

The Opioid Crisis

Perspectives From Addiction Specialists In Primary Care & Psychiatry

Today's Speakers

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Dr. Torrington is a family and addiction medicine physician in private practice in Los Angeles and the medical director of the Common Ground Free Clinic in Santa Monica, California, where, among other efforts, he supervised opioid overdose prevention efforts. Dr. Torrington received his medical degree from Jefferson Medical College in Philadelphia, Pennsylvania, completed his residency in Family Medicine at Christiana Care in Wilmington, Delaware, and completed a clinical research fellowship in the Integrated Substance Abuse Programs at University of California, Los Angeles. He has received multiple awards for his community service efforts, is engaged in numerous research activities centered around addiction medicine, and is a distinguished fellow with the American Society of Addiction Medicine.



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Dr. Rosenthal is the director of Addiction Psychiatry at Stony Brook University Medical Center, a professor of Psychiatry at Stony Brook University School of Medicine, and an attending physician at Mount Sinai Hospital in New York. He received his medical degree from State University of New York, Downstate Medical Center and completed residency in Psychiatry at Mount Sinai Hospital. He is a Distinguished Life Fellow of the American Psychiatric Association and past president of the New York Society for Clinical Psychiatry, serving on committees related to substance use disorders. He currently heads the Public Policy section of the American Academy of Addiction Psychiatry, where he is a past president and distinguished fellow. He has contributed to numerous clinical trials and grants aimed at creating a deeper understanding of mental illness and substance use disorders.



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Objectives



Review the history and origins of the current opioid epidemic



Discuss the overall implications of opioid use disorders in mental health



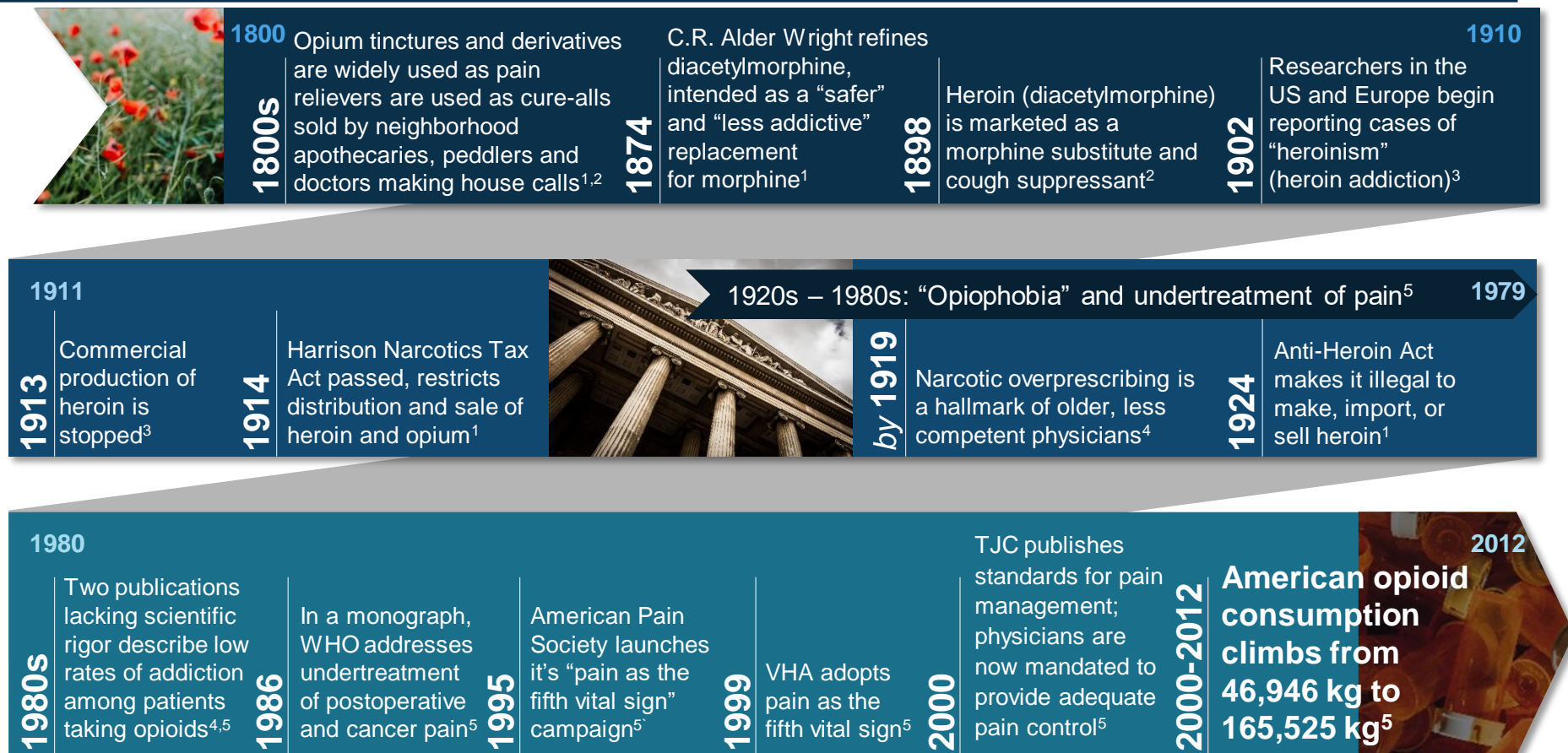
Consider strategies for responding to the opioid epidemic and for treating opioid use disorder

The Opioid Crisis In America

How did we get here?



