

Not an Epidemic? Controversies in Substance Abuse

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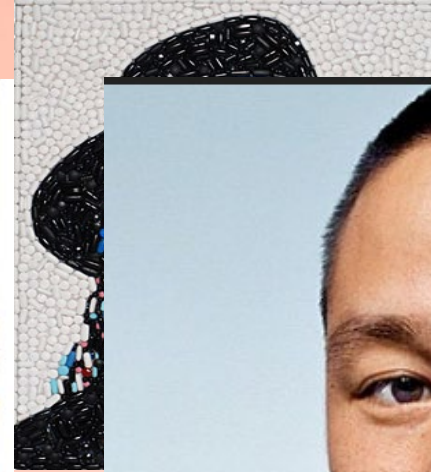
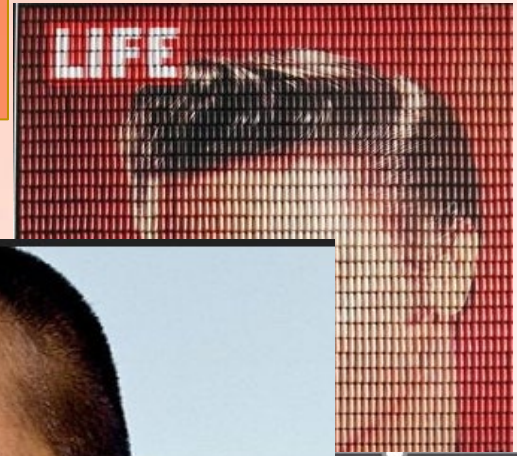
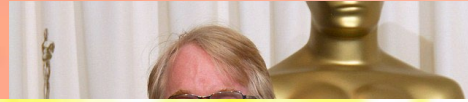
Professor, University of Colorado School of Medicine

Competing Interests

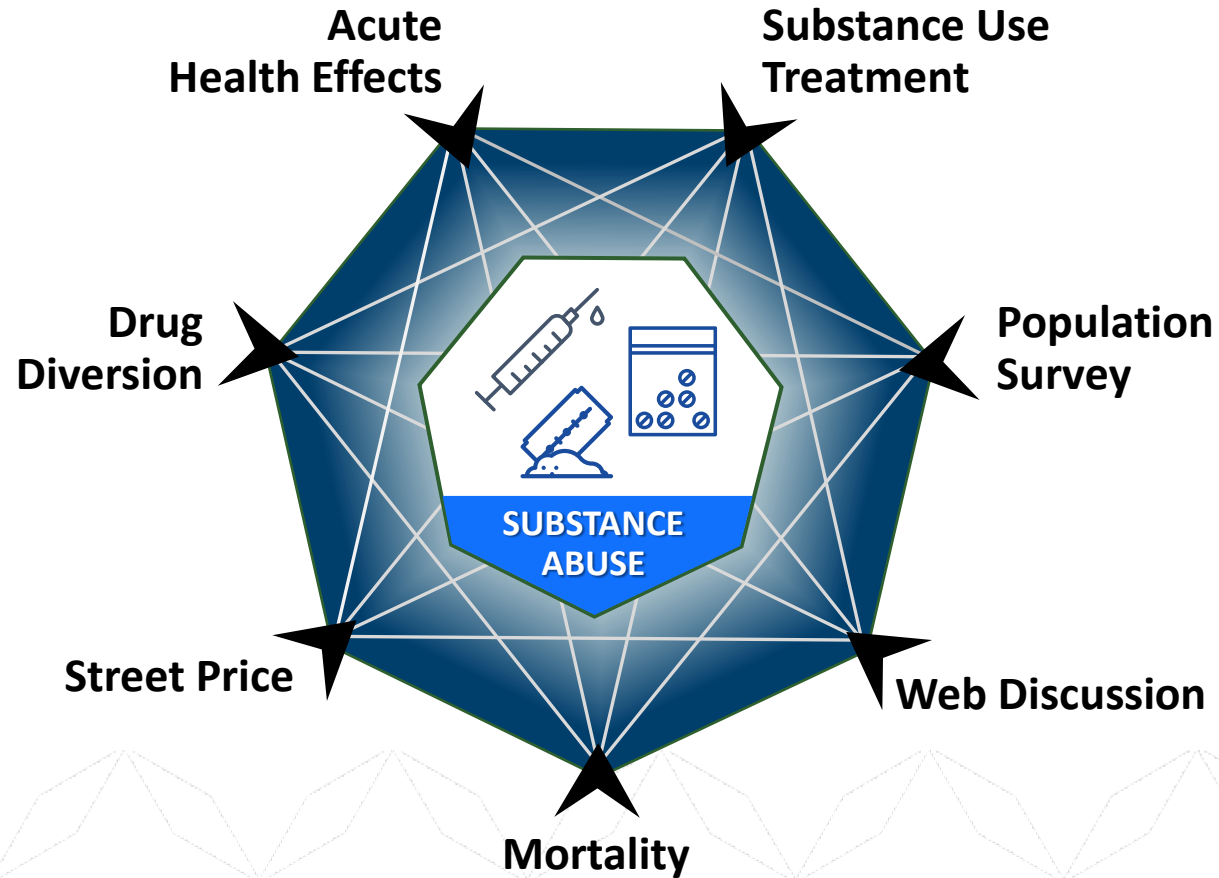
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RADARS® System is supported by subscriptions from pharmaceutical manufacturers, government and nongovernment agencies for surveillance, research, and reporting services. No subscriber participated in the conception, analysis, drafting, or review of this presentation.

The Epidemic of Drug Deaths



Real World Evidence and Triangulation



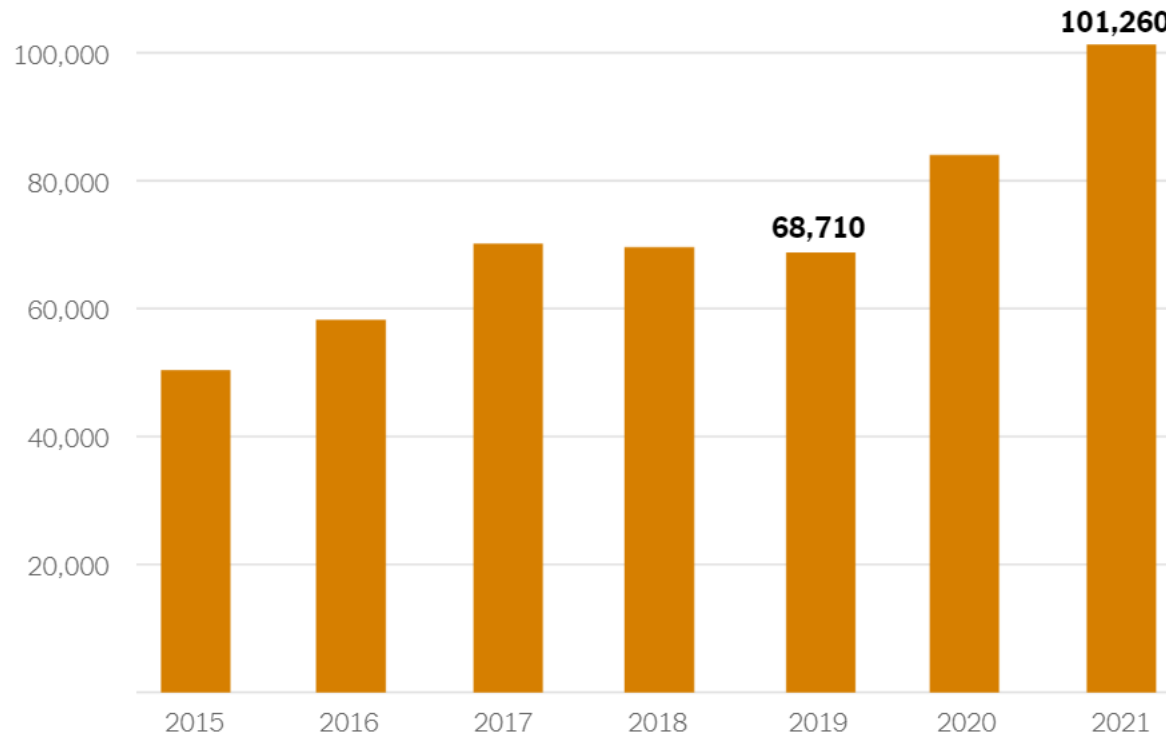
Lawlor DA, et al. Int J Epidemiology, 2016, 1866–1886 doi: 10.1093/ije/dyw314

What Is The Problem?

Drug-Related Deaths Are Increasing

Drug overdose deaths in the U.S.

