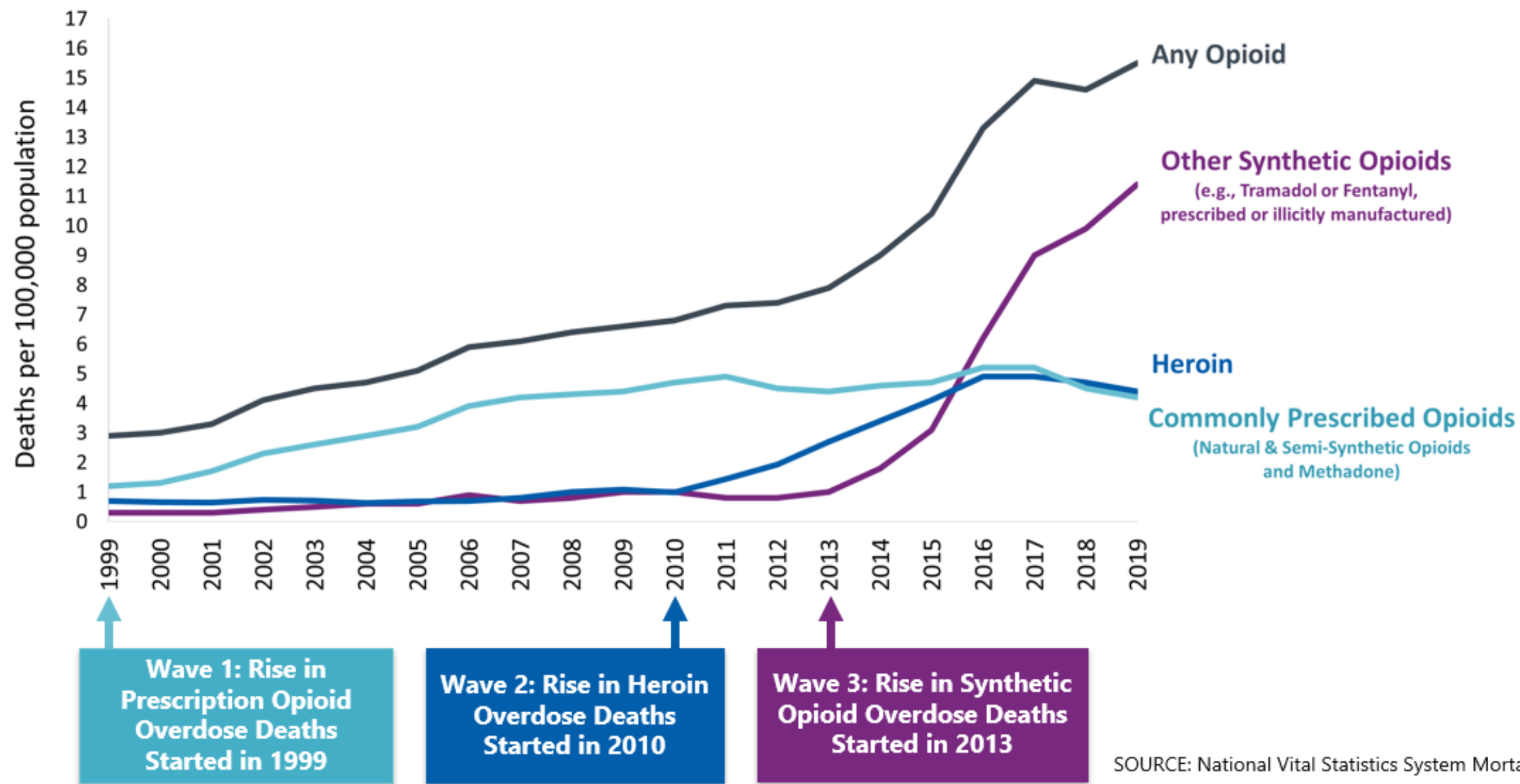
**Figure 2. National Drug-Involved Overdose Deaths*,
Number Among All Ages, 1999-2019**



