



MACS

**Maryland Addiction
Consultation Service**

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www.marylandMACS.org

Rural Opioid Epidemic

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July 12, 2018

Opioid Epidemic

2 million Americans with substance use disorder
due to prescription pain pills/2015

591,000 Americans with substance use disorder
due to heroin/2015

Opioid Overdose

- Opioid overdose deaths have quadrupled since 1999
- 2016 overdose deaths/ over 63,600/22% increase from 2015
- 42,249 died of an opioid OD in 2016
- 91 Americans die of an opioid overdose every day/2015. Over 115 a day in 2016

CDC

Deaths from Other Causes

- Approximately 58,000 soldiers died in Vietnam War
- 55,000 died in car crashes at peak in 1972
- 43,000 died of HIV/AIDS at height of epidemic in 1995
- 40,000 individuals died of gun violence in peak year of 1993
- 41,070 Americans die of breast cancer each year

The Washington Post

Health & Science

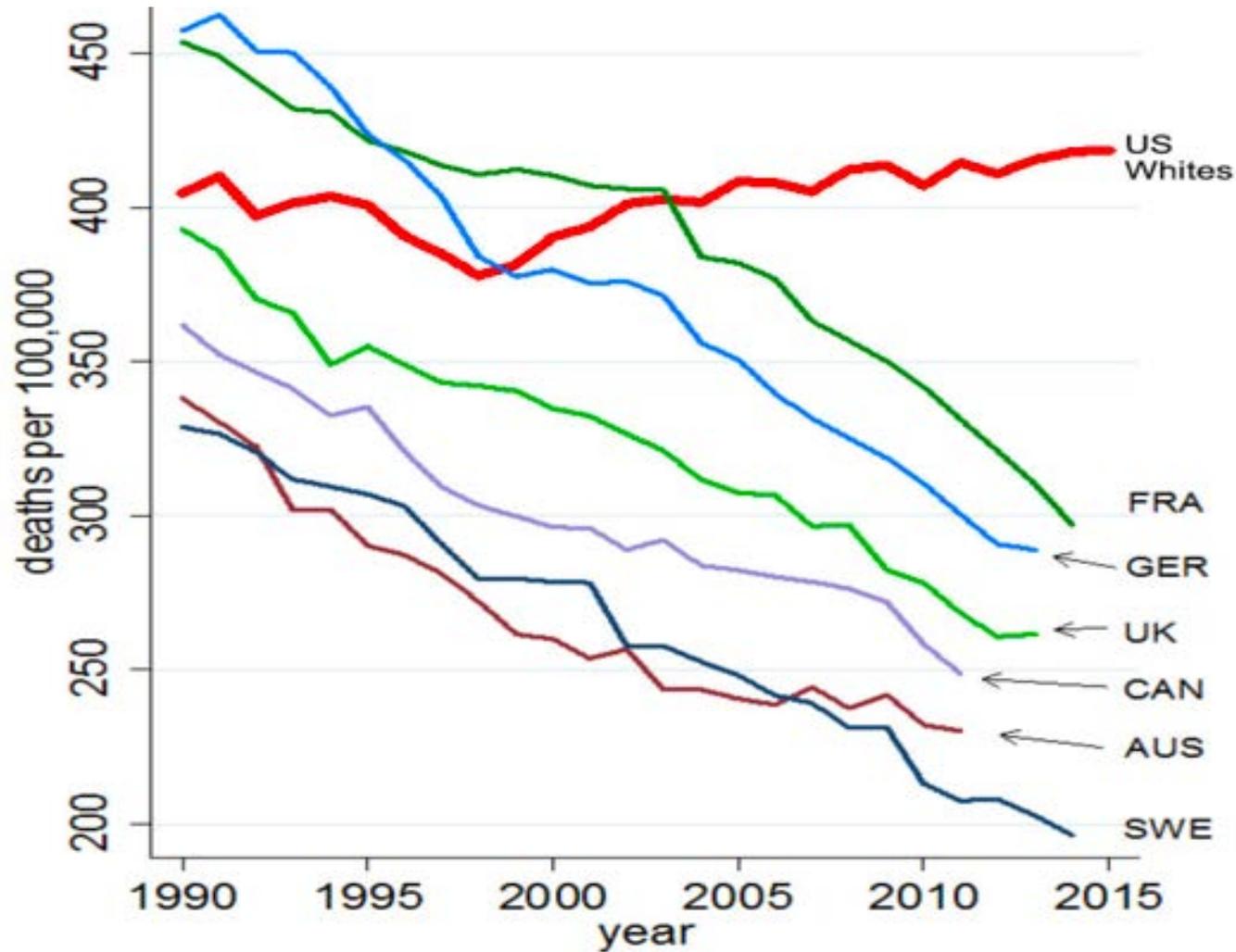
**Fueled by drug crisis, U.S.
life expectancy declines
for a second straight year**

12/19/17

Opioid Overdose

- Drug overdose is the leading cause of death in the United States for individuals under 50
- Marked increase in middle-aged (45-54) mortality for white non-Hispanic men and women in US between 1999-2013
- Deaths from drug overdose are most likely significantly underestimated

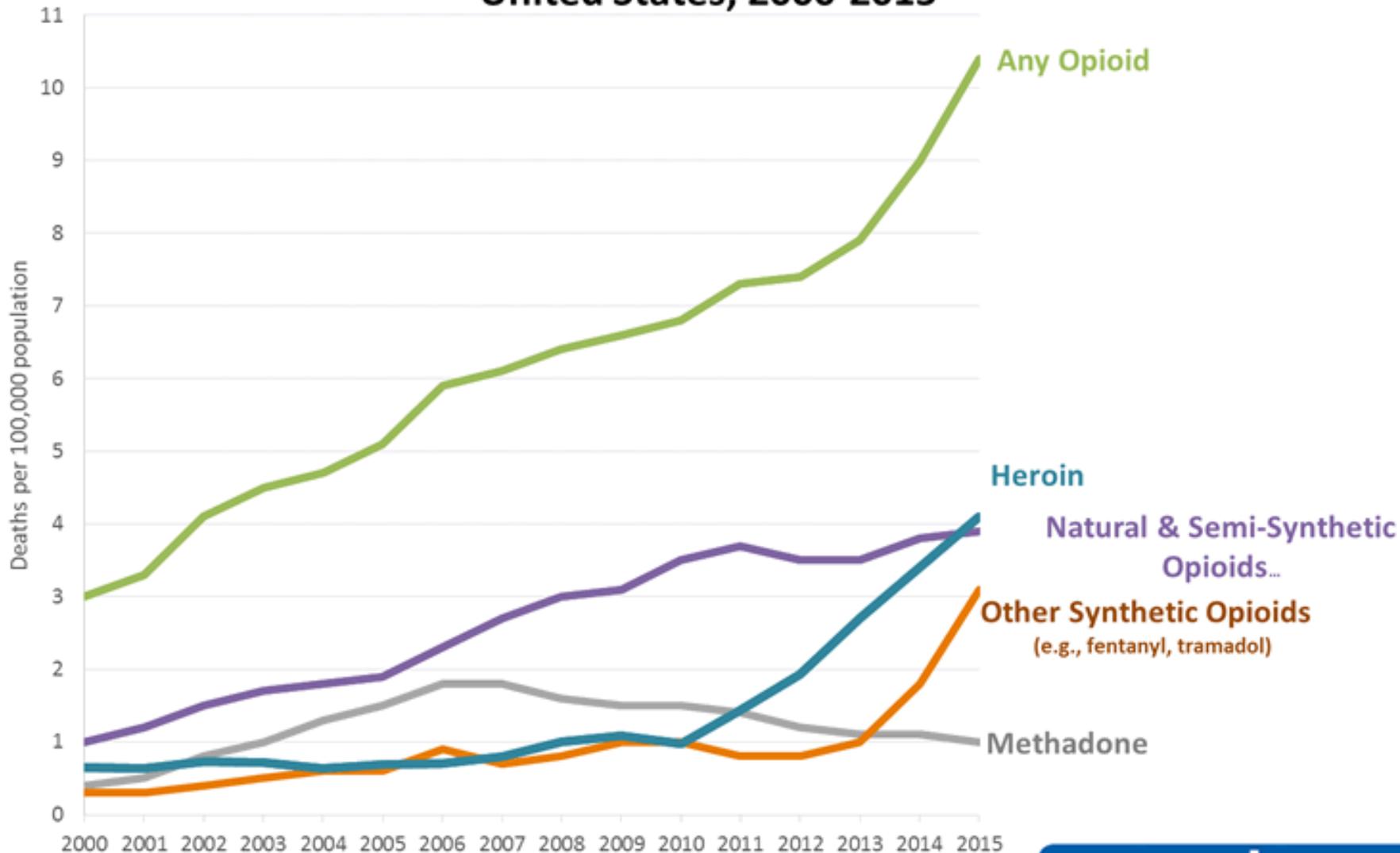
All-cause mortality rates ages 45-54C Rates



Causes of Rapid Rise in Opioid Overdose

- Increase in prescription opioid availability
- Significant increase in supply of heroin and decrease in cost
- Increased availability of high potency synthetic opioids such as fentanyl

Overdose Deaths Involving Opioids, by Type of Opioid, 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/>.

