36th Annual JOSE I. RICARD, MD

# FAMILY MEDICINE & SPORTS MEDICINE CONFERENCE

Presented by the Family Medicine Foundation of West Virginia

ESP SCHOLARSHIP FUND

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# Drug Diversion Training and Best Practice Prescribing of Controlled Substances

Tracy Hendershot, MD, FAAFP
WV Family Medicine Foundation
Huntington, WV
Thursday November 10th, 2022

# Credentials

**Dr. Hendershot, MD, DC, FAAFP** is a past Paul Ambrose Health Policy Fellow. He trained at Marshall University's Joan C. Edwards School of Medicine with completion of a family practice residency at the same.

He's worked in private practice as a chiropractor from 1996-2004, observing the WV opioid crisis develop from the vantage point of a non-prescribing provider. Since becoming an MD he's worked at the Ebenezer Clinic- a free clinic blocks from Huntington, WV's initial opioid epicenter. He's been CMO of a rural FQHC and Past Chair of the WV PCA CMO committee. He's now employed in the WVU Medicine Health System. At each location he's been handed his share of chronic opioid patients. He manages < 30 chronic opioid patients in the outpatient setting.

Finally, Dr. Hendershot has served as Past President of the WVAFP, currently serving as WVAFP Delegate to the AAFP Congress of Delegates. He also serves as chair of the WVAFP Legislative Committee.

# Disclaimers

Dr. Hendershot has **no** conflicts of interest or disclaimers to announce.

The use of brand specific names are not meant as an endorsement, But to ensure familiarity of the prescriber with the common opioid products.

I receive no renumeration from any manufacturer.

# Objectives

1. Review the climate and trends in WV that contribute to opioid overdose deaths.

2. Review best practice prescribing of controlled substances.

3. Review drug diversion concerns and best practices.

4. Encourage the appropriate use of Naloxone and MAT.

# Agenda

**The First 30  Hour:**

**Why We Are here**

The current situation

Assessment of Risk

Assessment of Need

BOP

Contracts

**The Hour After That:**

Prescribing Opioids

Opioid equivalents

Testing:
Urine
Pill counts

**The Last Hour:**

The New CDC Guidelines

The WV Opioid Reduction Act

# Why We Are Here…its required

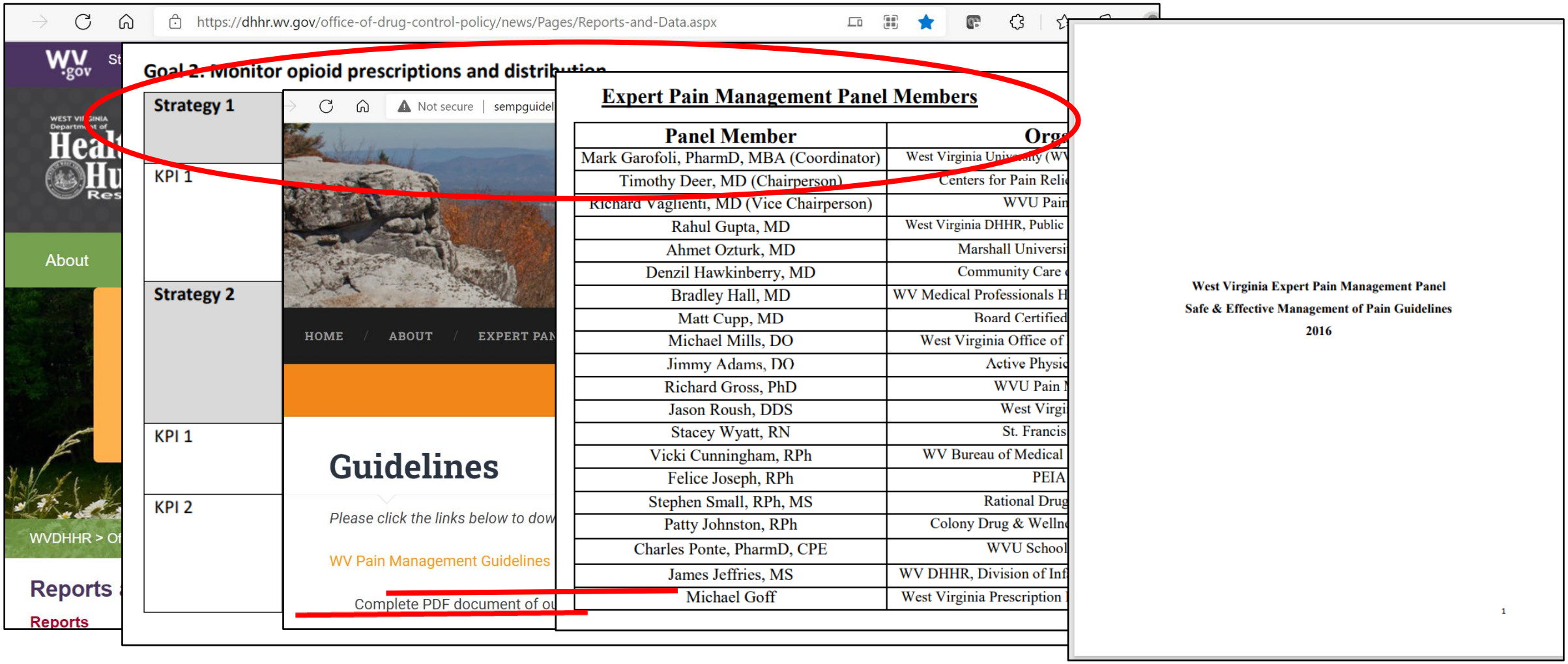
**Mandatory Controlled Substance CME for all Licensees**