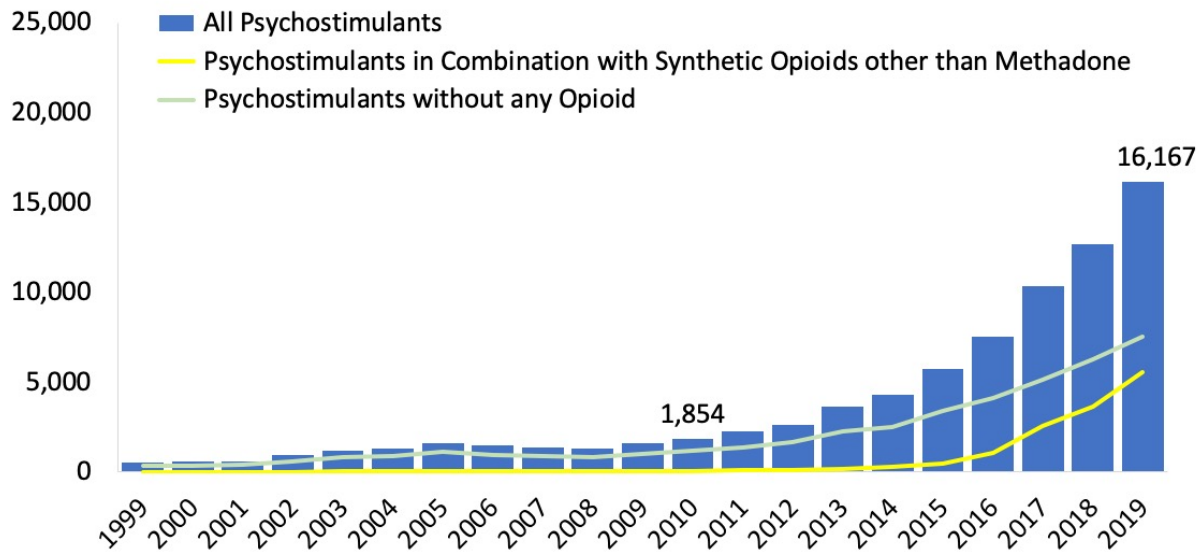
*Includes deaths with underlying causes of unintentional drug poisoning (X40–X44), suicide drug poisoning (X60–X64), homicide drug poisoning (X85), or drug poisoning of undetermined intent (Y10–Y14), as coded in the International Classification of Diseases, 10th Revision. Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2019 on CDC WONDER Online Database, released 12/2020.