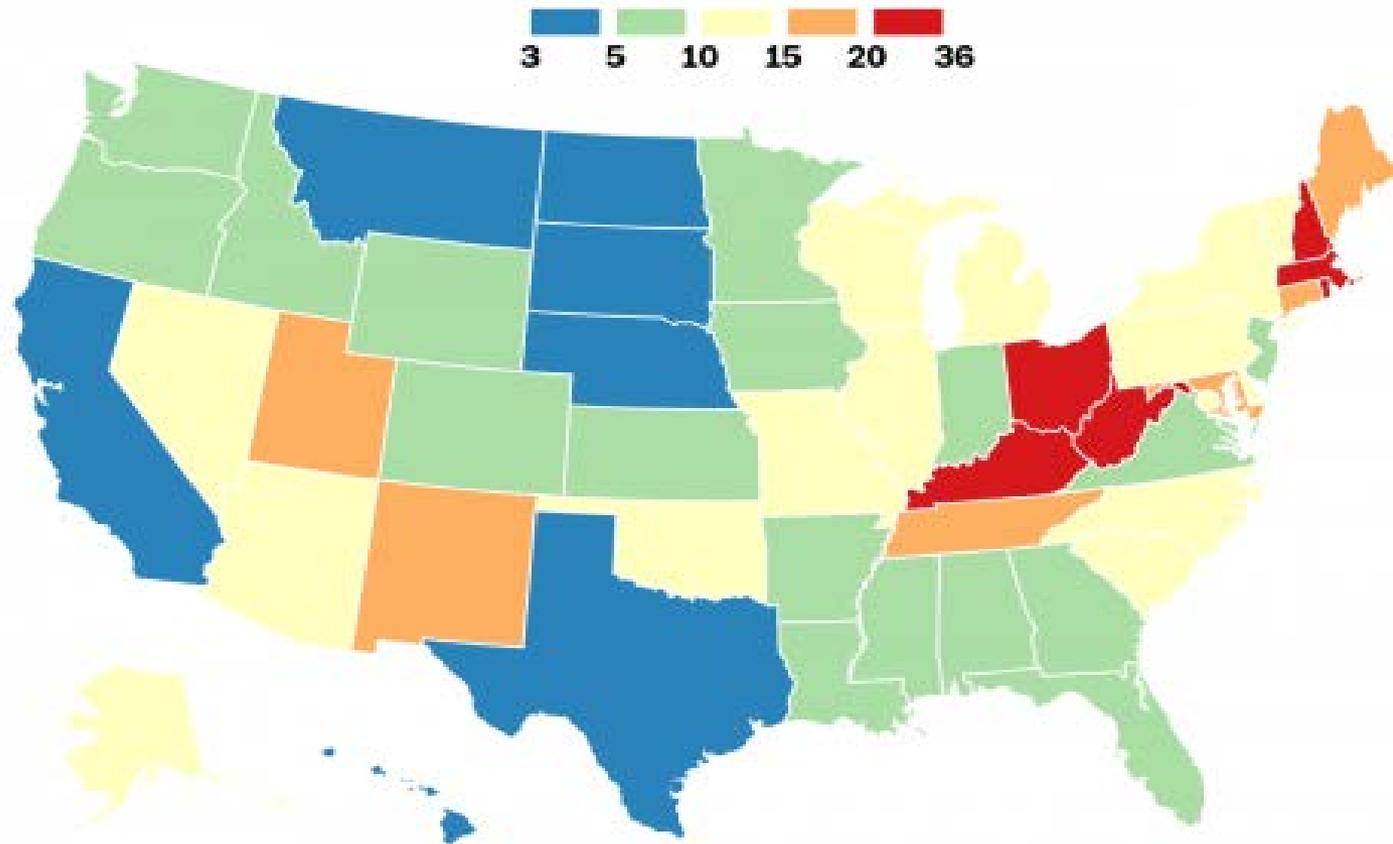
www.cdc.gov
Your Source for Credible Health Information

Opioid Overdose Deaths 2016

- Prescription opioids 14,400
- Heroin 15,400
- Fentanyl and its analogues 20,100 (Increased from 3,000 to 20,000 in 3 years which is a 540%)

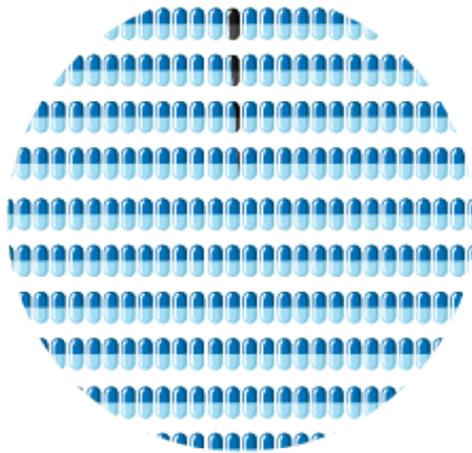
Opioid deaths in 2015

Age-adjusted death rates (per 100,000) for overdose deaths from all opioid drugs



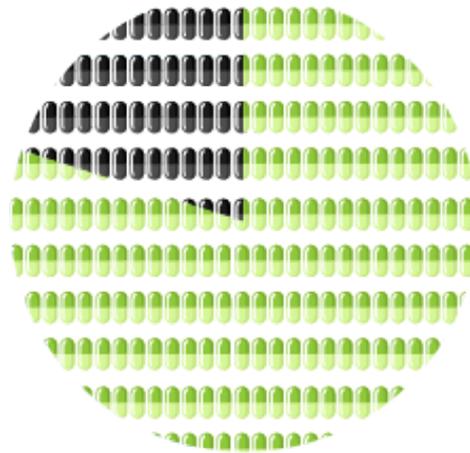
Prescription Opioids

- In 2012, 259 million prescriptions were written for opioids, enough for one bottle for each adult in US
- 80% of all opioids are prescribed in the US (4.6% of the world's population)