A Brief History Of Opioids In The United States

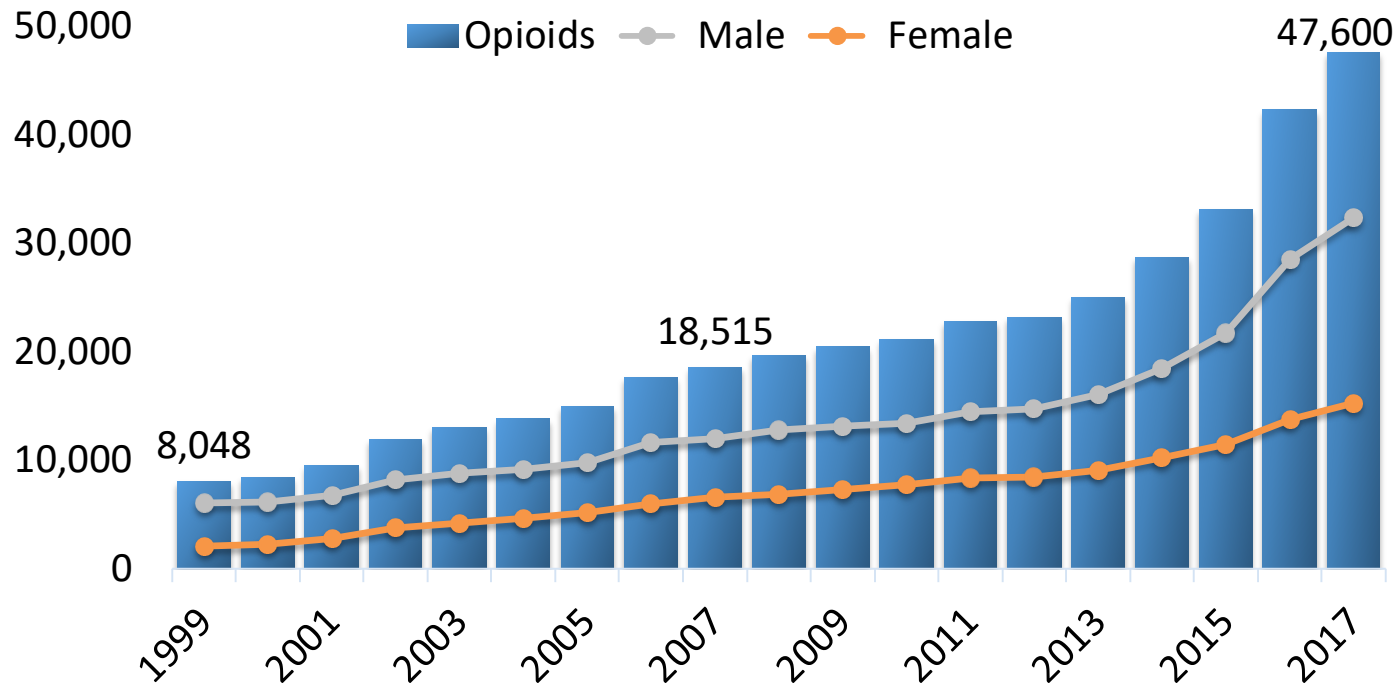


TJC, The Joint Commission; US, United States; VHA, Veteran Health Administration; WHO; World Health Organization.

- History.com editors. Heroin Morphine and Opiates. <https://www.history.com/topics/crime/history-of-heroin-morphine-and-opiates>. Updated August 21, 2018. Accessed March 18, 2019.
- Miroff N. From Teddy Roosevelt to Trump: How drug companies triggered an opioid crisis a century ago. <https://www.washingtonpost.com/news/retropolis/wp/2017/09/29/the-greatest-drug-fiends-in-the-world-an-american-opioid-crisis-in-1908/>. *The Washington Post*. October 17, 2017. Accessed March 18, 2019.
- Borigini M. When heroin was available to housewives and aspirin was bad for the heart. <https://www.psychologytoday.com/us/blog/overcoming-pain/201201/when-heroin-was-available-housewives-and-aspirin-was-bad-the-heart>. *Psychology Today*. Jan 12, 2012. Accessed March 18, 2019.
- Kolodny A et al. *Annu Rev Public Health*. 2015;36:559-74.
- Jones MR et al. *Pain Ther*. 2018;7:13-21.

From 1999 To 2017, Opioid-Related Overdose Deaths Increased Nearly 6 Times

**National Drug Overdose Deaths Involving Any Opioid,
Number Among All Ages, by Gender, 1999-2017**



Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death Data 1999-2017 on CDC WONDER Online Database, released December, 2018.

National Institute on Drug Abuse. Overdose Death Rates. January 2019. <https://www.drugabuse.gov/related-topics/trends-statistics/overdose-death-rates>. Accessed March 12, 2019.