Three Waves of the Rise in Opioid Overdose Deaths

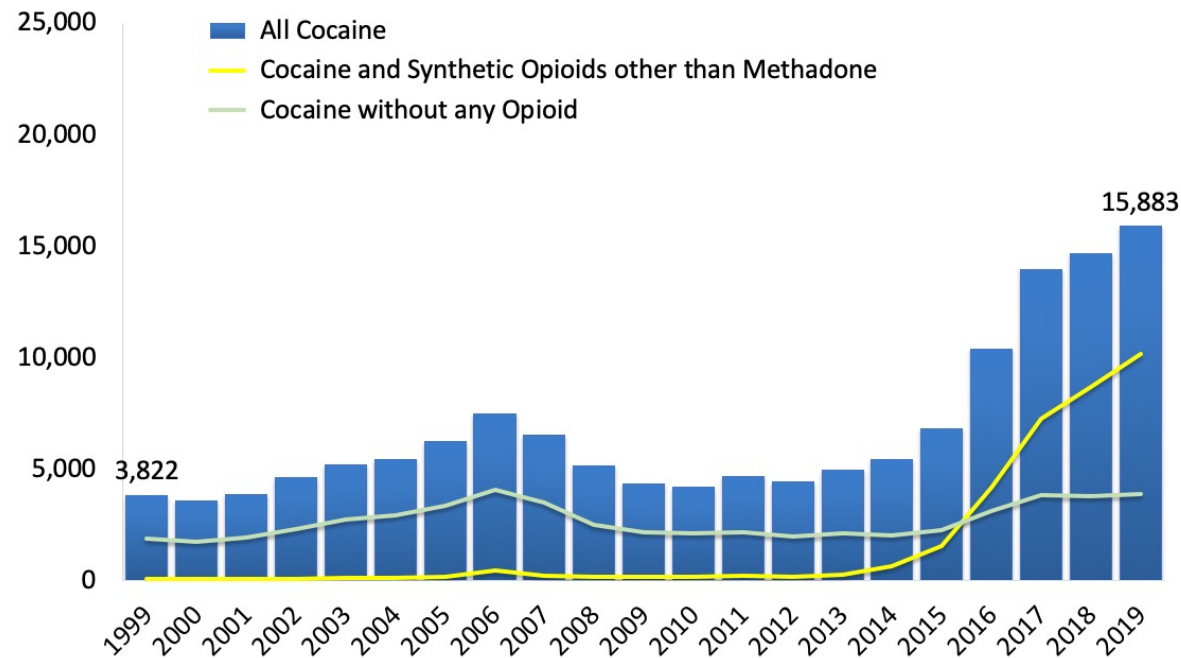


**Figure 6. National Drug Overdose Deaths Involving Psychostimulants with Abuse Potential (Primarily Methamphetamine)*, by Opioid Involvement
Number Among All Ages, 1999-2019**



*Among deaths with drug overdose as the underlying cause, the psychostimulants with abuse potential (primarily methamphetamine) category was determined by the T43.6 ICD-10 multiple cause-of-death code. Abbreviated to *psychostimulants* in the bar chart above. Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2019 on CDC WONDER Online Database, released 12/2020.

Figure 7. National Drug Overdose Deaths Involving Cocaine*, by Opioid Involvement, Number Among All Ages, 1999-2019



*Among deaths with drug overdose as the underlying cause, the cocaine category was determined by the T40.5 ICD-10 multiple cause-of-death code. Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2019 on CDC WONDER Online Database, released 12/2020.

ILLICITLY MANUFACTURED FENTANYL

- “the blues”
- Sold as “oxycodone 30mg”
- 30-40 times more potent than heroin
- Various analogs, all vary in potency
- Highly lipophilic
- Buprenorphine inductions can be tricky, and sometimes not enough



ADDITIONAL ADVERSE EVENTS WITH FENTANYL

- Wooden chest syndrome
- Need for higher doses of naloxone?
- Quicker respiratory depression -> cardiac arrest
 - 5-20 minutes: fentanyl
 - 30-90 minutes: heroin