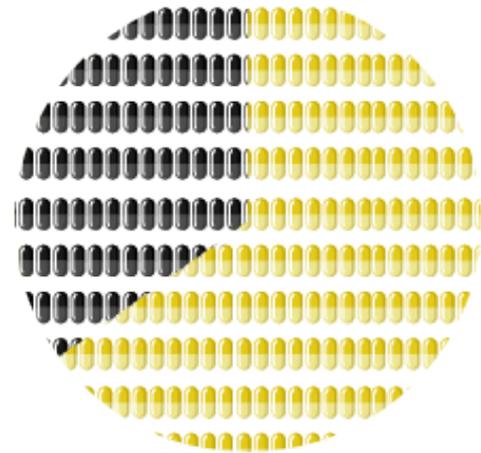
99%

Hydrocodone
Consumption



80%

Oxycodone
Consumption



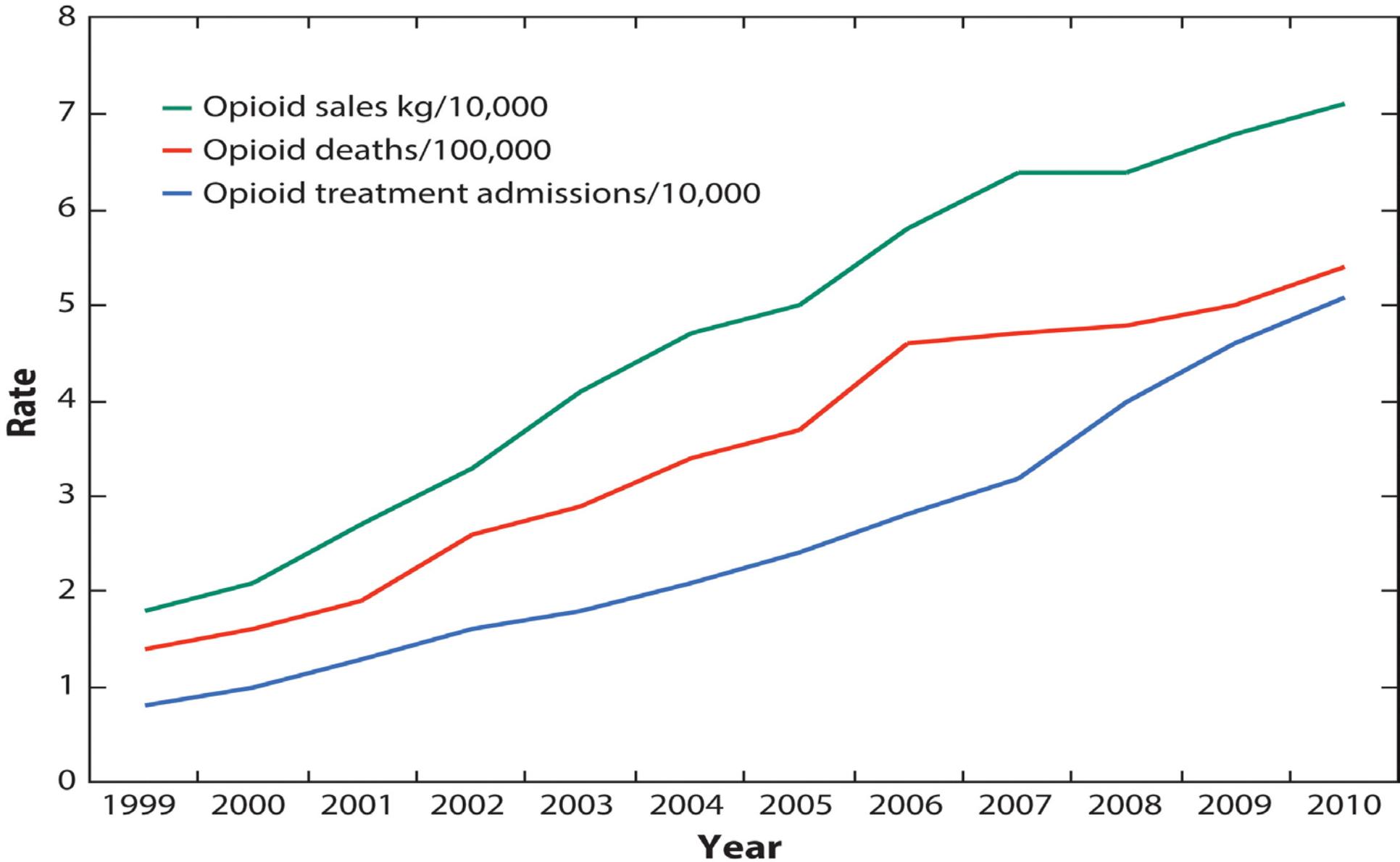
65%

Hydromorphone
Consumption

Feds: Doctor prescribed nearly 3 million opioid prescriptions over 19 months

👤 108PraiseEditor 🕒 December 22, 2017 📁 CNN_TOPSTORIES





Rise In Opioid Prescribing

- 1980 NEJM Letter to Editor
- Russell Portnoy MD
- Pain is the fifth vital sign promoted by American Pain Society 1996
- 2001 adoption by Joint Commissions Pain Management Standards
- Use of opioids to treat non malignant pain
- Long acting opioids non-addictive
- Big Pharma
- Oy Contin
- Patient satisfaction

Addiction Rare in Patients Treated with Narcotics

N Engl J Med 1980; 302:123 [January 10, 1980](#) DOI:
10.1056/NEJM198001103020221

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[Citing Articles \(257\)](#)

To the Editor:

Recently, we examined our current files to determine the incidence of narcotic addiction in 39,946 hospitalized medical patients¹ who were monitored consecutively. Although there were 11,882 patients who received at least one narcotic preparation, there were only four cases of reasonably well documented addiction in patients who had no history of addiction. The addiction was considered major in only one instance. The drugs implicated were meperidine in two patients,² Percodan in one, and hydromorphone in one. We conclude that despite widespread use of narcotic drugs in hospitals, the development of addiction is rare in medical patients with no history of addiction.

Jane Porter

Hershel Jick, M.D.

Boston Collaborative Drug Surveillance Program Boston
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**After surgery, more than two-thirds of patients
wind up with leftover prescription opioids, study
Finds**

**Surgical patients who are prescribed opioids for their
pain are frequently left with unused pills, a new study
finds. (John Moore / Getty)**

Picket et al, Jama Surgery 2017:152(1066-1071)

OxyContin

- OxyContin/Purdue Pharmaceuticals 1996
- Aggressively Marketed/Highly Promoted
- Sales from 48 million to 1.1 billion from 1996-2001
- Focus on high prescribers of opioids and PCP's
- Free time limited prescriptions
- Non-malignant pain/86% of pain market in 2000
- Minimized risk of addiction at 1%
- Highly abused/new formulation 2010

Feds: Doctor prescribed nearly 3 million opioid prescriptions over 19 months

👤 108PraiseEditor 🕒 December 22, 2017 📁 CNN_TOPSTORIES



BUSINESS DAY

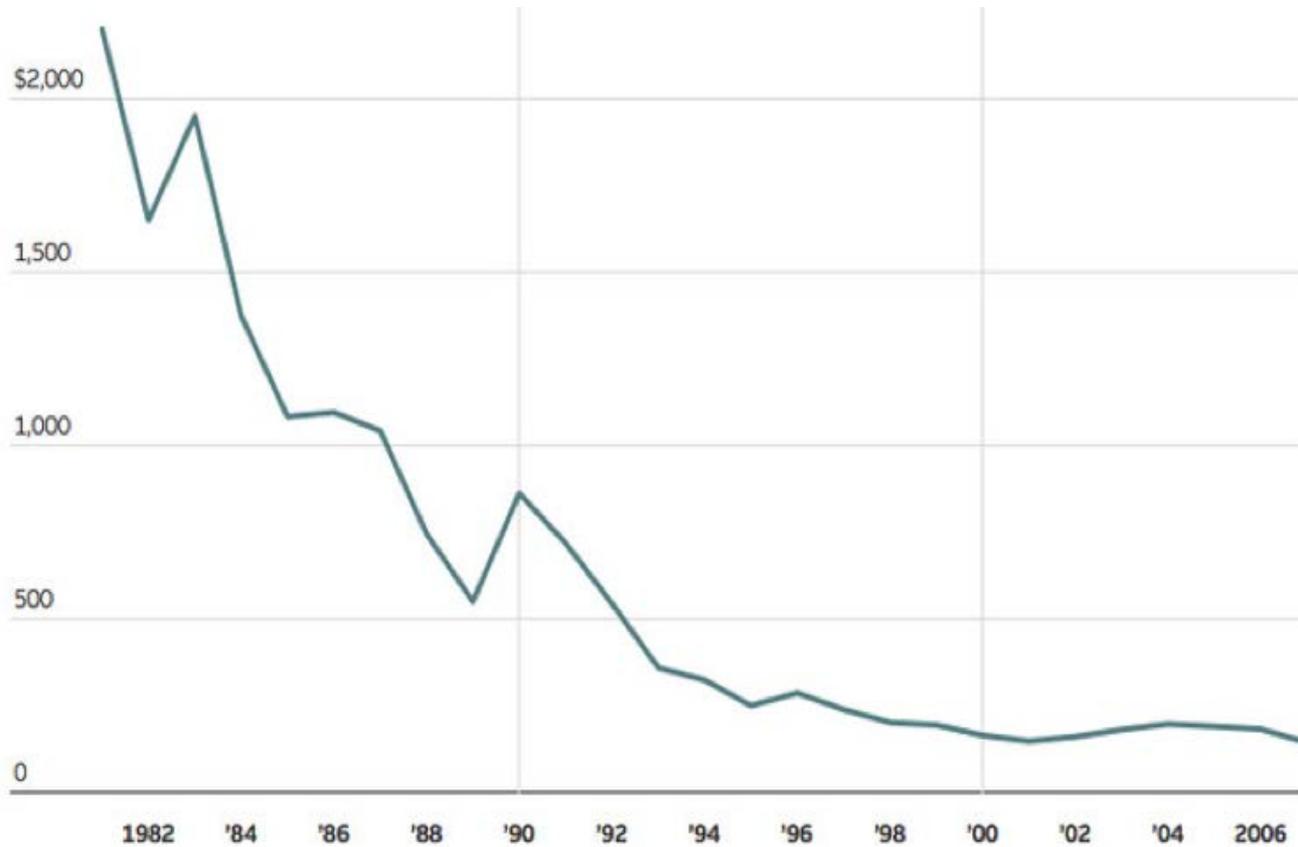
***In Guilty Plea, OxyContin
Maker to Pay \$600 Million***