Annual deaths ending in June of each year below



\$1.6 TRILLION
in 2020

Note: Chart shows provisional figures. • Source: Centers for Disease Control and

Problem: Demand for Drugs of Abuse

How Did We Get Here? The Federal Narrative

- **1990s**
 - Pharmaceutical companies and pain experts reassured the medical community that patients would not become addicted to opioid pain relievers
 - Health care providers began to prescribe them at greater rates.
 - Increased prescription of opioid medications led to widespread misuse of both prescription and non-prescription opioids before it came clear that these medications could indeed be highly addictive.
- **2017**
 - HHS declared a public health emergency and announced a five point strategy to combat the opioid crisis emphasizing Rx opioids

OxyContin Started It All?

- Dopesick
- "It aims to explore the scandal from the Sacklers down, opening with the development of the drug in the 1980s, to show how greedy bosses and avaricious sales reps were able to hijack the good intentions of doctors all over the country," Wikipedia
- What do the data say?

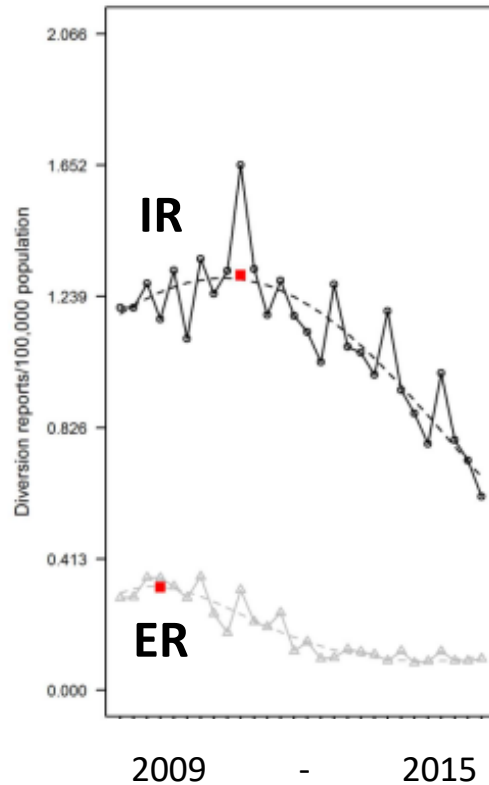
PAIN KILLER

**The True Story
of a
Prescription
Drug Disaster**

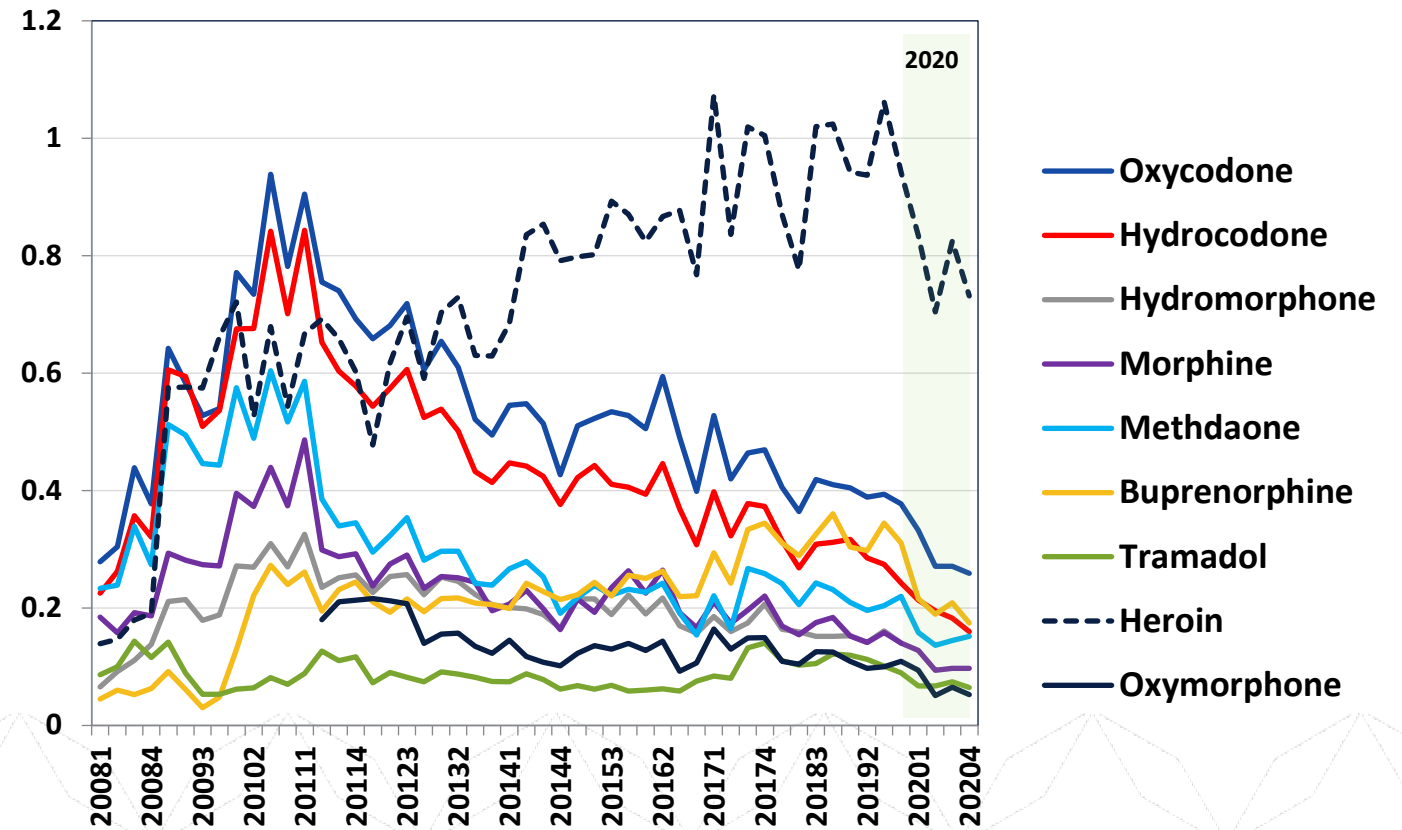
**Barry Meier
2003**

ER Products Like OC Are Small Fraction of Rx Illicit Drug Supply

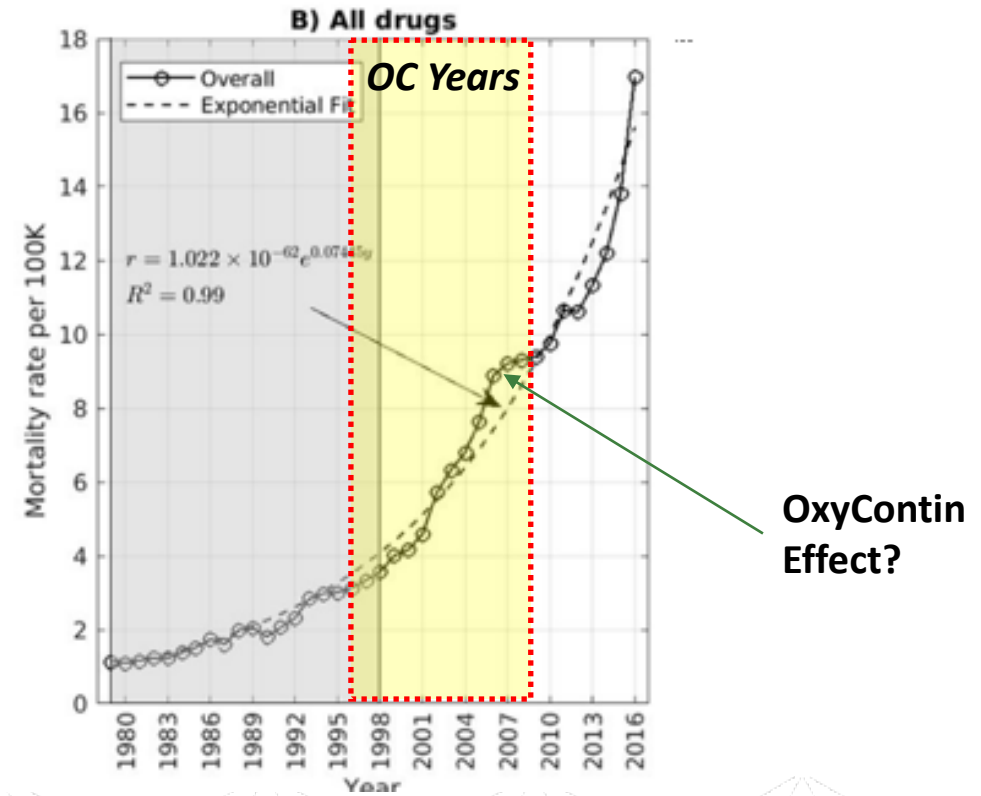
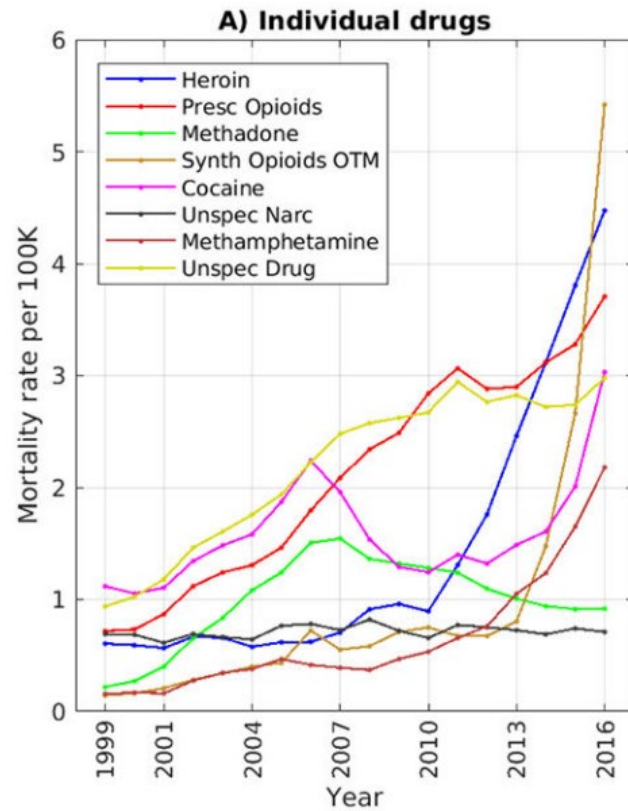
RADARS® System Drug Diversion