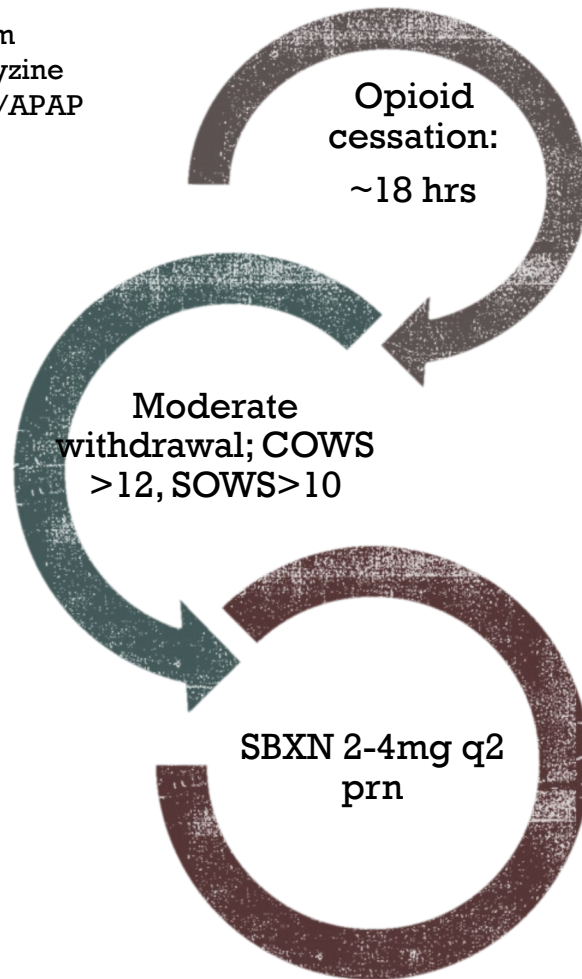
TREATMENT OPTIONS

- Standard
- Micro induction
- High dose induction
- Methadone



Supportive medications:

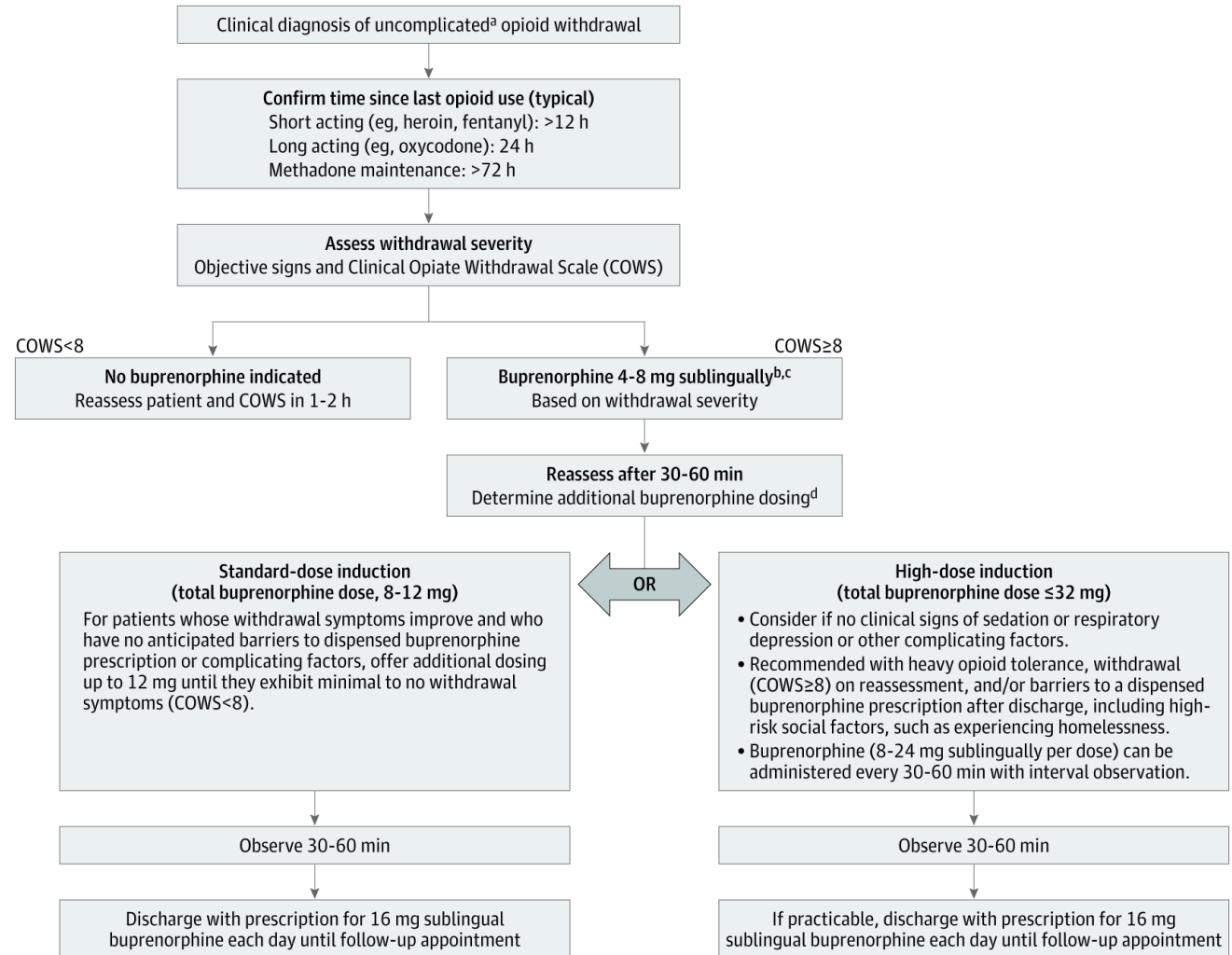
- clonidine
- Zofran
- Imodium
- hydroxyzine
- NSAIDs/APAP