Heroin

- Users of heroin have approximately doubled since 2008
- Price of heroin has decreased dramatically since the 1980's and continues to drop (halved again between 2010-14)
- Supply has increased/seizures were up close to 150% between 2010-15
- Source has changed and now 80% of US heroin is being imported from Mexico
- Potency of heroin purer and more potent

Median bulk price of heroin per pure gram



Source: Office of National Drug Control Policy

Prescription Opioid/Heroin Use Link

- During the 60's heroin epidemic most users often chose heroin as their first drug
- Currently most heroin users/80% start with the non-medical use of prescription opioids before switching to heroin
- Most current heroin users started with other drugs as adolescents before trying prescription opioids

Fentanyl Agonist at μ -opioid Receptor

- Fast acting and short duration
- 50 x > heroin, 100x > morphine.
- 2 Classes:
 - Pharmaceutical Fentanyl
 - Non-pharmaceutical Fentanyl- Illegally made.
- 2015 DEA alert: “Fentanyl is a threat to public health & safety”

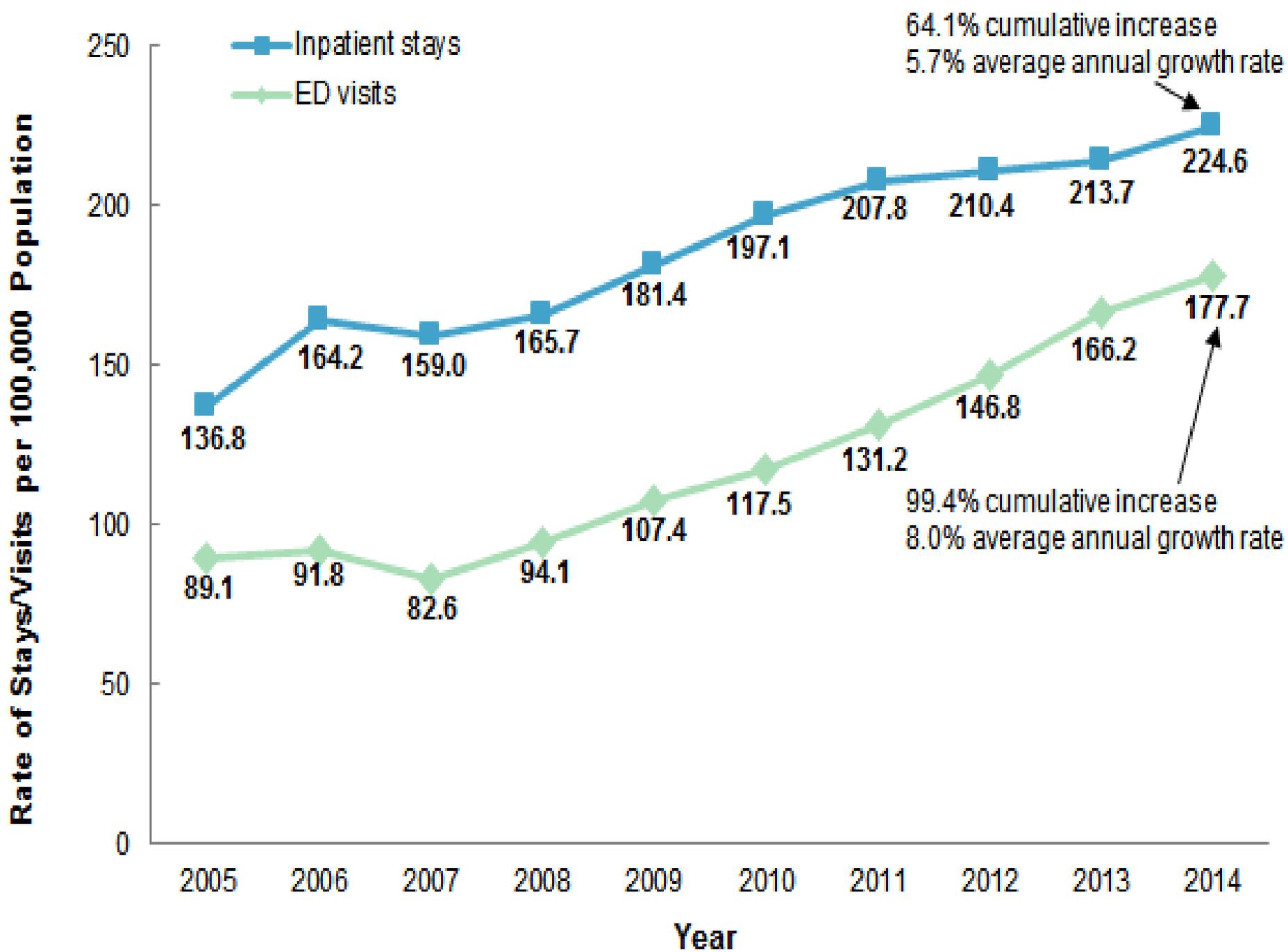
OPIOID POTENCY





Impact of Epidemic

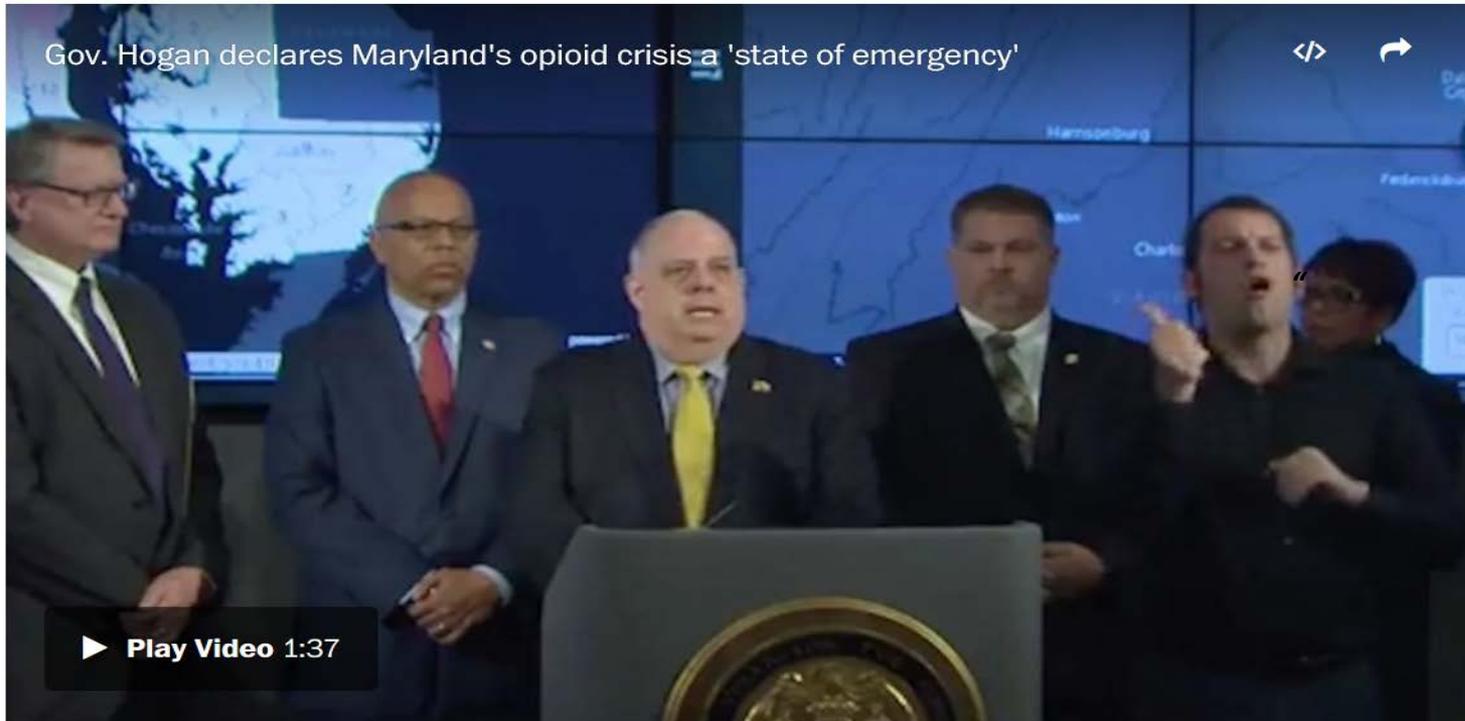
- Acute care medical use and costs
- Children and families of overdose victims
- Pregnant addicted women
- Significant increase in rates of Hepatitis
- Criminal justice system
- Foster care system