A Multilayered Problem In 3 Waves

399,000 people died
from an opioid overdose (1999–2017)

1990s

mark a rise in
prescription opioid
overdose deaths



Rx OPIOIDS

Include natural, semi-synthetic,
and methadone and can be
prescribed by doctors

2010

marks a rise in
heroin
overdose deaths



HEROIN

An illegal opioid

2013

marks a rise in
synthetic opioid
overdose deaths



SYNTHETIC OPIOIDS

Such as fentanyl and tramadol
are very powerful and can
be illegally made

Of people entering treatment
for opioid addiction²:

- In the 1960s, >80% reported starting with heroin
- Of those who began using opioids non-medically in the 2000s, 75% reported that their first opioid was a prescription drug

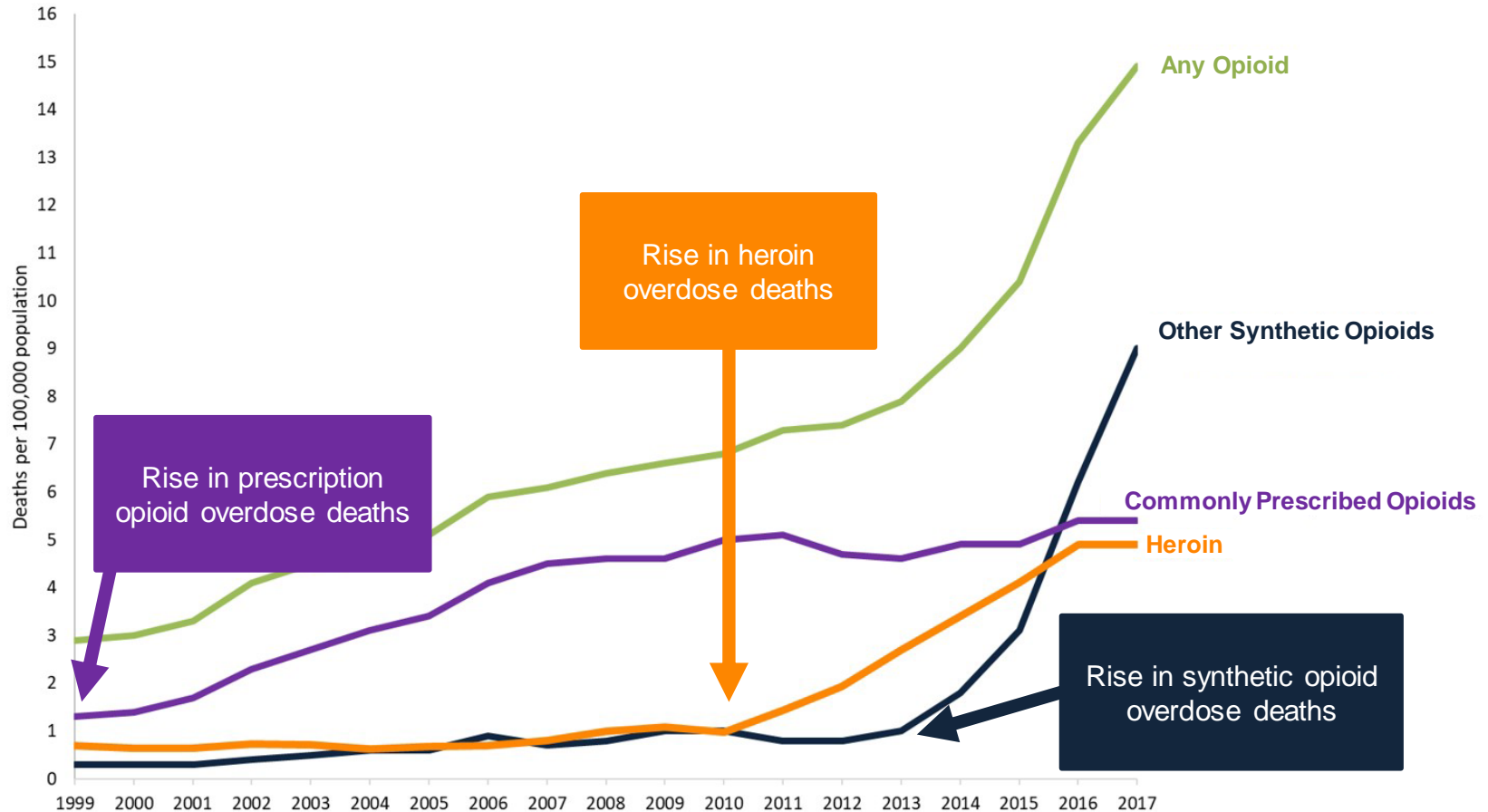
130 Americans die every day
from an opioid overdose³

Rx, prescription.

1. Centers for Disease Control and Prevention. Overdose Waves. Opioid Data Analysis and Resources. <https://www.cdc.gov/drugoverdose/data/analysis.html>. Updated December 19, 2018. Accessed March 14, 2019.
2. National Institute on Drug Abuse. Prescription Opioids and Heroin. <https://www.drugabuse.gov/publications/research-reports/prescription-opioids-heroin>. Updated January 2018. Accessed March 14, 2019.
3. CDC, Centers for Disease Control and Prevention. Understanding the Epidemic: Preventing Overdose Deaths. <https://www.cdc.gov/drugoverdose/epidemic/index.html>. Updated December 19, 2018. Accessed March 14, 2019.