**(SB 437 passed 2012)**

"Physicians who have prescribed, administered, or dispensed any controlled substance in any jurisdiction in the two year license cycle preceding renewal, are required to complete three hours of Board-approved CME in drug diversion and best practices prescribing of controlled substances **during each reporting period. This is not a one-time only requirement.**

A physician who has **not prescribed any controlled substances whatsoever during the reporting period may seek a waiver** of this requirement by attesting on the renewal application that he or she has not prescribed, administered or dispensed any controlled substances whatsoever since July 1, 2016."

# Why We Are Here…its a state objective




http://sempguidelines.org/wp-content/uploads/2016/09/WV-Pain-Management-Guidelines-No-Appendix.pdf

# WVBM and WVBOM Approved Courses:

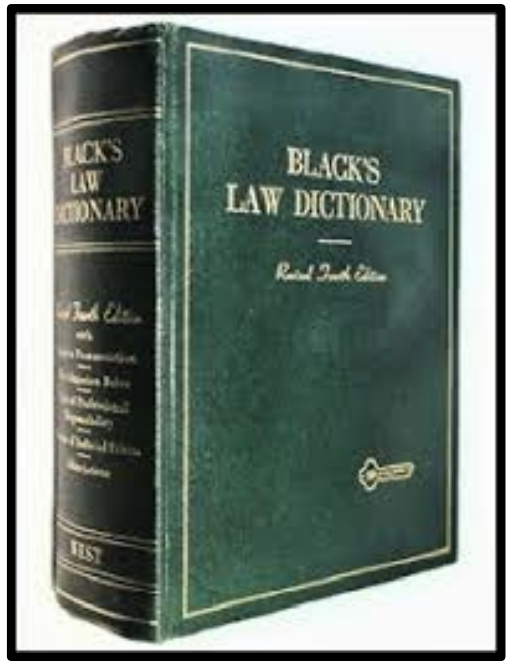
The Boards of Medicine maintain a list of all three-hour courses that have been approved..


-Thank you for attending **this** lecture

https://wvbom.wv.gov/Cont_Med_Education.asp
https://www.wvbdosteo.org/article.asp?action2=showArticle&id=14&ty=CTTS