Maryland Politics

Maryland governor declares state of emergency for opioid crisis

”



At a news conference on March 1, Maryland Gov. Larry Hogan (R) said he will sign an executive order to declare the state's opioid crisis a "state of emergency," a legal step that will allow state agencies to better coordinate their response to the growing opioid addiction crisis. (Facebook/larryhoganmd)

By **Bill Turque** March 1 

*“Deaths from drug, alcohol overdoses skyrocket in
Maryland*

*Maryland health officials reported Thursday that
fatal overdoses are up 66 percent from 2015 to
2016.”*

–Meredith Cohn, The Baltimore Sun

Total drug and alcohol intoxication deaths for 2016

State: 2,089

Baltimore City: 694

Baltimore County: 336

Anne Arundel County: 195

Prince George's County: 129

Montgomery County: 102

Frederick County: 88

Harford County: 84

Washington County: 66

Allegany County: 59

Wicomico County: 48

Carroll County: 47

Howard County: 46

Charles County: 45

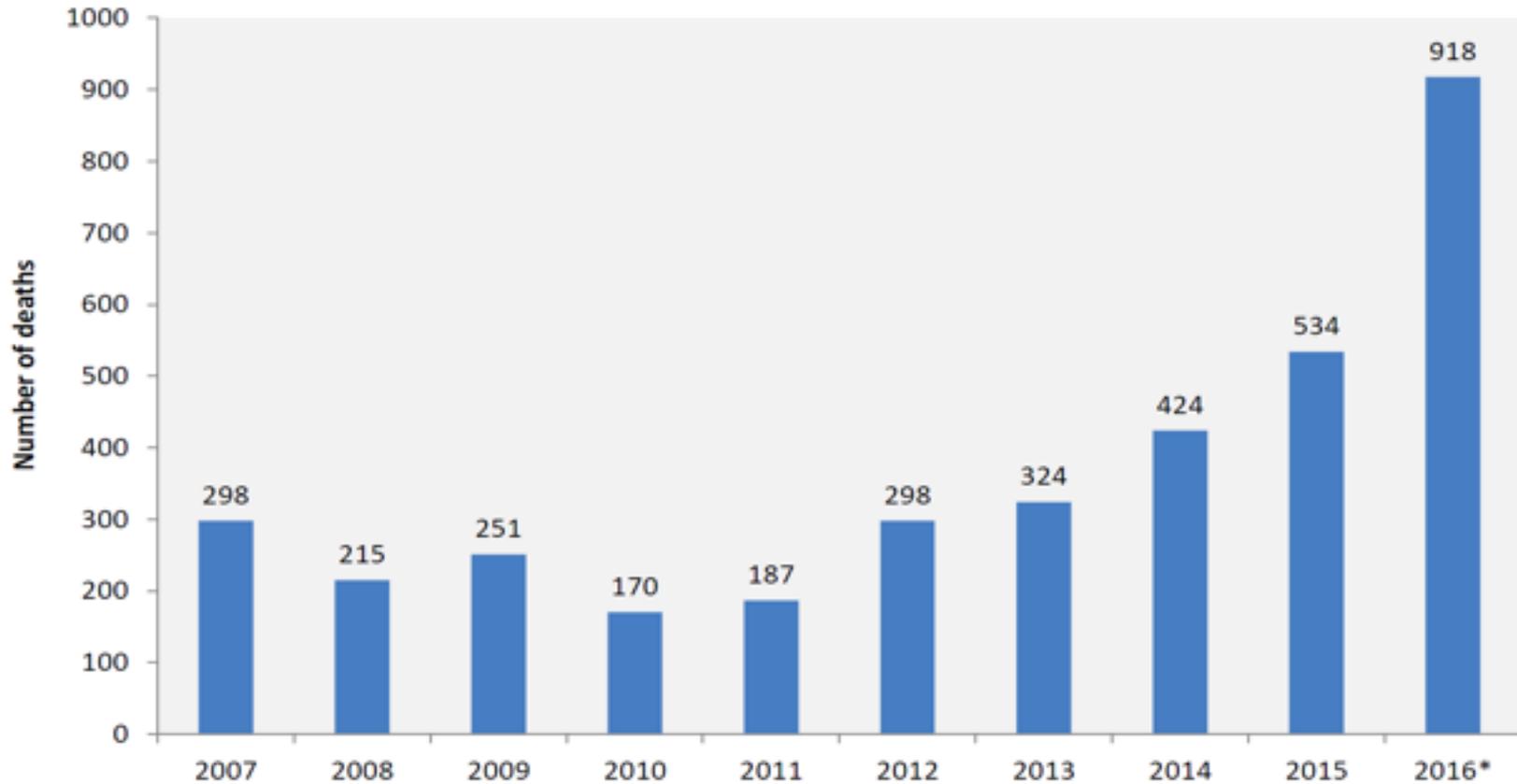
Cecil County: 30

Worcester County: 28

Source: Maryland Department of Health and Mental Hygiene

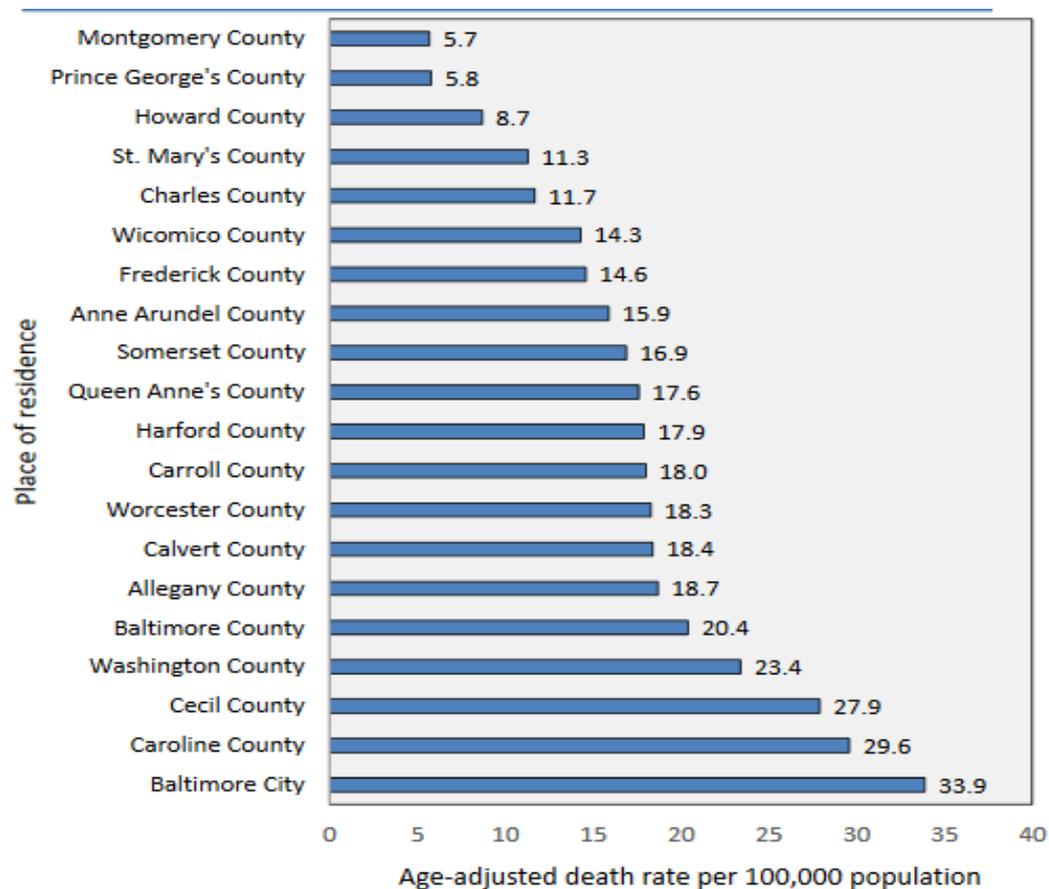
| Drug Type | United States | | Alaska | | Iowa | | Maine | | Maryland | | New York City | | Virginia | | Washington | |
|--|--------------------------------------|--------|--------|--------|--------|--------|--------|--------|----------|--------|---------------|--------|----------|--------|------------|--------|
| | Number of deaths ending 12 months in | | | | | | | | | | | | | | | |
| | Jan-16 | Jan-17 | Jan-16 | Jan-17 | Jan-16 | Jan-16 | Jan-16 | Jan-17 | Jan-16 | Jan-17 | Jan-16 | Jan-17 | Jan-16 | Jan-17 | Jan-16 | Jan-17 |
| Heroin (T40.1) | 13,219 | 15,446 | 35 | 50 | 40 | 49 | 418 | 679 | 421 | 595 | 339 | 451 | 323 | 285 | | |
| Natural and semi-synthetic opioids (T40.2) | 12,726 | 14,427 | 60 | 40 | 76 | 108 | 394 | 712 | 222 | 337 | 270 | 346 | 272 | 281 | | |
| Methadone (T40.3) | 3,276 | 3,314 | 13 | 11 | 22 | 34 | 179 | 200 | 125 | 177 | 73 | 70 | 119 | 127 | | |
| Synthetic opioids excluding methadone (T40.4) | 9,945 | 20,145 | 13 | 10 | 47 | 111 | 386 | 1,222 | 154 | 628 | 263 | 692 | 61 | 101 | | |
| Cocaine (T40.5) | 6,986 | 10,619 | 9 | 15 | 17 | 32 | 154 | 328 | 308 | 537 | 168 | 263 | 86 | 82 | | |