STANDARD



HIGH DOSE



MICRO-DOSE

- Various methods
- Start at low dose of buprenorphine and slowly increase
- Patients will likely use concurrently with induction
- Example:
 - Day 1: 0.5mg q6 (TDD 1mg); continue full agonist opioid
 - Day 2: 1mg q6 (TDD 4mg); continue full agonist
 - Day 3: 2mg q6 (TDD 8mg); consider reducing full agonist
 - Day 4: 12mg in AM, titrate up as needed

Day	Buprenorphine dosage	Methadone dose
1	0.5 mg ^a SL once/day	Full dose
2	0.5 mg ^a SL twice/day	Full dose
3	1 mg SL twice/day	Full dose
4	2 mg SL twice/day	Full dose
5	4 mg SL twice/day	Full dose
6	8 mg SL once/day	Full dose
7	8 mg SL in A.M. and 4 mg SL in P.M.	Full dose
8	12 mg SL/day	Stop

SL = sublingually.

^aFor our buprenorphine formulation, one-quarter of a 2-mg sublingual strip was used.



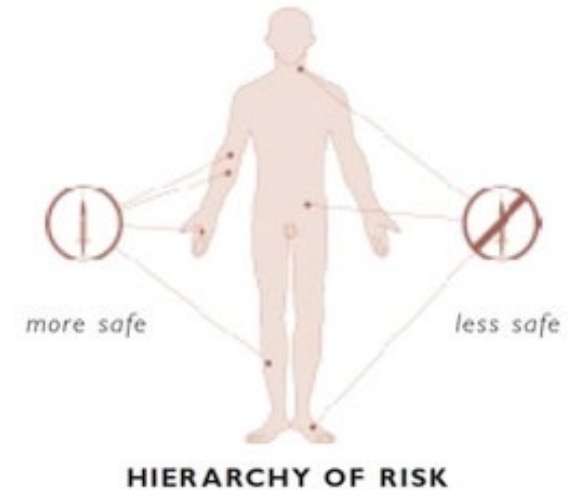
METHADONE

- Consider transition to OTP, if possible, for continued cravings/use
- Long half life
- Daily dosing, though relaxed rules given COVID



HARM REDUCTION

- Discuss test dosing with patients
- Try not using alone
- Person with highest tolerance uses first
- Standard ID labs: HIV, Hep C, Hep B, Treponema ab, GC/CT
- Immunizations
- Know syringe exchange sites near you
- Avoiding sharing needles, pipes, cookers, cotton swabs, water, straws
- Narcan prescription
- Taste the substance: fentanyl sweeter, heroin bitter



REFERENCES

- Ahmet et al. Microinduction of buprenorphine/naloxone: A review of the literature. American Journal of Addiction. 2021. 30(4): 305-315.
- Ciccarone, Daniel. The rise of illicit fentanyl, stimulants and the fourth wave of the opioid overdose crisis. Psychiatry. 2021. 34(4): 344-350.
- Herring et al. High dose buprenorphine induction in the emergency department for treatment of opioid use disorder. JAMA Netw Open. 2021;4(7):e2117128. doi:10.1001/jamanetworkopen.2021.17128
- <https://www.cdc.gov/opioids/basics/epidemic.html>
- <https://www.drugabuse.gov/drug-topics/trends-statistics/overdose-death-rates>