# Common Terms:

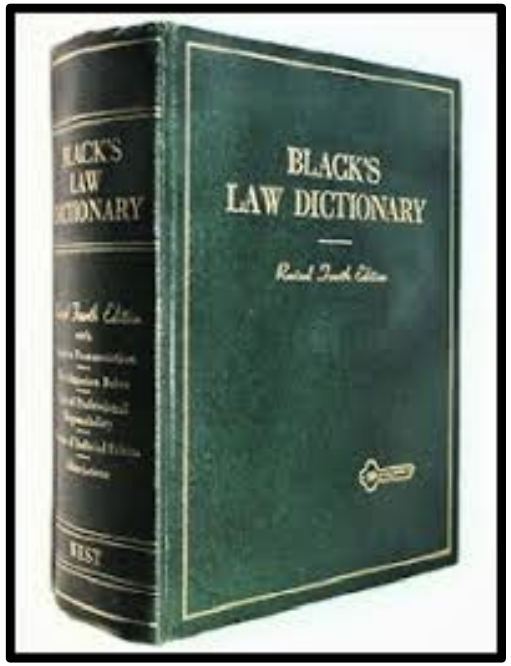
- **Opiates:** refer to **natural** opioids such as heroin, morphine, and codeine.
- **Opioids:** refers to **all** natural, semisynthetic (hydrocodone, oxycodone, hydromorphone..) , and synthetic opioids (excludes methadone, includes tramadol and fentanyl)
- **MAT:** Medication assisted treatment for opioid use disorder when combined with counseling and behavioral therapies.
- **MME:** Morphine milligram equivalents, accounts for different drug types and strengths.




cdc.gov/drugoverdose/opioids/terms.html

# Common Terms:

- **Illicit drugs:** drugs prohibited by law or illicitly manufactured drugs, i.e. fentanyl, ecstasy.
- **Drug Misuse:** The use of drugs in a manner other than prescribed by a doctor.
- **Tolerance:** Reduced response to a drug with repeated use.
- **Dependence**: adaption to a drug that produces symptoms of withdrawal when drug is stopped.
- **Drug addiction**: Preferred term is **Substance Use Disorder**, a problematic pattern of opioid use that causes significant impairment or distress.
  - Unsuccessful efforts to reduce.
  - Use resulting in personal, social, and/or work problems



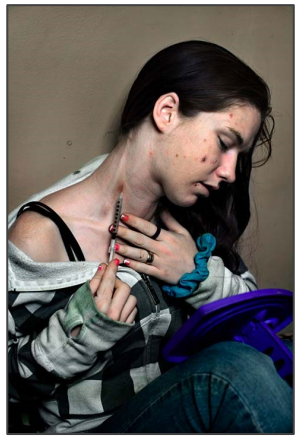

https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.legalgenealogist.com%2F2017%2F03%2F24%2Fdont-buy-that book%2F&psig=AOvVaw0THAzloUqGPxH7vXfhUEzU&ust=1603140274387000&source=images&cd=vfe&ved=2ahUKEwivvvSFgb_sAhVFR6wKHfrkDtkQr4kDegUIARDoAg

# The Opioid Crisis

Nearly **841,000 people have died since 1999** from a drug overdose.

In 2019, **70,630** drug overdose deaths occurred in the United States.

The age-adjusted rate of overdose deaths **increased by over 4%** from 2018 (20.7 per 100,000) to 2019 (21.6 per 100,000).