| Psychostimulants with abuse potential (T43.6) | 5,922 | 7,663 | 27 | 55 | 61 | 23 | 21 | 48 | 49 | 60 | 45 | 68 | 316 | 338 | | |
| Quality: % of overdose deaths with drug(s) specified | 83% | 85% | 90% | 99% | 90% | 99% | 99% | 99% | 98% | 100% | 98% | 99% | 95% | 93% | | |

Number of Heroin-Related Deaths Occurring in Maryland from January through September of Each Year*



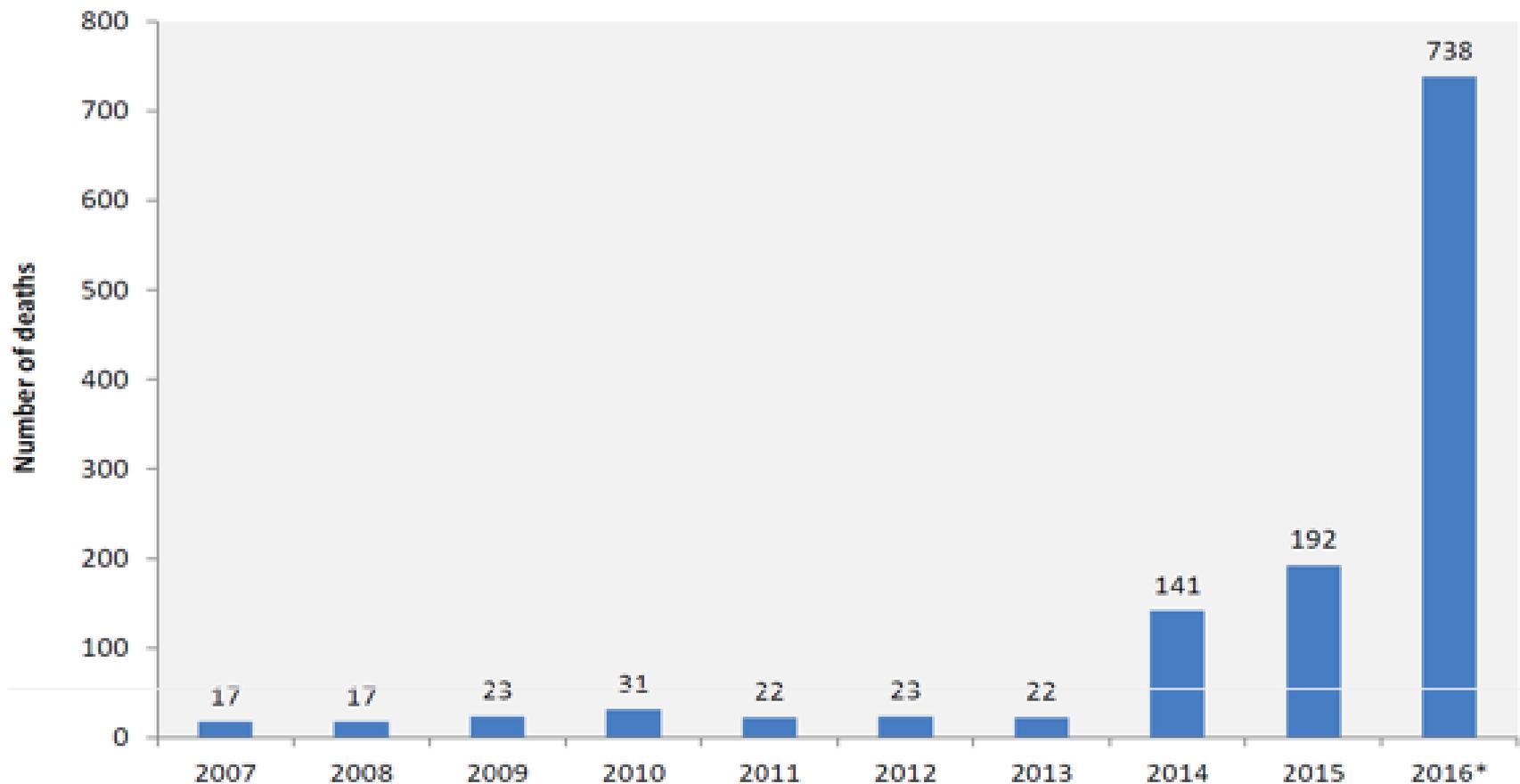
*2016 counts are preliminary.

Age-adjusted overdose death rates





Number of Fentanyl-Related Deaths Occurring in Maryland from January through September of Each Year*



*2016 counts are preliminary.



THE BALTIMORE SUN

Opioid users filling Maryland hospital bed and emergency rooms”



Opioid Usage Impact in Maryland

- Maryland ranked #1 among all states in 2014 in rate of opioid related inpatient hospital stays
- Maryland ranked # 2 among all states in opioid related Emergency Department visits

Rural America

- Disproportionally impacted
- Higher rates of opioid prescribing
- Demographic, economic and environmental factors
- Higher overdose rates
- Higher rates of neonates in withdrawal
- Physical jobs with more injuries
- Larger social networks

Rural Drug Overdose Deaths

1999

rural 4.0 per 100,000

urban 6.4 per 100,000

2004 rates were equal

2006 rural rates were higher (11.7 vs 11.5)

2015

rural 17.0 per 100,000

urban 16.2 per 100,000

“Deaths of Despair”

- 1999-2014 Increasing death rates in middle ages whites 45-54
- Decline in white working class w/o college degrees
- Suicides
- Overdoses
- Alcoholic liver disease

Is the US facing an epidemic of 'deaths of despair'? These researchers say yes

Anne Case and Angus Deaton's findings on mortality rates have made waves. A new paper looks deeper at a divided America - and its crisis of suicide, overdoses, and drug- and alcohol-fueled diseases



There appear to be two Americas: one for people who got a four-year college degree, and one for people who didn't. Photograph: WIN-Initiative/Neleman/Getty Images/WIN-Initiative RM

In 2015, the Princeton economists Anne Case and Angus Deaton's groundbreaking paper in the National Academy of Science's magazine reported that mortality rates among a section of Americans were suddenly surging - something unheard of in previous decades. Mortality was only rising in a certain group: middle-aged non-Hispanic whites without a college degree.