Three Waves Of The Rise In Opioid Deaths

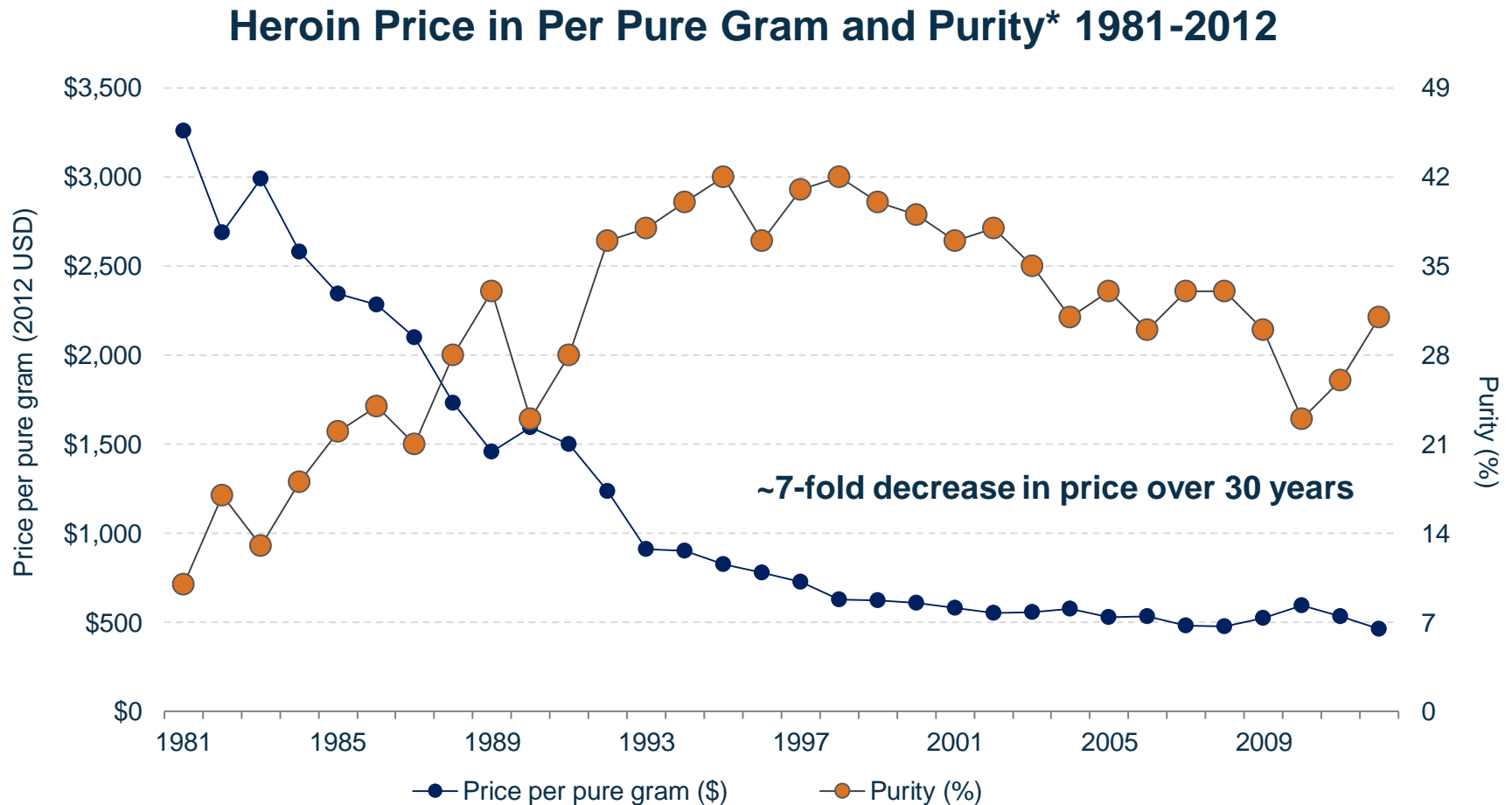
Overdose Death Rates Involving Opioids, by Type, United States, 2000-2017



Centers for Disease Control and Prevention. Overdose waves & Rising Rates. Opioid Data Analysis and Resources. <https://www.cdc.gov/drugoverdose/data/analysis.html>. Updated December 19, 2018. Accessed March 14, 2019.

Changes In Heroin Price & Purity

1981 – 2012

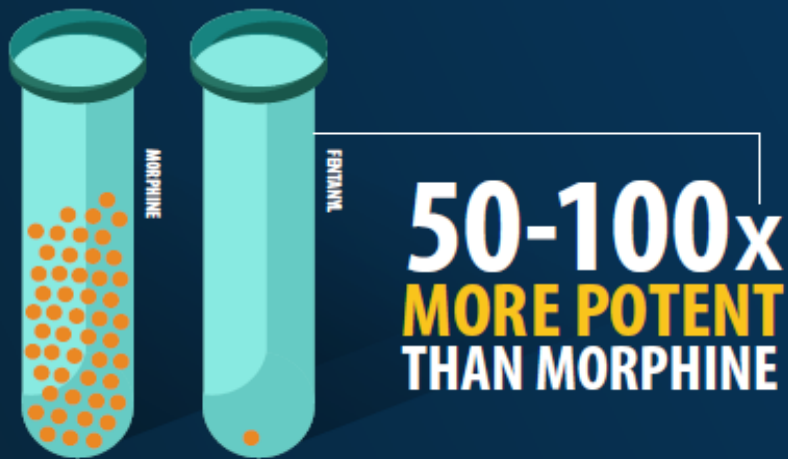


*Purchases of 10 grams or less (ie, quantities purchased at the "retail" level).