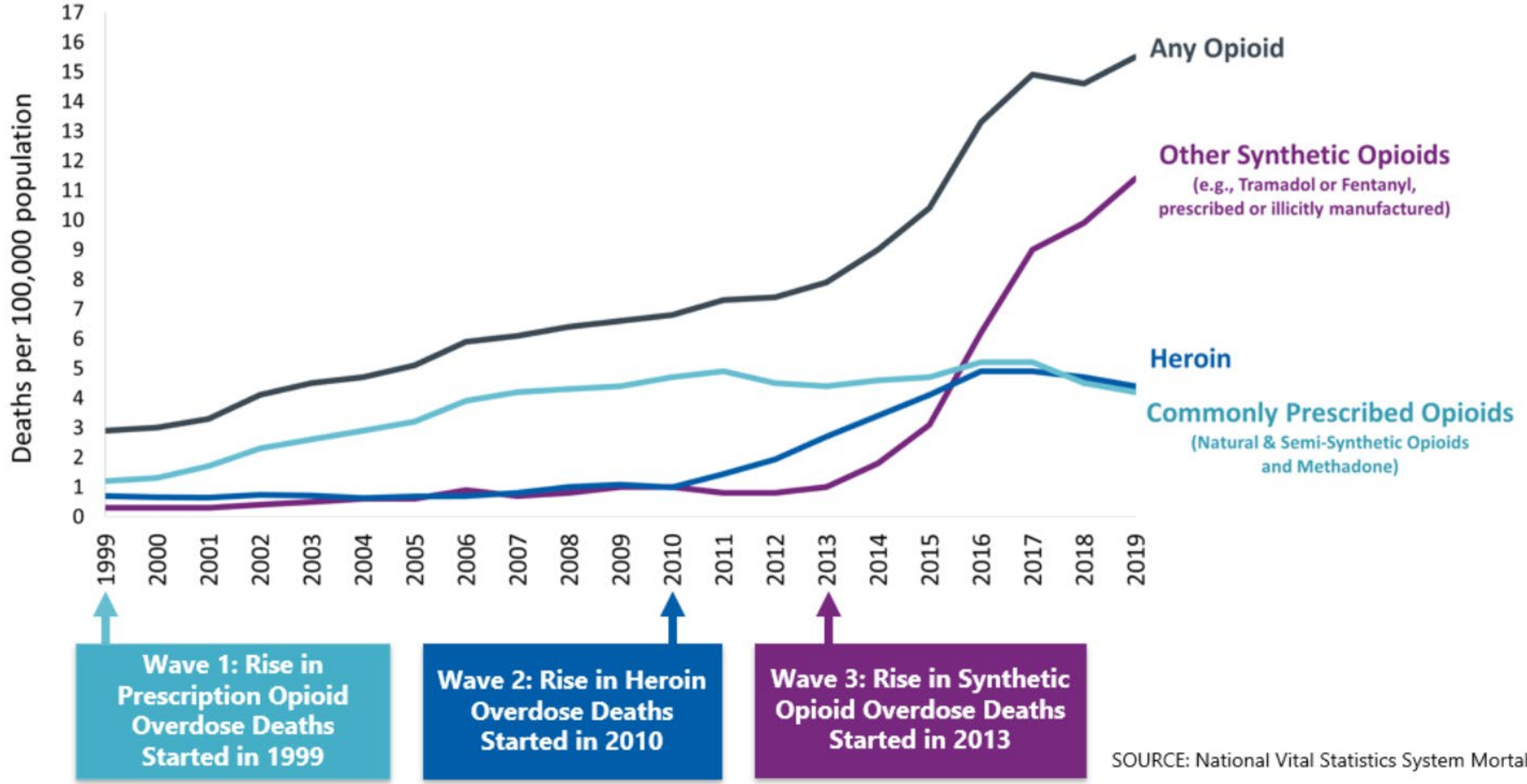


https://www.cdc.gov/drugoverdose/deaths/index.html updated 4/3/22

https://www.featureshoot.com/2012/09/photographing-a-heroin-addict-through-despair-horror-and-hope/

https://www.pri.org/stories/2016-04-27/photos-getting-know-person-behind-heroin-addiction. Aaron Goodman

# Three Waves of the Rise in Opioid Overdose Deaths




SOURCE: National Vital Statistics System Mortality File.

# Current National Trends

**The COVID-19 pandemic worsened the Opioid Crisis.**

While there was a **4.6% drop** from 2017 (21.7 per 100,000) to 2018 (20.7 per 100,000).

Recent provisional data available from the CDC indicated that approximately 81,230 drug overdose deaths occurred in the United States in the 12-months ending in May 2020.

**This represents a worsening of the drug overdose epidemic in the United States and is the largest number of drug overdoses for a 12-month period ever recorded.**

**Synthetic opioids (other than methadone)—remain the main driver of drug overdose deaths.**

67.0% of opioid-involved overdose deaths involve synthetic opioids.

https://www.cdc.gov/drugoverdose/data/statedeaths.html https://emergency.cdc.gov/han/2020/han00438.asp

# Current National Trends

In 2020, WV lead the nation with **the highest rates of drug overdose deaths**.