Case and Deaton have returned with a new paper published last week by the [Brookings Institute](#). It paints a grim picture of two Americas, in which one has

PUBLIC HEALTH & DESPAIR IN THE AMERICAN HEARTLAND

Causes, Solutions, and Complexity,
p.1533 and pp.1541–1567

PREEXPOSURE PROPHYLAXIS
Generalizing Access,
pp. 1534 and 1568–1581

COMMUNITY HEALTH WORKERS
Impact on Chronic Diseases,
pp. 1660 and 1668

COUNTING DEATHS
Versus Years of Life Lost,
pp. 1535 and 1653

Opioid overdoses shorten US life expectancy by 2½ months

By Nadia Kounang, CNN

Updated 12:33 PM ET, Tue September 19, 2017



More from CNN



More people
prescribed
treat their
any other

“...the stress and hopelessness faced by this population as they enter the labor market and are met with bleaker prospects and lower paying job opportunities relative to the prior generation . . . [has led] to compounding family dysfunction, poor social support, and addiction, conditions that are the drivers of ‘despair deaths’.”

Economic Decline of Rural America

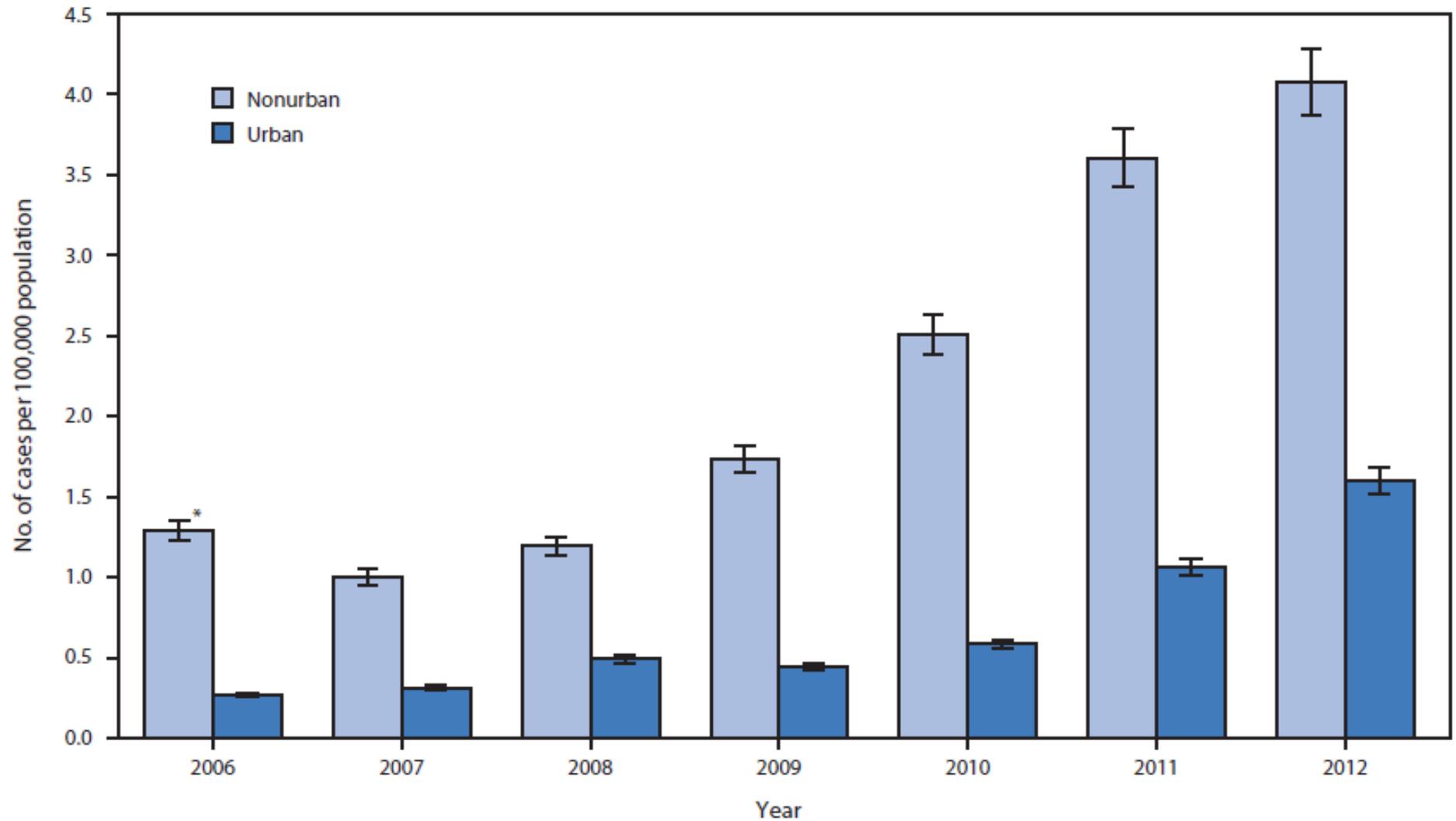
- Peak of rural economy in the early 1970's
- Loss of industrial jobs
- Migration of younger population
- Loss of population between 2010-16 for the first time in history
- Aging shrinking population
- Increase in poverty

Between 2000-2013 non metro counties with poverty rates of 20 percent or more rose from 20.6 to 32.5 percent

Overdose Deaths in Rural America

- Rural areas account for about 80% of American land mass
- Most overdoses occur at home
- Only 15-20 percent of EMT's are in these rural areas
- Basic EMT's are not able to administer naloxone in many areas

Increase in Hepatitis C Rates



Tackling the Epidemic

- Prevention
- Treatment/Recovery
- Enforcement

Primary Prevention Strategies

- Prescriber education on treatment of chronic pain
- Use of alternative modalities for pain management to reduce patient exposure to opioids
 - physical therapy
 - acupuncture
 - non-narcotic medication
- Returning unused opioid medications
- Education of adolescents of risk
- Identifying and closing opioid “pill mills”

Secondary Prevention Strategies

- Accurate diagnosis by medical providers
- PDMP
- Mandated checking of PDMP
- Collateral Information

Tertiary Prevention/Treatment: Focus of Treatment

Illicit Opioid Use

Other Drug Use

Overdose

Injection Drug Use

Medical Complications

Psychosocial Deterioration

Criminality

Infectious Disease Transmission

Medication Assisted Treatment

Combination of medications with counseling and behavioral therapies to treat substance use disorders

Medication Assisted Treatment

*Recommended as treatment for opioid use disorders
by the following:*

- United States Federal Government
- American Society of Addiction Medicine(ASAM)
 - World Health Organization
 - United Nations

Medication Assisted Treatment

“Access to medication-assisted treatment can mean [the] difference between life or death.”

Michael Botticelli, October 23, 2014 Director, White House Office of National Drug Control Policy

Medication Assisted Treatment: FDA Approved

- **Methadone** (Methadose; Dolophine)
- **Buprenorphine** (Suboxone; Suboxone Film; Subutex; Bunavail; Zubsolv)
- **Naltrexone** (Trexan; Vivitrol)

Medication Assisted Treatment

Only 40 percent of the 2.5 million Americans who could benefit from medication-assisted treatment are receiving it

Medication Assisted Treatment

- Decreases rate of overdoses
- Increases retention in treatment
- Decreases illicit opioid use
- Improves social functioning
- Decreases transmission of infectious diseases
- Decreases criminal activity

Barriers to Medication Assisted Treatment

Associated stigma:

- Addicted to another drug
- Covering up the addiction
- Personal bias based on experience
- Adherence to abstinence based treatment
- Negative attitudes towards individuals with addiction disorders.