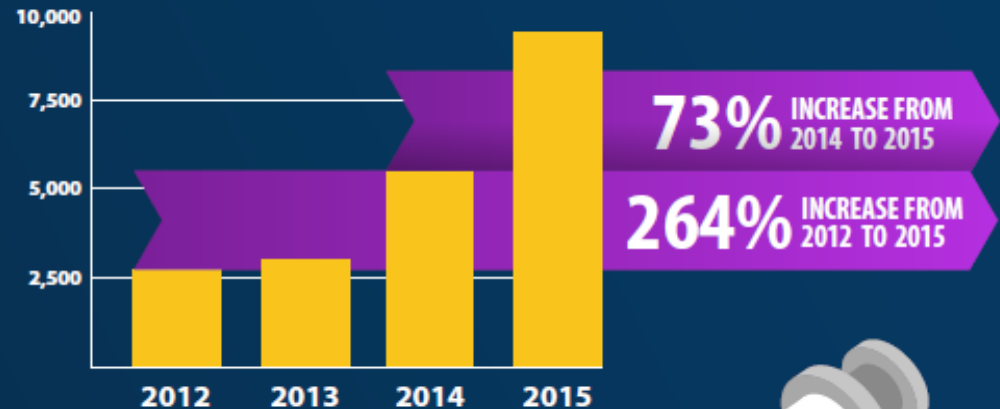
USD, United States Dollars.

United States. Office of National Drug Control Policy. National Drug Control Strategy Data Supplement 2016. <https://www.hsdl.org/?abstract&did=806335>. Accessed April 10, 2019.

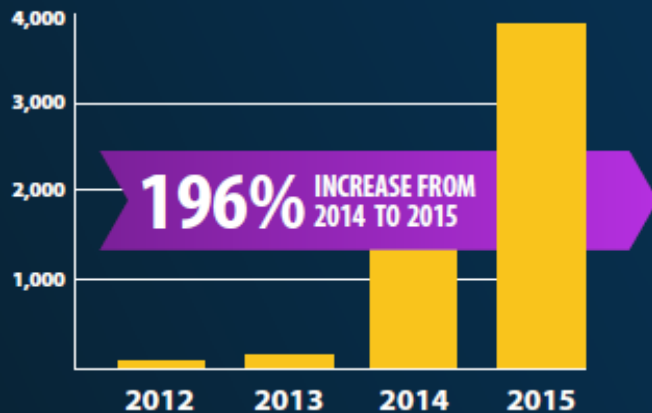
Fentanyl: Overdoses On The Rise



SYNTHETIC OPIOID DEATHS ACROSS THE U.S.

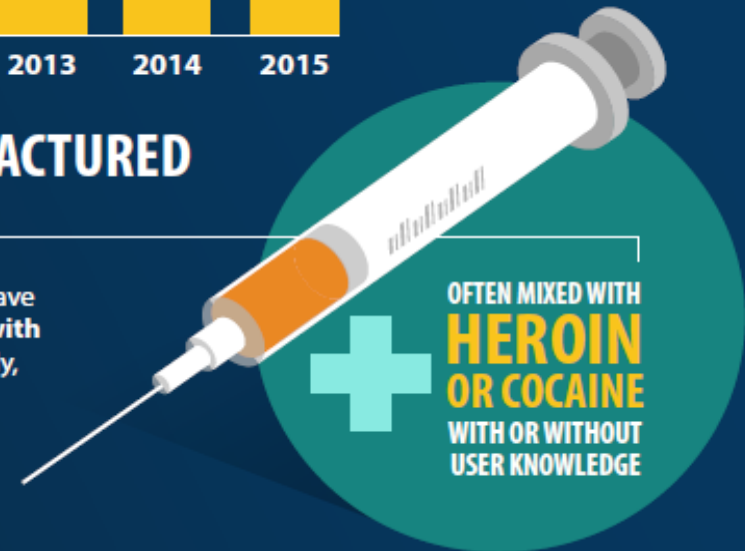


Ohio Drug Submissions Testing Positive for Illicitly Manufactured Fentanyl



ILLICITLY MANUFACTURED FENTANYL

Although **prescription rates** have fallen, **overdoses associated with fentanyl** have risen dramatically, contributing to a sharp spike in synthetic opioid deaths.



Centers for Disease Control and Prevention. Shareable Graphics and Videos. <https://www.cdc.gov/drugoverdose/resources/graphics.html>. Updated December 21, 2018. Accessed March 14, 2019.

Heroin use is part of a larger substance abuse problem.

Nearly all people who used heroin also used at least 1 other drug.

Most used at least **3** other drugs.

Heroin is a highly addictive opioid drug with a high risk of overdose and **death** for users.

People who are addicted to...



ALCOHOL

are

2x



MARIJUANA

are

3x



COCAINE

are

15x



Rx OPIOID PAINKILLERS

are

40x

...more likely to be addicted to heroin.