RADARS® System Drug Diversion



The Role of OxyContin in Opioid Crisis

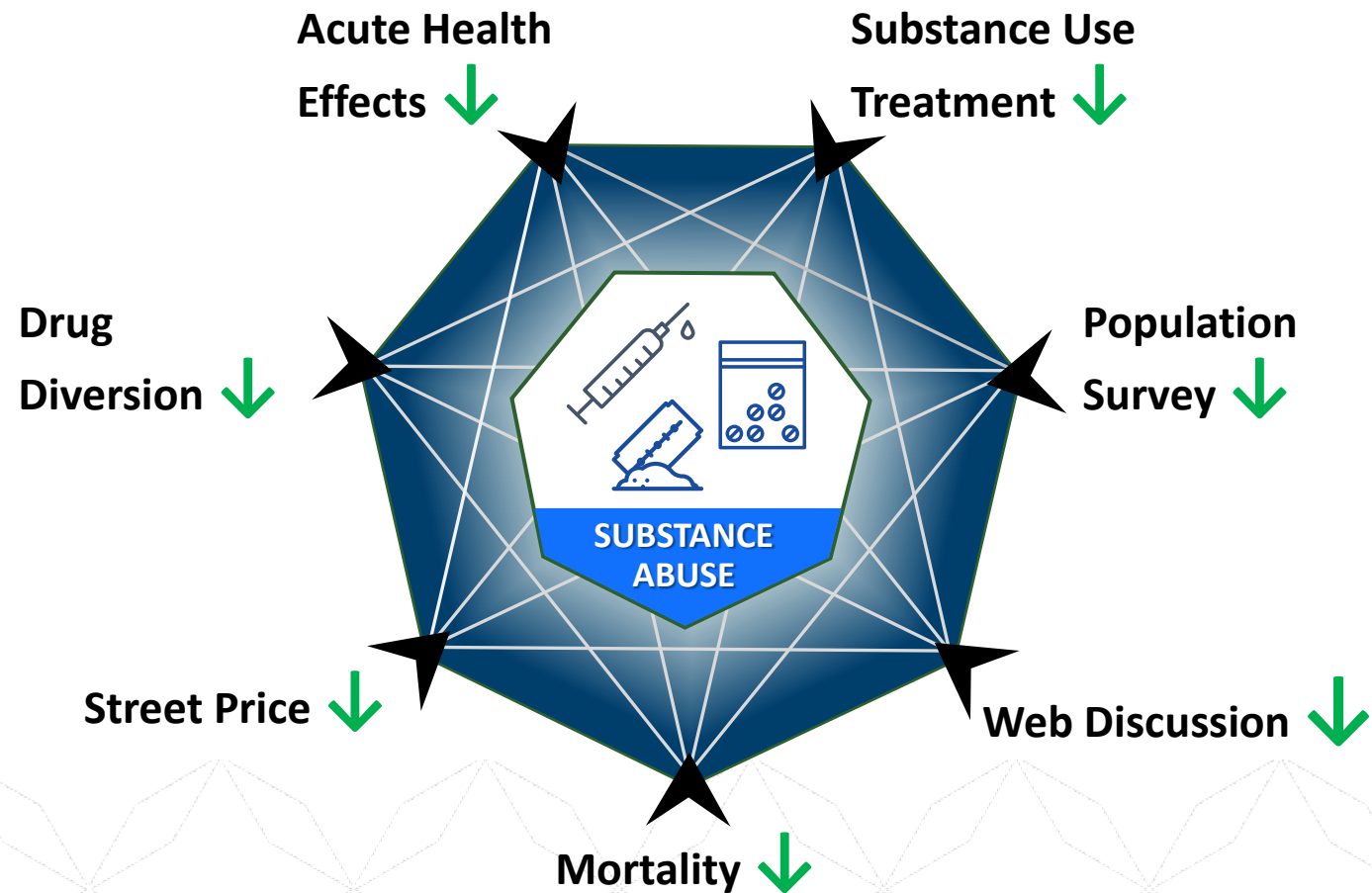


What Actually Happened?

- Health care systems and regulation
 - Fifth vital sign, patient “satisfaction,” etc.
- Careless doctors
 - We knew better, but convenience won us over. WILLING TEXT
 - Malicious behavior – pill mills
- Opioid **marketing**
 - Aggressive, irresponsible
- Insufficient treatment options for Opioid Use Disorder (OUD)
- “Patient demand”

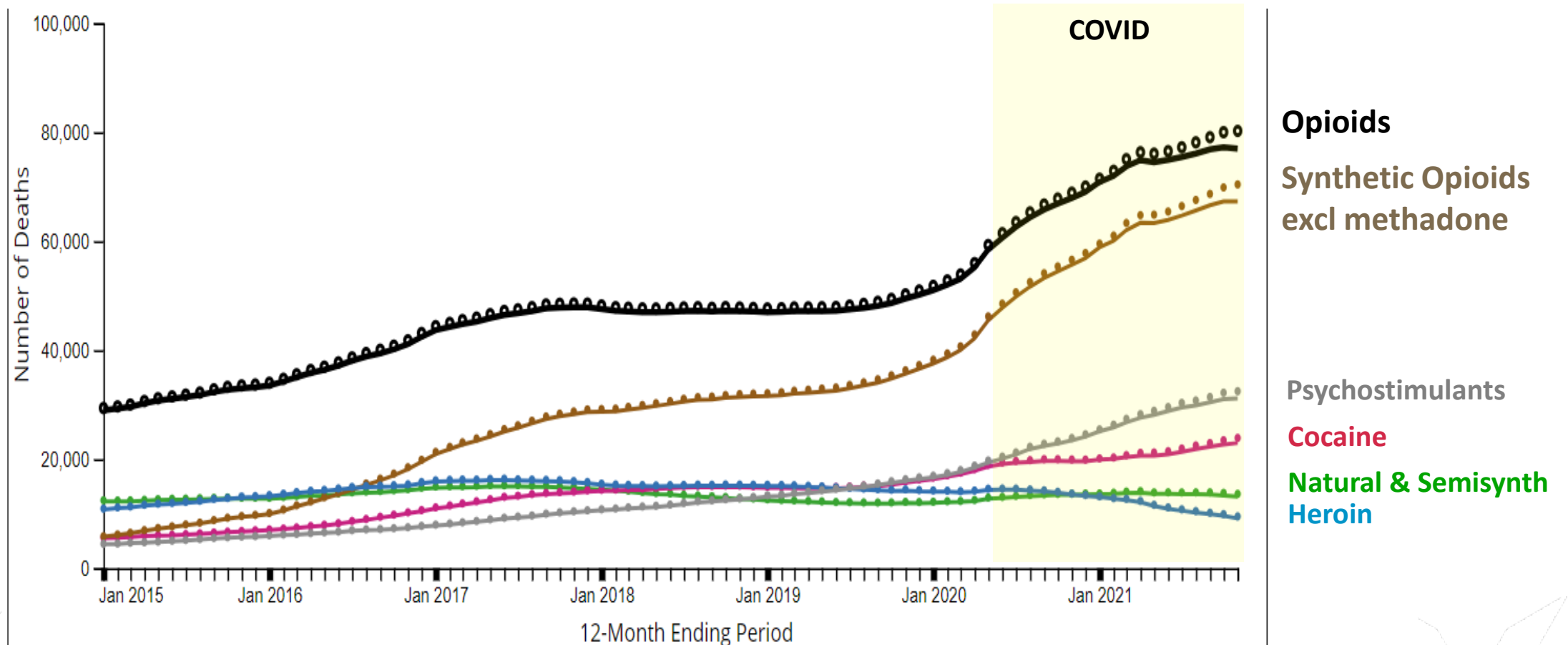
All Measures of Prescription Opioid Use Are Decreasing