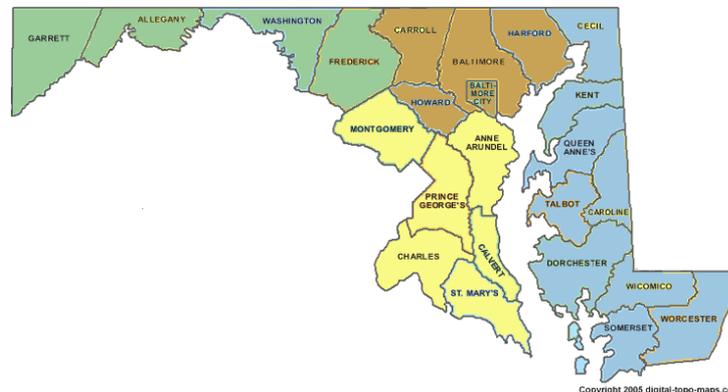
Barriers to Medication Assisted Treatment in Rural Areas

- Lack of OTPs/less than 5% in rural areas
- Methadone programs highly regulated; require frequent attendance
- Lack of buprenorphine waived prescribers
 - less than 2% in remote rural areas
 - 60% of US counties without a waived buprenorphine provider
- Geography/ transportation/weather
- Stigma related to receiving treatment in a specialized program (ie. a methadone program)

Tele & SUDs

ADVANTAGES

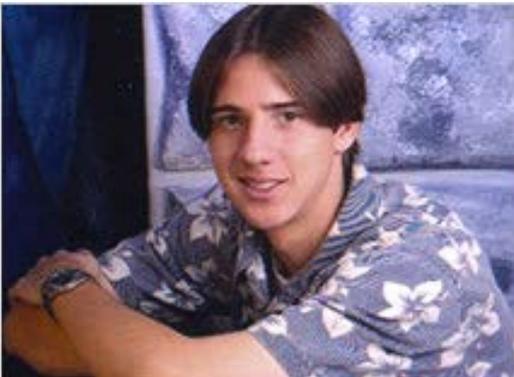
- **Chronic nature of substance use disorders**
- **Extends provider's availability**
- **Offers potential immediate resource**
- **Removing barrier of geography**
- **Removing barrier of stigma**

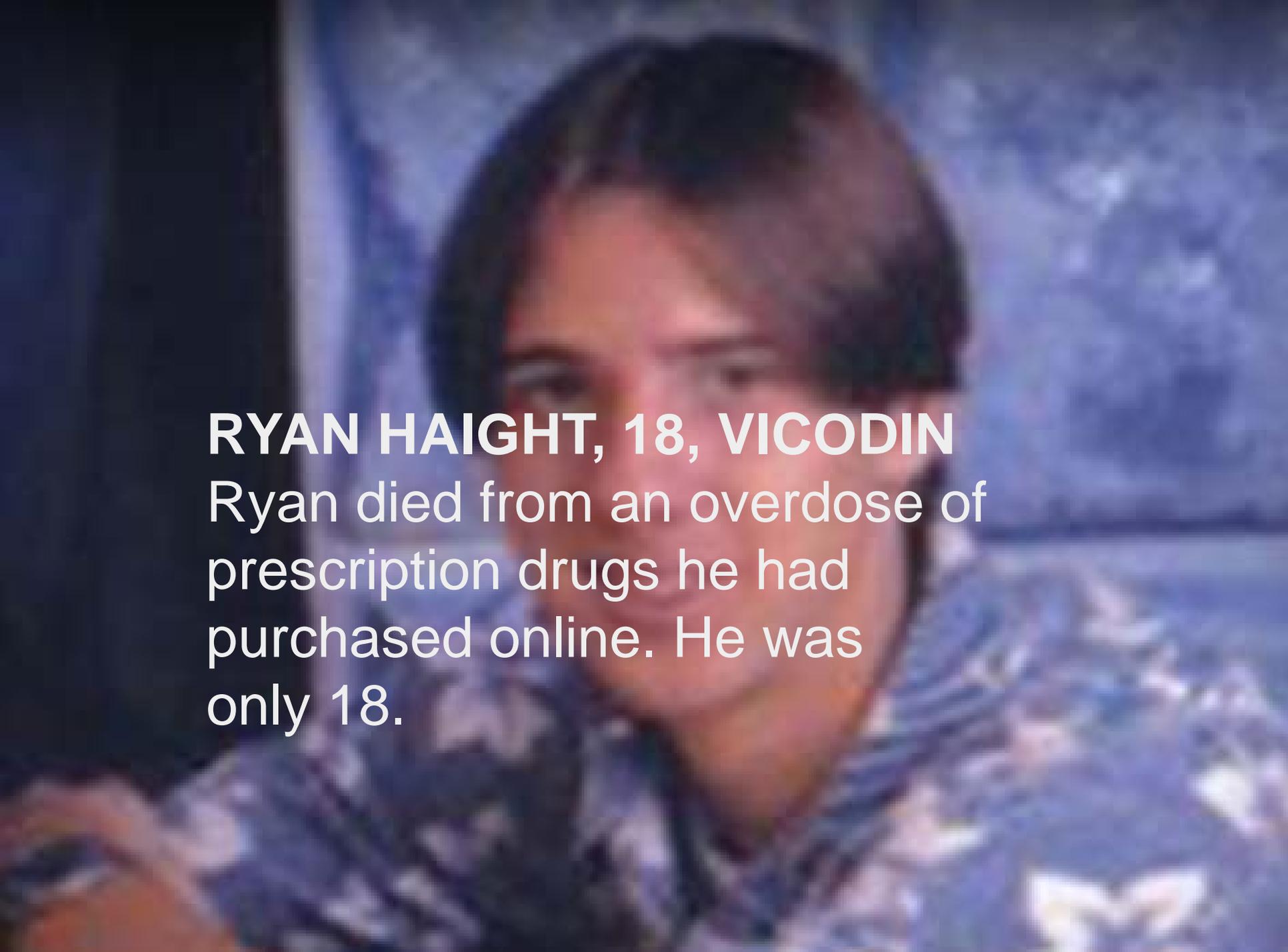


Tele & SUDs

LIMITATIONS

- **Disparate State Regulations**
- **Insurance Parity**
- **Federal Regulation of Controlled Substances**
 - **The Ryan Haight Online Pharmacy Consumer Protection Act of 2008**





RYAN HAIGHT, 18, VICODIN

Ryan died from an overdose of prescription drugs he had purchased online. He was only 18.

Ryan Haight Act

- RH Online Consumer Protection Act
- Targets Rogue “Form Only” Online Pharmacies
- Passed in 2008 and took effect in April 2009
- To prevent illegal distribution and dispensing of **controlled substances** via the internet

Ryan Haight Act

- No controlled substance may be delivered, distributed, or dispensed without a “Valid Prescription”
- “Valid Prescription” A prescription issued for a legitimate medical purpose in the usual course of professional practice
- A Prescription issued by a practitioner who has conducted. at least 1 “in-person medical evaluation” of the patient
- In-Person Medical Evaluation A medical evaluation that is conducted with the patient in the physical presence of the practitioner

Definition of Telemedicine

- A) is being conducted - while the patient is being treated by, and physically located in a DEA- registered hospital or clinic.

- B) is being conducted - while the patient is being treated by, and in the physical presence of, a DEA-registered practitioner.

Telemedicine Exemptions

- Indian Health Service or Tribal Organization
- Public health emergency declared by the Secretary of Health and Human Services
- Special Registration from the DEA
- Department of Veterans Affairs medical emergency

Other Factors to Consider

- State Laws
- Medical Board Requirements
- Proposed Federal Statutes
 - 1. Improving Access to Remote Behavioral Treatment Act
 - 2. Special Registration for Telemedicine Clarification Act

Maryland Addictions Consultation Service



Maryland's Behavioral Health Integration
Program for Opioid Use Disorders

*Offering consultation to medical providers
across Maryland*

Conclusion

- The US and the State of Maryland are in the midst of an Opioid Epidemic which is a major public health crisis
- There are extremely lethal synthetic opioids that are being abused that are causing soaring overdose death rates
- The over prescribing of opioid pain medications has been a major contributor to the crisis
- Effective life saving treatments do exist but there are significant barriers preventing patients from accessing them