SOURCE: National Survey on Drug Use and Health (NSDUH), 2011-2013.

Centers for Disease Control and Prevention. Today's Heroin Epidemic Infographics. Vital Signs. <https://www.cdc.gov/vitalsigns/heroin/infographic.html>. July 7, 2015. Accessed March 14, 2019.

Discussion

Substance Use & Mental Health

Potential Implications for Opioid Use Disorder



Depression & Opioid Use

A Role For Chronic Pain

Patients with Depression

Chronic pain is common (~50%)

Chronic pain may be worse

Patients With Both

Depression may be harder to treat

Pain may be less responsive to opioids

Compared to nondepressed persons, those with a history of depression were more likely to receive:

- higher daily doses
- greater days' supply
- more schedule II opioids

Major depression is common (~50%)

The risk of developing an SUD is 2-3x higher than in those without chronic pain


Patients with Chronic Pain

In a WHO prospective study, persistent pain predicted the onset of psychological disorder with the same strength that a psychological disorder predicted the onset of persistent pain

SUD, substance use disorder; WHO, World Health Organization.
Sullivan MD. *Clin J Pain*. 2018; 34(9):878-884.

Depression & Opioid Use Disorder

A Two-Way Street



DEPRESSION
IS ASSOCIATED WITH
AN INCREASED RISK
OF OPIOID USE
DISORDER

Depression has been associated with an increased risk of opioid misuse and overdose^{1,2}


Opioid-naïve patients with mood disorders that are given opioids for acute or chronic pain may be more likely to transition to longer-term opioid use³

Results from a telephone survey of 1,334 patients indicated that patients with depression may be more likely to misuse their opioid medications for non-pain symptoms and self-increase their opioid dose⁴

Studies indicate that the risk of developing new-onset depression may be increased by longer durations of opioid analgesic use⁵⁻⁶

Opioid use may double the risk of depression recurrence in patients who were in remission⁷

In patients with depression, opioid use for greater than 30 days has been associated with the onset of treatment-resistant depression⁸



OPIOID USE IS
ASSOCIATED WITH
AN INCREASED RISK
OF DEPRESSION

MME, morphine milligram equivalents.

1. Sullivan MD. *Clin J Pain*. 2018; 34(9):878-884.

2. Dowell D et al. *MMWR Recomm Rep*. 2016;65(1):1-49.

3. Halbert BT et al. *Pain*. 2016;157:2452-2457.

4. Grattan A et al. *Ann Fam Med*. 2012;10(4):304-311.

5. Scherrer JF et al. *J Gen Intern Med*. 2014;29(3):491-9.

6. Scherrer JF et al. *Ann Fam Med*. 2016;14(1):54-62.

7. Scherrer JF et al. *J Pain*. 2016; 17(4):473-482.

8. Scherrer JF et al. *Prev Med*. 2016; 91:110-116.

Implications Of Other Mental Disorders For Opioid Use Disorder

- Of the 6 million current nonmedical users of psychotherapeutic drugs, 53.3% or 3.2 million people, are current nonmedical users of prescription pain relievers^{*1}
- To date, there has been little focus on the 16% of US adults with mental disorders, **who receive half of all opioids prescribed in the United States**[†]
 - 18.7% of adults with mental health disorders were opioid users, vs 5.0% of those without mental health disorders[†] ($p < 0.001$, OR= 2.08)²
- Of the 70,237 drug overdose deaths in 2017, 7% (~4900) were intentional and 5% were of undetermined intent³

^{*}Based on data from 2017 National Survey on Drug Use and Health; respondents that reported misusing prescription psychotherapeutic drugs in the past month.

[†]Based on data from an analysis of Medical Expenditure Panel Survey data from 2011 and 2013, with an analytic sample of 51,891 adults.

OR, odds ratio; US, United States.

1. Substance Abuse and Mental Health Services Administration. National Survey on Drug Use and Health 2017. <https://www.samhsa.gov/data/report/2017-nsduh-annual-national-report>. September 2018. Accessed March 14, 2019.
2. Davis MA et al. *J Am Board Fam Med*. 2017;30(4):407–417.
3. Hedegaard H et al. *NCHS Data Brief*. 2018;329: 1-8.

Discussion

Responding To The Opioid Epidemic



Responding The The Opioid Epidemic¹

Improve opioid prescribing practices

In 2017, almost 36% of all opioid overdose deaths involved a prescription opioid²

Prevent opioid use disorder

Although some patients are more vulnerable than others, no patient is immune to addiction³

Reverse overdose

From 1996 to 2014, at least 26,500 opioid overdoses in the US were reversed by laypersons using overdose reversal therapeutics⁴

Treat opioid use disorder

Only 12% of Americans who need specialty addiction treatment access it⁵

US, United States.

1. Centers for Disease Control and Prevention. Overdose Prevention. <https://www.cdc.gov/drugoverdose/prevention/index.html>. Updated August 31, 2017. Accessed March 14, 2019.
2. Centers for Disease Control and Prevention. Prescription Opioid Data. <https://www.cdc.gov/drugoverdose/data/prescribing.html>. Updated December 19, 2018.