All Prescription Opioids, Individually or Combined

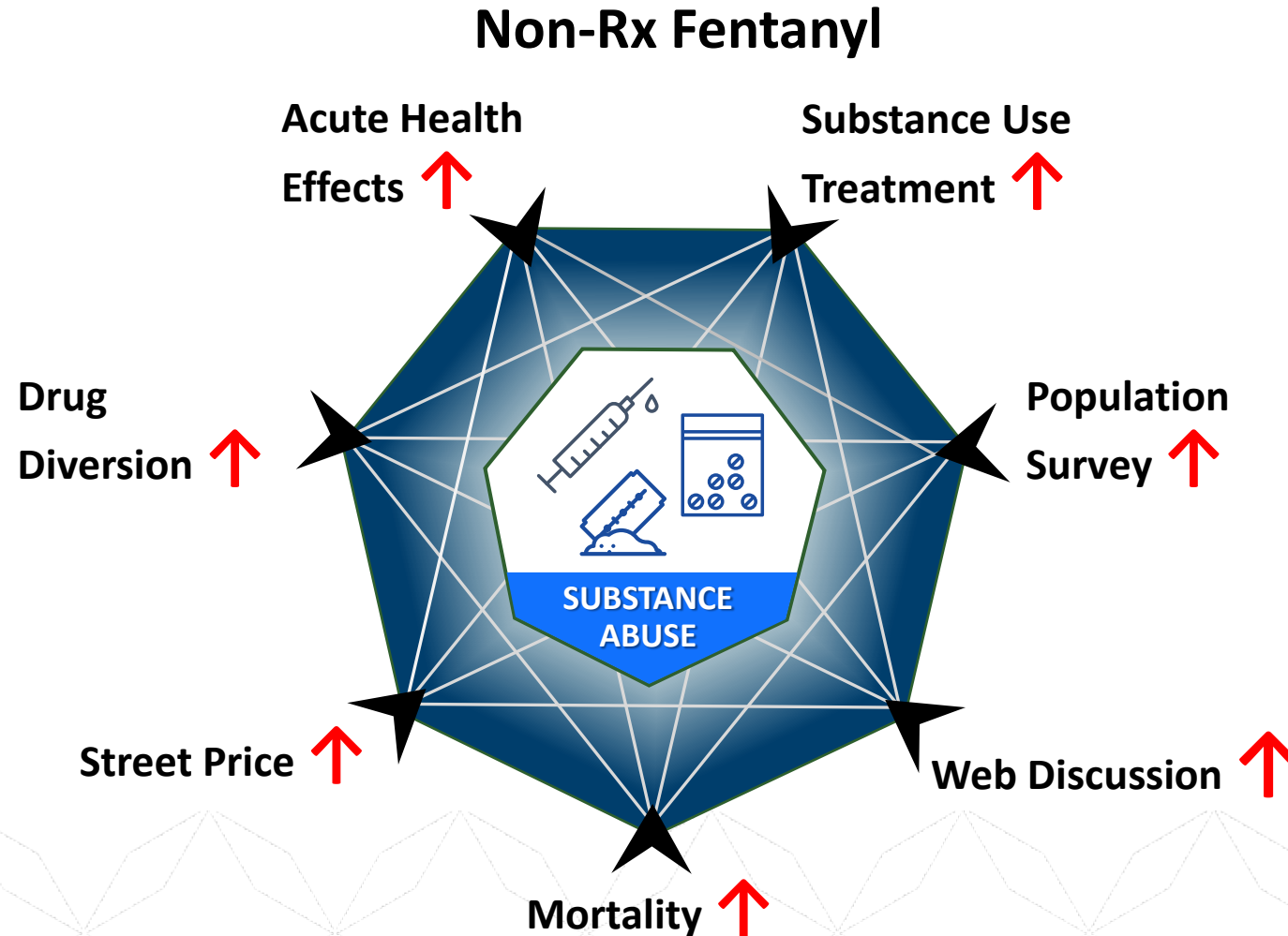


**HOW CAN WE HAVE
DECREASING PRESCRIPTION
OPIOID ABUSE,
BUT INCREASING DEATHS?**

Drug Overdose Deaths are Dominated by Synthetic Opioids



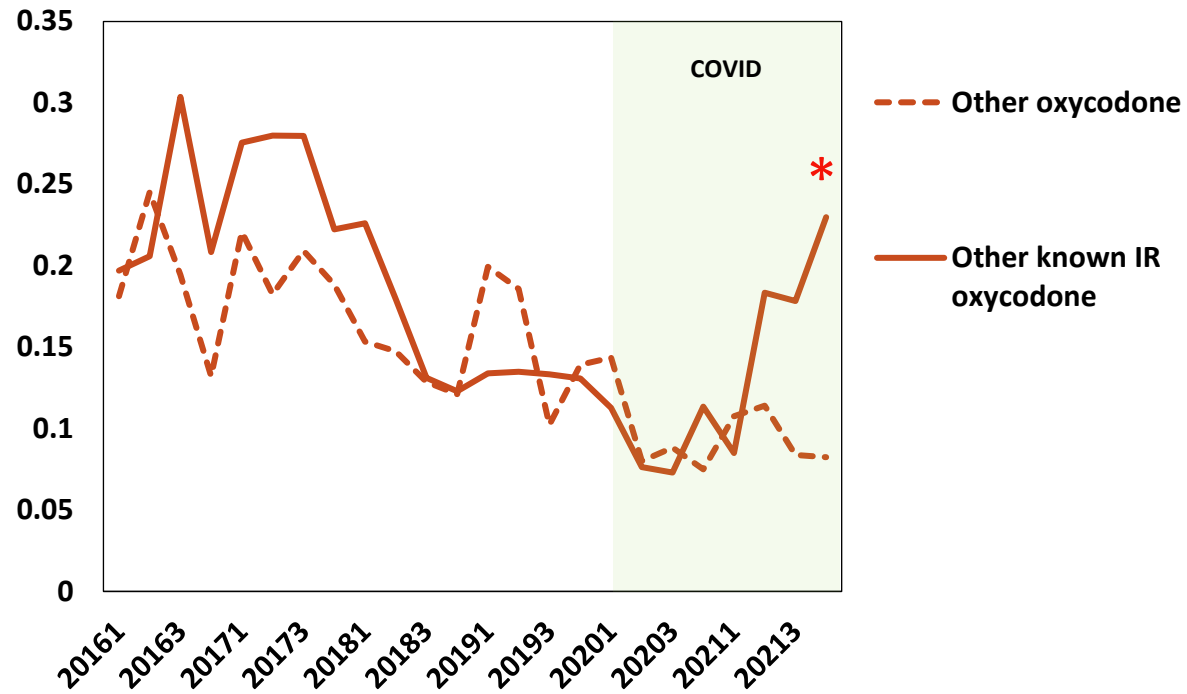
All Measures of Illicit Fentanyl Use Are Increasing



Lawlor DA, et al. Int J Epidemiology, 2016, 1866–1886 doi: 10.1093/ije/dyw314

The Role of “Counterfeit” Drugs Drug Diversion Program – Increase in “Oxycodone” Cases

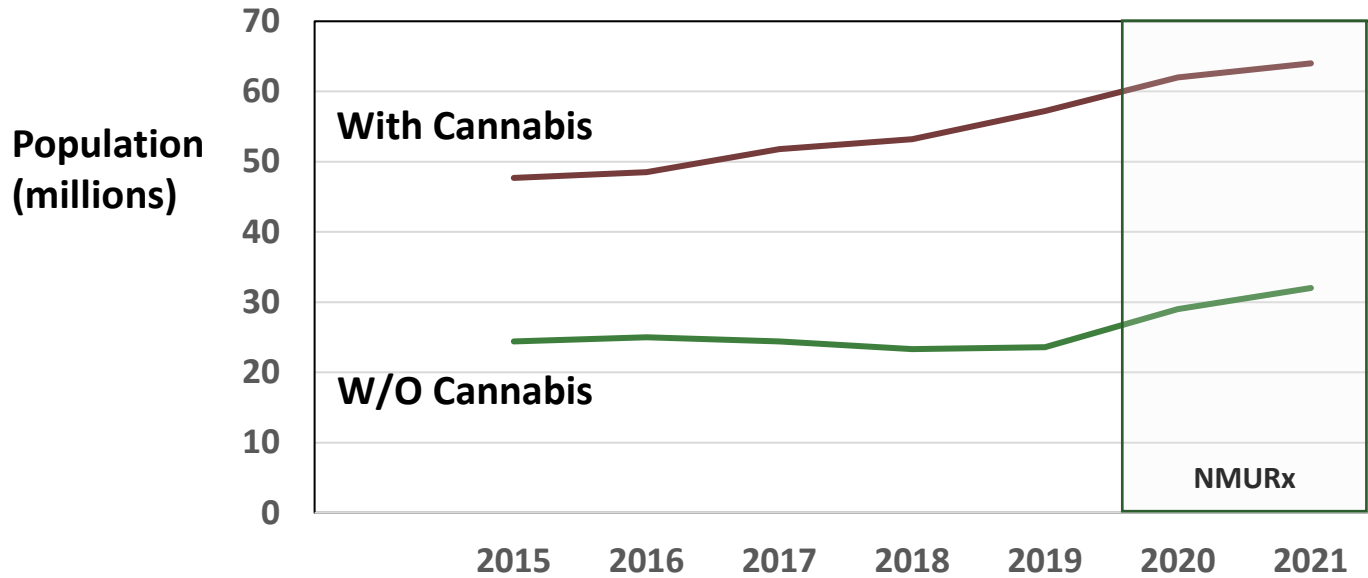
Invest.
Opened
Per
100,000
population



Drug Enforcement Agency

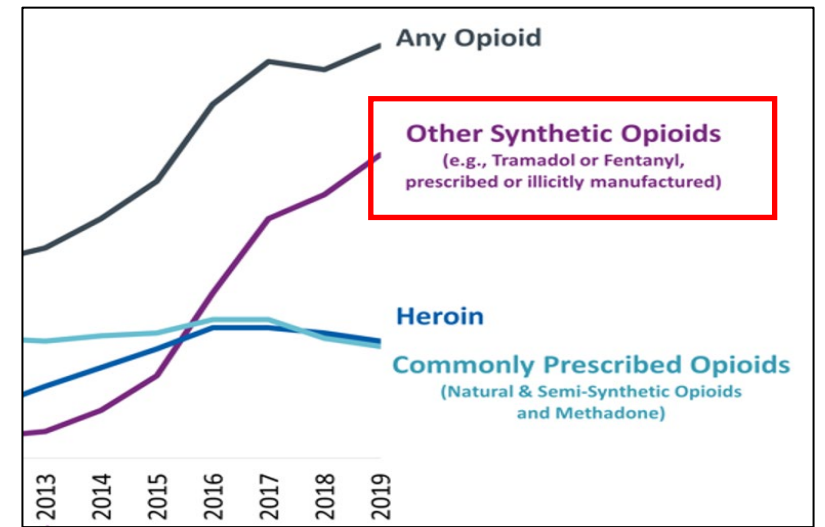
Nonmedical Use is Increasing Slowly, but Mortality is Increasing Rapidly

Total Nonmedical Use of Psychotropics



National Survey of Drug Use and Health

Opioid-Related Mortality



NVSS, CDC

Demand and Supply

Just It's Not the Drug



- *As a recovering substance abuser, I know that no pharmaceutical giant ever pushed a pill down my throat. I did it myself. Now I'm beginning to discover why.*
– Jeffrey Gratton, Long Island, NY Aug 19, 2001 (NYT)

*Drugs are not my problem.
Reality is my problem.
Drugs are my solution.*

Russell Brand

RECOVERY

**FREEDOM FROM
OUR ADDICTIONS**

**RUSSELL
BRAND**

Drug Exposure

Nicotine - Alcohol – Cannabis – Etc.

Risk Factors
Family Dysfunction
Emotional Abuse
Isolation

Risk Factors
Physical Abuse
Trauma
Genetics

Move to POLYSUBSTANCE ABUSE

Polysubstance Abuse

Opioid

- Heroin/Fentanyl
- Designer opioids
- Rx analgesics
- Loperamide

Sedative/Hypnotics

- Alprazolam
- Diazepam
- Designer drugs
- Z-Drugs

Antipsychotic

- Quetiapine
- Olanzapine

GABAergic

- Pregabalin
- Gabapentin

Stimulant

- Cocaine
- Amphetamine
- Methylphenidate
- Designer drugs

Hallucinogen

- Ketamine
- LSD
- Psilocybin

NPS/Synthetic

- Mephedrone
- Cathinones
- Synth Cann'oids

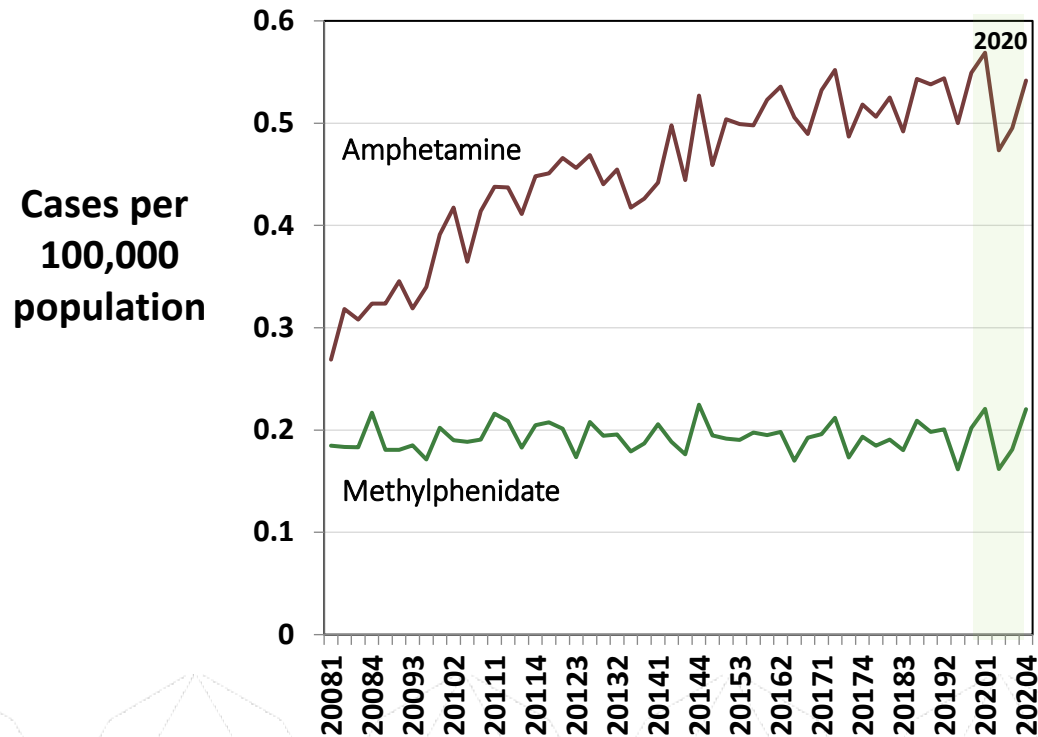
Supply and Demand

- Supply generally increases to meet demand
 - Why is demand for drugs so high in the United States?
 - And what will that supply look like?
- Demand Reduction
 - Buprenorphine
 - Methadone
 - Primary reduction?

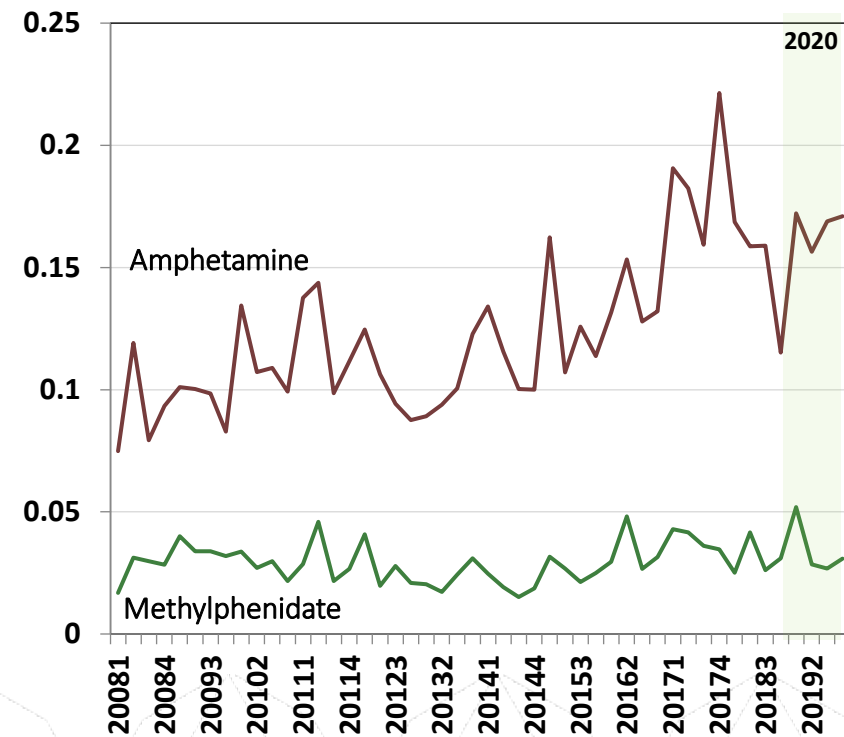
What Does the Future Hold?