3. Volkow ND & McLellan AT. *NEJM*. 2016;374:1253-63.
4. Wheeler E et al. *MMWR*. 2015;64(23):631-5.
5. Substance Abuse and Mental Health Services Administration. National Survey on Drug Use and Health 2017. <https://www.samhsa.gov/data/report/2017-nsduh-annual-national-report>. September 2018. Accessed March 14, 2019.

Improve Opioid Prescribing

The 12 recommendations in the CDC guidelines for prescribing opioids are¹:

1. Opioids should not be treated as first-line therapy for pain; consider alternatives
2. Clinicians should establish goals for pain and function with patients
3. Clinicians should discuss the risks and benefits of opioids with patients
4. Use immediate-release opioids when starting
5. Use the lowest effective dose
6. Prescribe short durations for acute pain
7. Evaluate benefits and harms frequently
8. Use strategies to mitigate risk (including offering overdose reversal therapies)
9. Review PDMP data
10. Use urine drug testing
11. Avoid concurrent opioid and benzodiazepine prescribing
12. Offer treatment for opioid use disorder (including MAT)

CDC, Centers for Disease Control and Prevention; MAT, medication-assisted therapy; PDMP, prescription drug monitoring program.

1. Centers for Disease Control and Prevention. Guideline for Prescribing Opioids for Chronic Pain: Recommendations. <https://www.cdc.gov/drugoverdose/prescribing/guideline.html>. Accessed March 18, 2019.
2. Volkow ND & McLellan AT. *NEJM*. 2016. 374:1253-63.

Common misconceptions regarding opioids²

Addiction is the same as physical dependence and tolerance. **The molecular processes and clinical consequences of addiction are distinct from tolerance and dependence**

Pain protects patients from addiction to their opioid medications. **Research has shown that patients prescribed opioid medications for pain can become addicted to them even when the drugs are taken as prescribed**

Only long-term use of certain opioids produces addiction. **The over prescription of opioids for acute pain is the main source of drug diversion**

Only patients with certain characteristics are vulnerable to addiction. **Although some patients are more vulnerable than others, no patient is immune to addiction**

Prevent Opioid Use Disorder

Primary prevention

Preventing the development of new cases

Prevent addiction caused by **medical** exposure to opioids

Consider nonopioid analgesics and nonpharmaceutical approaches¹

Analyses have found that receipt of high-dose or long-acting opioids increased the likelihood of long-term opioid use²

Research has indicated that every day of opioid prescription beyond the first 3 days increased the likelihood of chronic opioid use³

Abuse deterrent formulations are not recommended as a primary prevention strategy⁴

Prevent addiction caused by **nonmedical** exposure to opioids

Adolescents and young adults who experiment with nonmedical use of opioids are most likely to obtain them from friends or family who have a legitimate prescription⁴

Unused opioids should be returned to the pharmacy for disposal⁴

Prescription opioids are commonly perceived as less risky than heroin, despite similar abuse liability, and a 2004 survey of college students found that those who perceived opioids as a low-level risk were 9.6 times more likely to use opioids nonmedically⁴

Secondary prevention

Early detection before serious complications

Patients who are addicted may not always present with drug-seeking behavior⁴

Although urine toxicology may verify a patient's self-reported drug ingestion history, it is not reliable⁴

Use of PDMPs can detect and deter "doctor shopping"⁴

PDMP, prescription drug monitoring program.

1. Dowell D et al. *MMWR Recomm Rep*. 2016;65(1):1-49.
2. Shah A et al. *J Pain*. 2017; 18(11):1374-1383.

3. Sullivan MD. *Clin J Pain*. 2018; 34(9):878-884.

4. Kolodny A et al. *Annu Rev Public Health*. 2015;36:559-74.

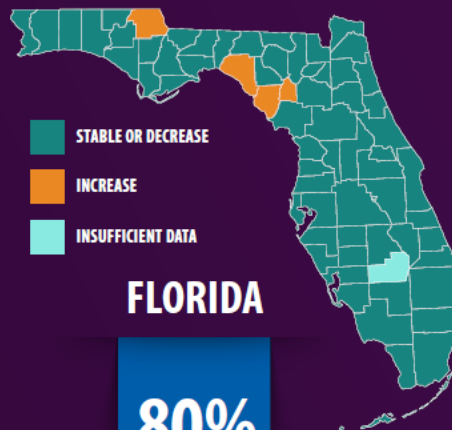
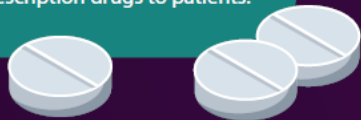
PDMP State Successes

Decreases In Opioid Prescribing From 2010 To 2015

- Low rate of provider use has presented a challenge to the effectiveness of PDMP data¹
- Some states have passed legislation mandating that prescribers check PDMP before prescribing controlled substances¹
 - In these states, increased PDMP utilization has correlated with declines in opioid prescribing and a drop in visits to multiple providers
- In states with regulated pain clinics and set requirements for PDMP, average MME* per person decreased in most counties in Florida, Ohio, and Kentucky from 2010 to 2015²:

These states have
**regulated
pain clinics**
and set requirements for
their state's PDMP.

PDMP, Prescription Drug Monitoring Program, is a state-run electronic database used to track the prescribing and dispensing of controlled prescription drugs to patients.