RADARS System, Rx Stimulant Rates, 2008 - 2020

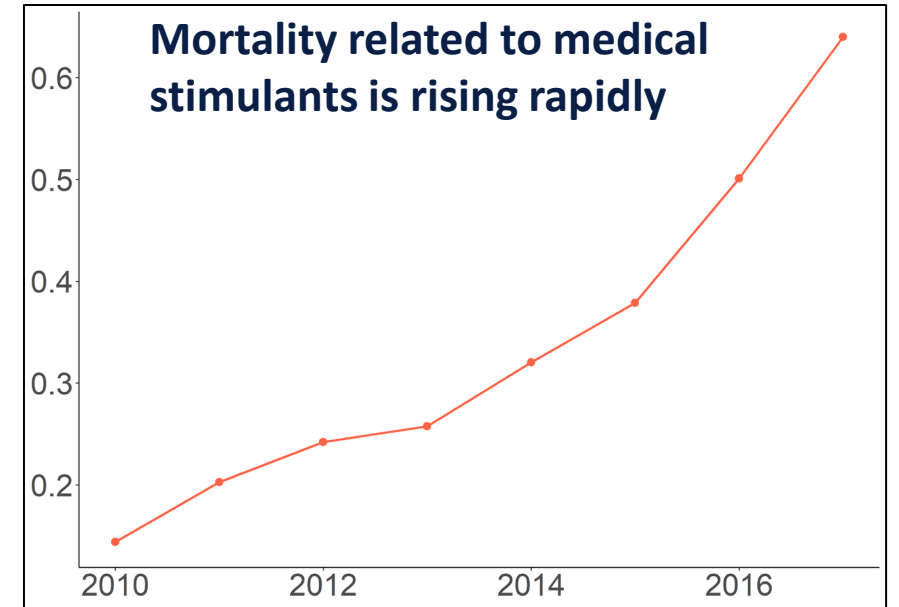
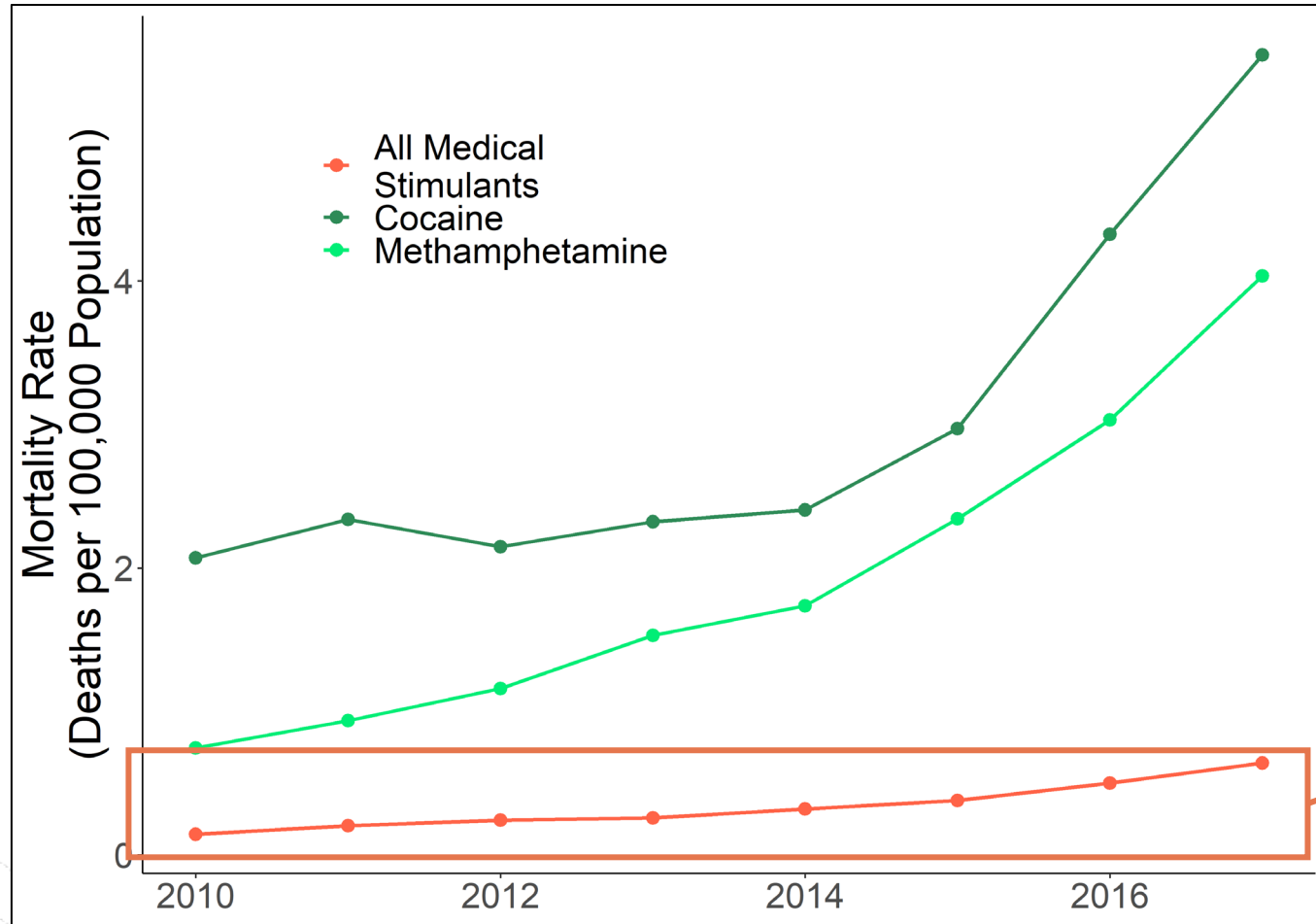
Poison Center Program



Drug Diversion Program



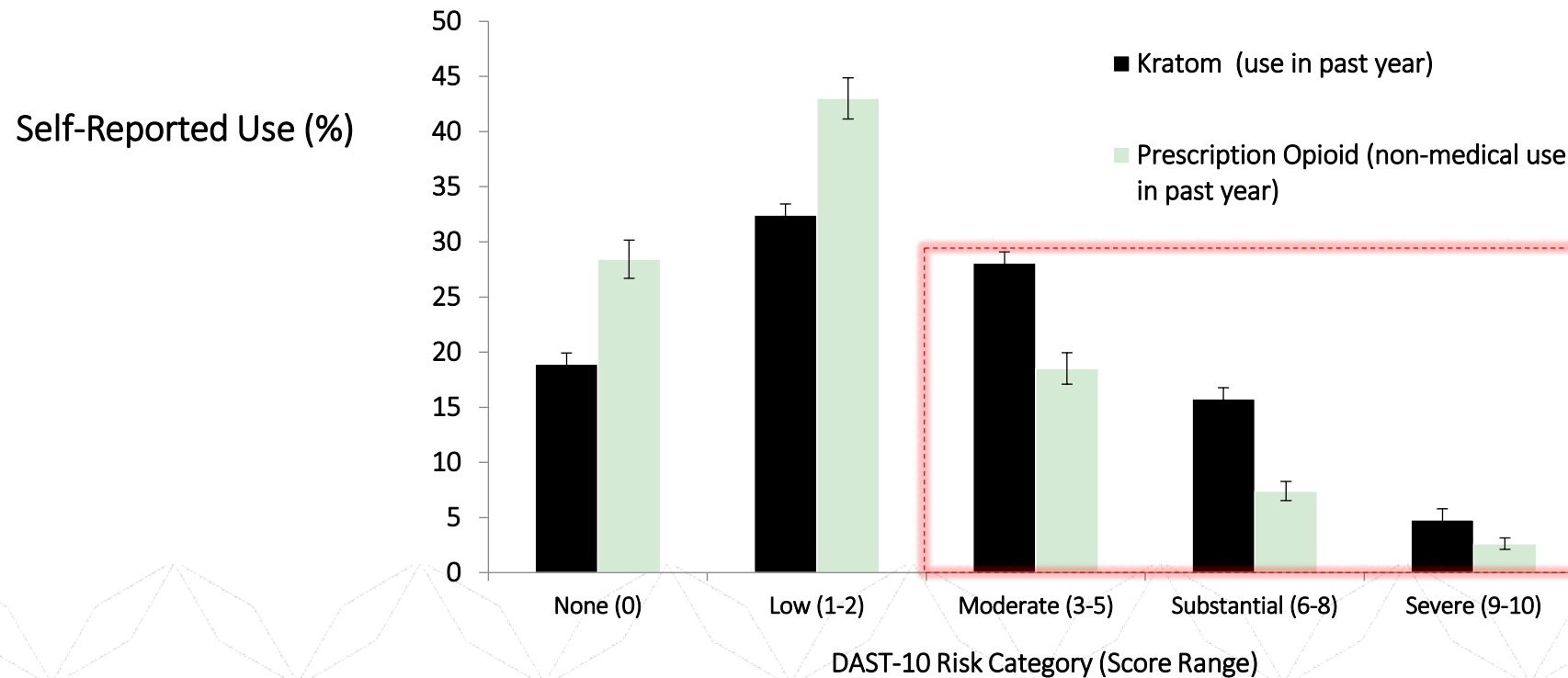
Stimulants - Increasing Mortality over Time



Black J, et al. Association of Medical Stimulants With Mortality in the US From 2010 to 2017
doi:10.1001/jamainternmed.2020.7850

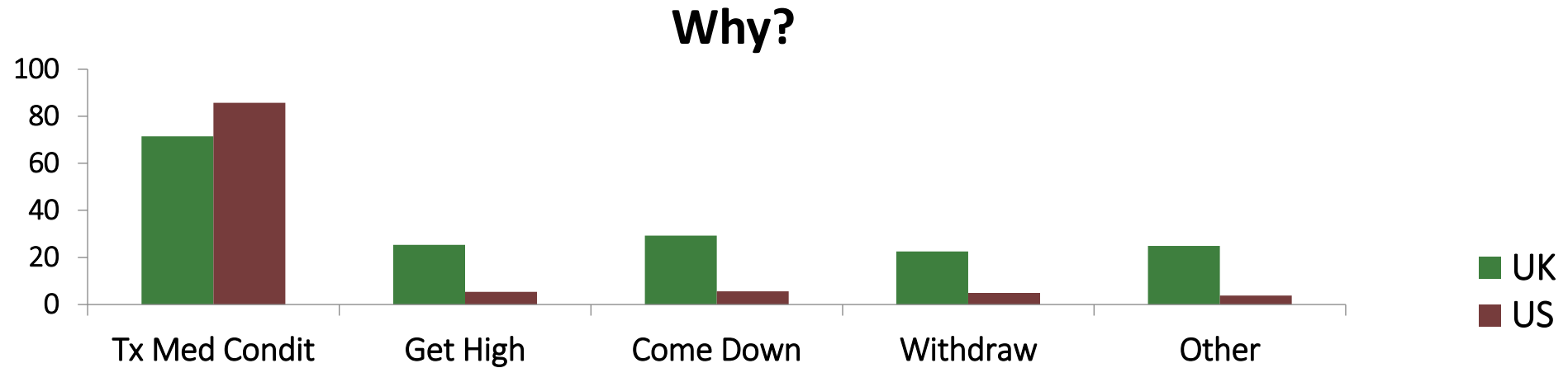
3 Million Adults Have Used Kratom, NMURx, 2018-2019

Kratom Abuse Profile More Severe Than Prescription Opioids



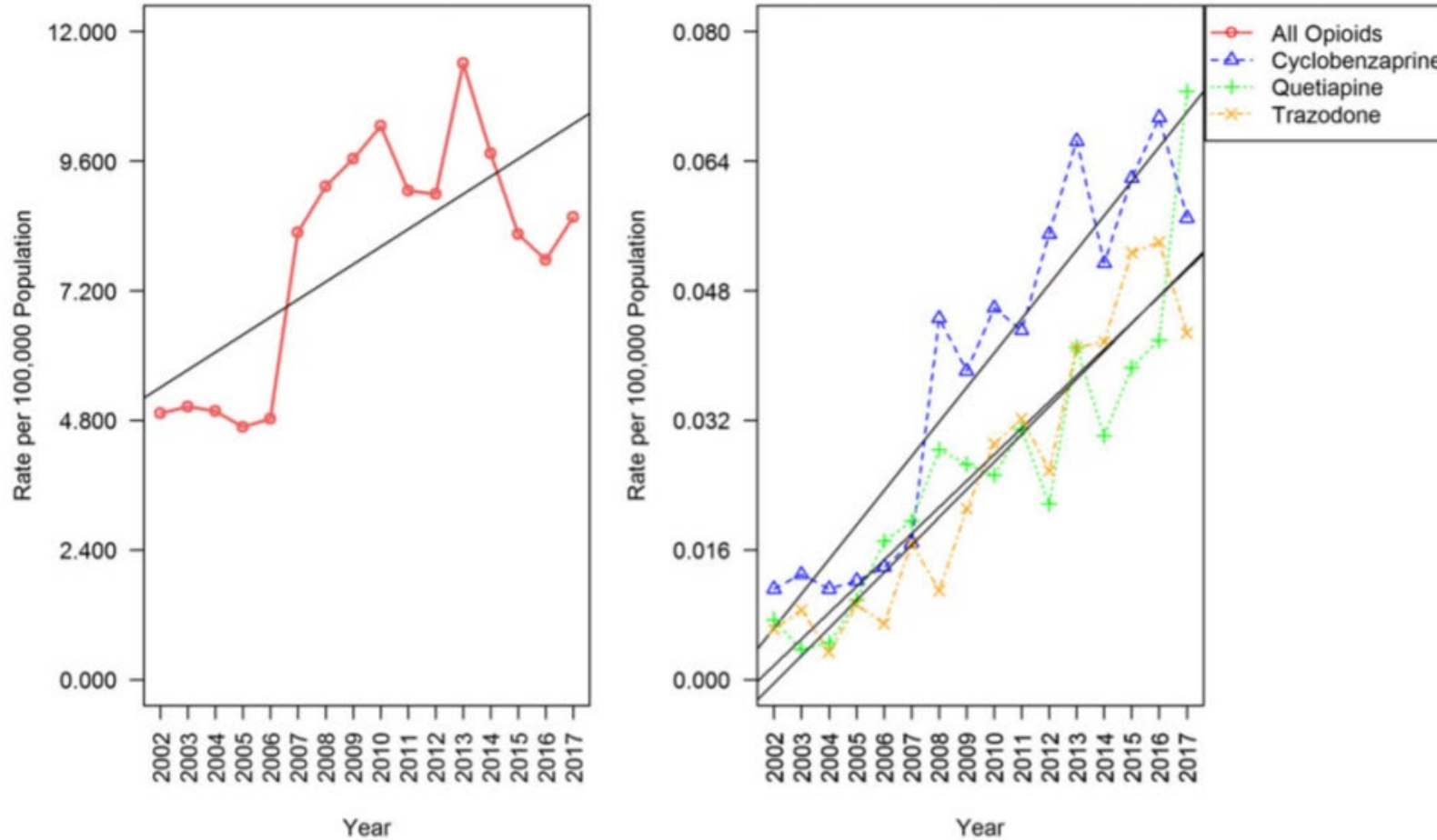
Schimmel J, et al. Prevalence and description of kratom (*Mitragyna speciosa*) use in the United States: A cross-sectional study. *Addiction*. 2020 <https://doi.org/10.1111/add.15082>.