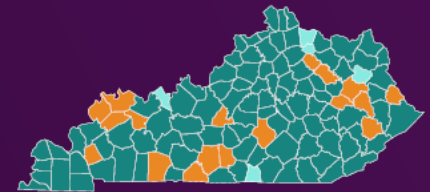
FLORIDA

80%
of counties
DECREASED



OHIO

85%
of counties
DECREASED



KENTUCKY

62%
of counties
DECREASED

*MME is a way to calculate the amount of opioids, accounting for difference in opioid drug type and strength.

CDC, Centers for Disease Control and Prevention; MME, morphine milligram equivalents; PDMP, prescription drug monitoring program.

1. Kolodny A et al. *Annu Rev Public Health*. 2015;36:559-74.

2. Centers for Disease Control and Prevention. Shareable Graphics and Videos. <https://www.cdc.gov/drugoverdose/resources/graphics.html>. Updated December 21, 2018. Accessed March 14, 2019.

Reverse Opioid Overdose

Opioid Overdose Education & Rescue Kit Distribution

The CDC guidelines recommend considering opioid overdose education and overdose reversal rescue kits for patients and household members of patients prescribed opioids with a history of overdose, history of substance use disorder, higher opioid dosages (≥ 50 MME/day), or concurrent benzodiazepine use¹

- Access to overdose education and overdose reversing therapies through community programs has expanded since the late 1990s, with most states adopting policies that allow for easier distribution of overdose rescue kits²
- Opioid overdose-reversing therapies can be administered intravenously, intramuscularly, subcutaneously, and intranasally²
- These therapies have no effects on people who are not taking opioids²
- **Examples of the effectiveness of education and distribution programs:**
 - A study found that Massachusetts communities with education and distribution programs had reduced opioid overdose deaths compared when with communities without them³
 - In a rural county in North Carolina, overdose death rates fell from 46.6 per 100,000 to 29.0 per 100,000 in the year following the introduction of an education and distribution program⁴

CDC, Centers for Disease Control and Prevention; MME, morphine milligram equivalents.

1. Dowell D et al. *MMWR Recomm Rep*. 2016;65(1):1-49.

2. Kerensky T & Walley AY. *Addict Sci Clin Pract*. 2017;12:4.

3. Walley AY et al. *BMJ*. 2013;346:f174.

4. Albert S et al. *Pain Med*. 2011;12 Suppl 2:S77-85.

Reverse Opioid Overdose

Responding To Overdose & Continued Care

During: Responding

Overdose education and rescue kit distribution programs and the AHA instruct rescuers, after recognizing an overdose, to¹:

- Call for help
- Start ventilation or CPR
- Deliver rescue therapy
- Remain with the person until help arrives
- Place the person in the rescue position

Many states have attempted to limit civil or criminal liabilities for responding to an overdose¹

- These laws generally encourage rescuers to call for emergency services by reducing fears of legal repercussions when emergency responders arrive

After: Short- and Long-term Care

Administration of opioid reversal therapy should be accompanied by a call to emergency responders²

Overdose reversal therapy precipitates withdrawal and may increase opioid craving¹

- Reports of life-threatening or lethal responses to overdose reversal therapy are rare but exist³

Overdose reversal therapy may wear off before the opioids, necessitating additional care^{1,3}

- National EMS data from 2015 revealed that almost one-fifth of patients receiving overdose reversal therapy from EMS required more than one administration³

Following overdose rescue, MAT may be a promising way to engage an overdose survivor in treatment to prevent another overdose event¹

AHA, American Heart Association; CPR, cardiopulmonary resuscitation; EMS, emergency medical services; MAT, medication-assisted therapy.

1. Kerensky T & Walley AY. *Addict Sci Clin Pract.* 2017;12:4.
2. Lavonas EJ et al. *Circulation.* 2015;132(suppl 2):S501–S518.
3. Lynn RR & Galinkin JL. *Ther Adv Drug Saf.* 2018;9(1):63-88.

Treating Opioid Use Disorder

The goals of treatment are to prevent:

- overdose deaths • medical complications • psychosocial deterioration •
- transition to injection drug use • injection-related infectious disease •

Treatment of opioid addiction includes:

Psychosocial approaches

For example:

- Residential treatment • Mutual-help programs • 12-Step treatment programs •
- These approaches show value and are an important treatment option, however in most cases, psychosocial treatment alone after detoxification may be risky without concomitant maintenance pharmacotherapy¹⁻⁴**

Pharmacotherapy

- **Agonist and partial agonist maintenance:** strong evidence supports the use of maintenance therapies as safe and effective, but access to these therapies remains limited
- **Antagonists that block opioid action:** may be helpful in highly motivated patients

Harm reduction

- **Needle exchange programs:** prevent transmission of bloodborne diseases
- **Expanded access to overdose rescue kits:** prevent overdose death

1. Kolodny A et al. *Annu Rev Public Health*. 2015;36:559-74.
2. Woody GE et al. *JAMA*. 2008;300(17):2003-2011.

3. Weiss RD et al. *Arch Gen Psychiatry*. 2011;68(12):1238-1246.
4. Bentzley BS et al. *J Subst Abuse Treat*. 2015;52:48-57.

Discussion

Questions

Closing

The Opioid Crisis

Perspectives From Addiction Specialists In Primary Care & Psychiatry