Nonmedical Use of Loperamide (Immodium) in UK and US, NMURx, 2017



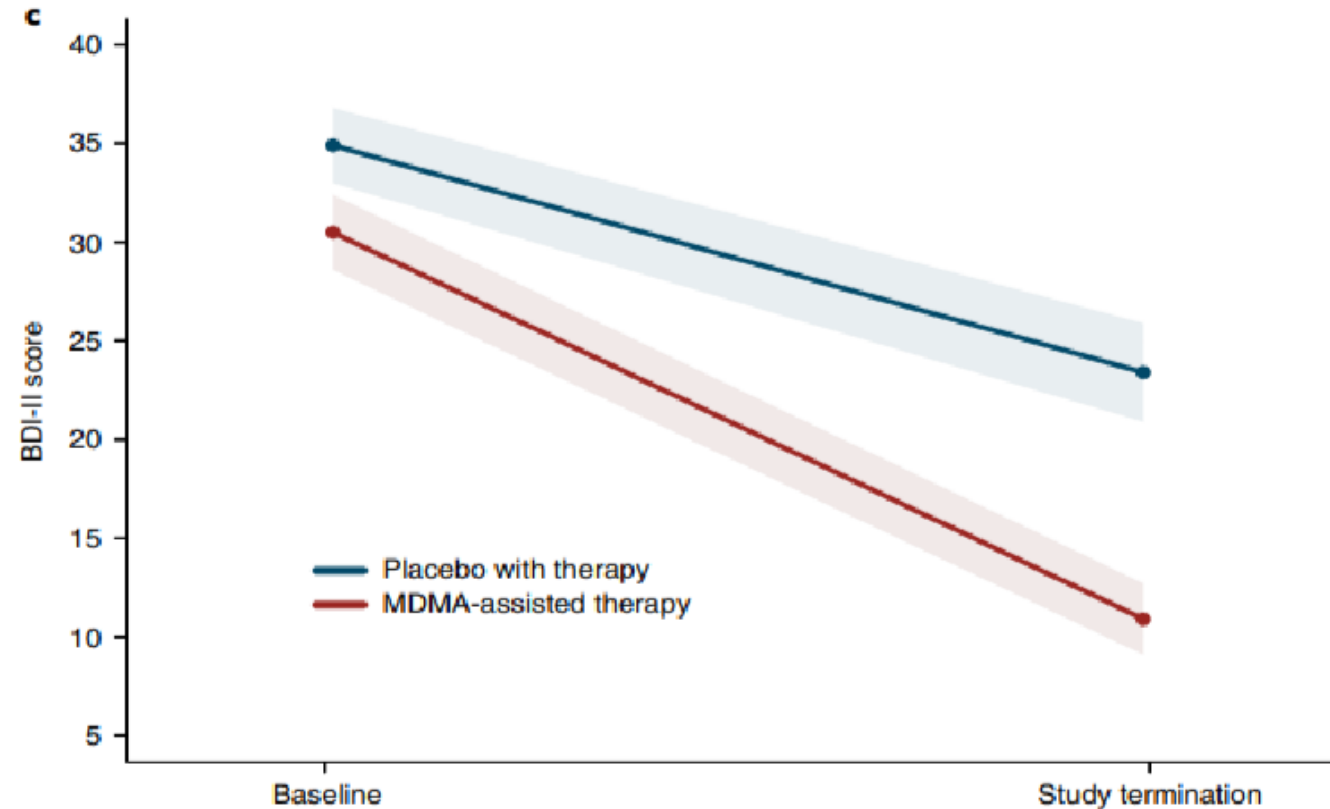
Webb NE, et al. Non-medical use of loperamide in the UK and USA. *QJM*. 2020 DOI: 10.1093/qjmed/hcz215

Increasing Diversion of Nonscheduled Psychoactive Prescription Medications



Kurtz SP, et al. Pharmacoepidemiol Drug Safety, 2019

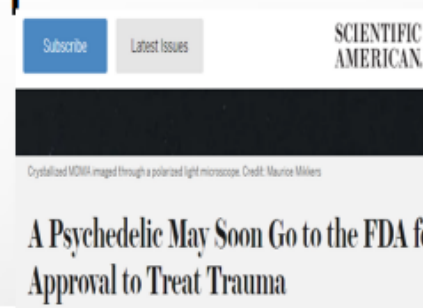
MDMA-assisted Therapy for Severe PTSD



Mitchell, J.M., Bogenschutz, M., Lilienstein, A. *et al.* *Nat Med* **27**, 1025–1033 (2021).
<https://doi.org/10.1038/s41591-021-01336-3>

DRUG DEVELOPMENT SNAPSHOT

- 113 CLINICAL TRIALS FOR MDMA
- 99 CLINICAL TRIALS FOR PSILOCYBIN
- 29 CLINICAL TRIALS FOR LYSERGIC ACID DIETHYLAMIDE (LSD)



Source: Clinicaltrials.gov, Accessed 2/16/22; 5/16/22

1. Carhart- Harris, et al (2021). Trial of psilocybin versus escitalopram for depression. *New England Journal of Med.*; 384: 1402-1411
 2. Mitchell JM, et. al. (2021). MDMA-assisted therapy for severe PTSD: a randomized, double-blind, placebo-controlled phase 3 study. In *Nature Med.* ; 27: 1025-1033
- Images: <https://fortune.com/2022/01/26/fda-clears-bsd-based-drug-clinical-trials/>; <https://www.livescience.com/psilocybin-depression-breakthrough-therapy.html>;

Psychedelic Module

- IN 2020, 2.6% OF PEOPLE AGED 12+ (OR 7.1M PEOPLE) USED HALLUCINOGENS IN THE PAST YEAR
- 1.4M PEOPLE INITIATED HALLUCINOGEN USE IN THE PAST YEAR, INCLUDING 251,000 ADOLESCENTS

Figure 9. Past Year Illicit Drug Use: Among People Aged 12 or Older; 2020

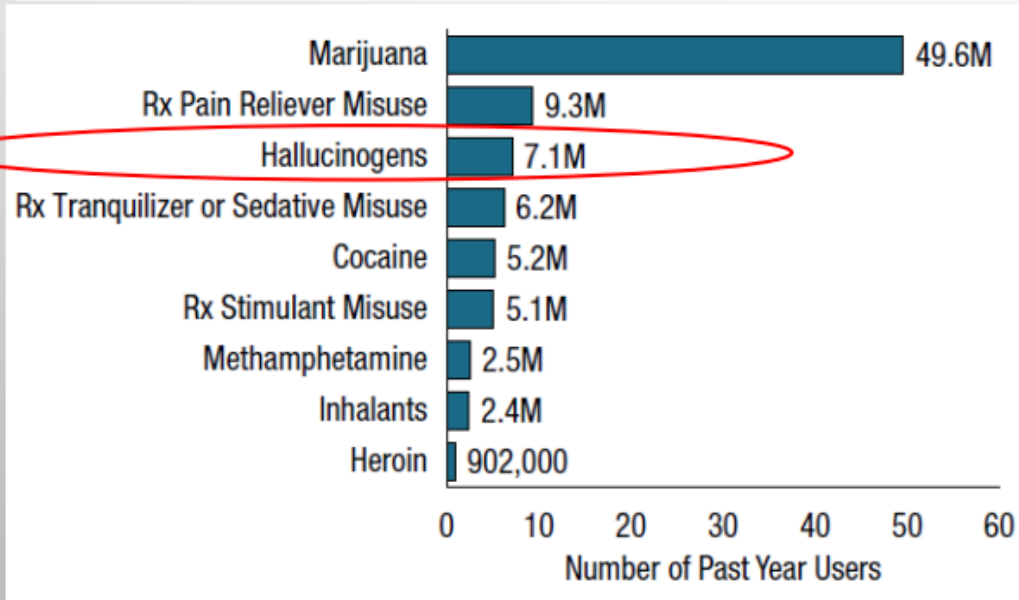
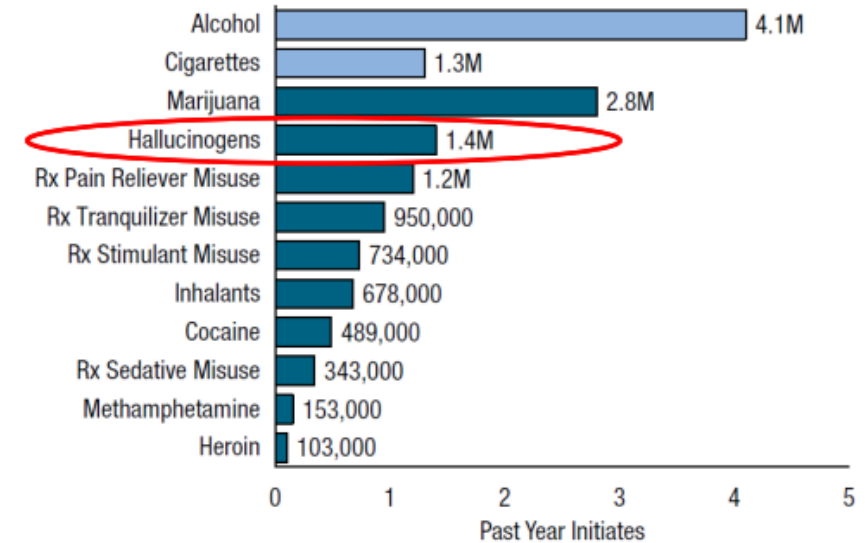


Figure 21. Past Year Initiates of Substances: Among People Aged 12 or Older; 2020



2020 NSDUH Annual National Report | CBHSQ Data ([samhsa.gov](https://www.samhsa.gov))

Note: category of hallucinogens includes LSD, PCP, peyote, mescaline, psilocybin, MDMA, ketamine, DMT and Salvia divinorum

Summary

- Opioid deaths are still rising
 - Mainly due to synthetic opioid analog
 - Counterfeit drugs rising
 - Illicit fentanyl continues to rise
- Most patients misuse more than one drug
- Most deaths involve more than one drug
- On the horizon: stimulants, OTCs, antipsychotics, psychedelics

Questions?

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www.RADARS.org