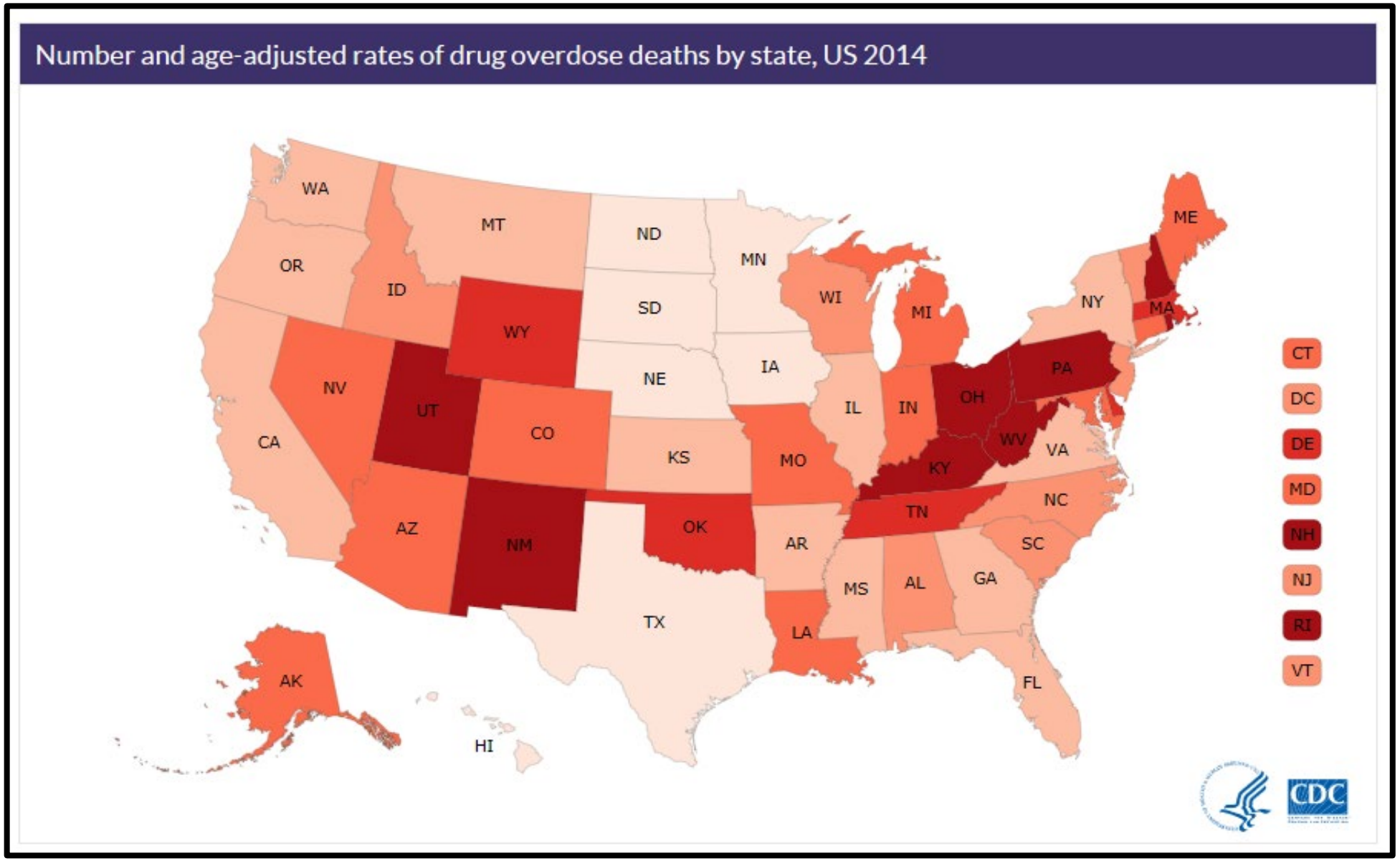
**West Virginia (81.4 per 100,000 or 1330 persons ),**
District Of Columbia (58.1 per 100,000 or 424 persons),
Kentucky (49.2 per 100,000 or 2083 persons),
Delaware (47.3 per 100,000 or 444 persons ),
Ohio (47.2 per 100,000 or 5204 persons),
Tennessee (45.6 per 100,000 or 3034 persons), and
Maryland (44.6 per 100,000 or 2771 persons).
California and Florida lead actual losses with 8908 and 7231 respectively

https://www.cdc.gov/drugoverdose/data/statedeaths.html

West Virginia

**35.5** per 100,000

**627** total deaths

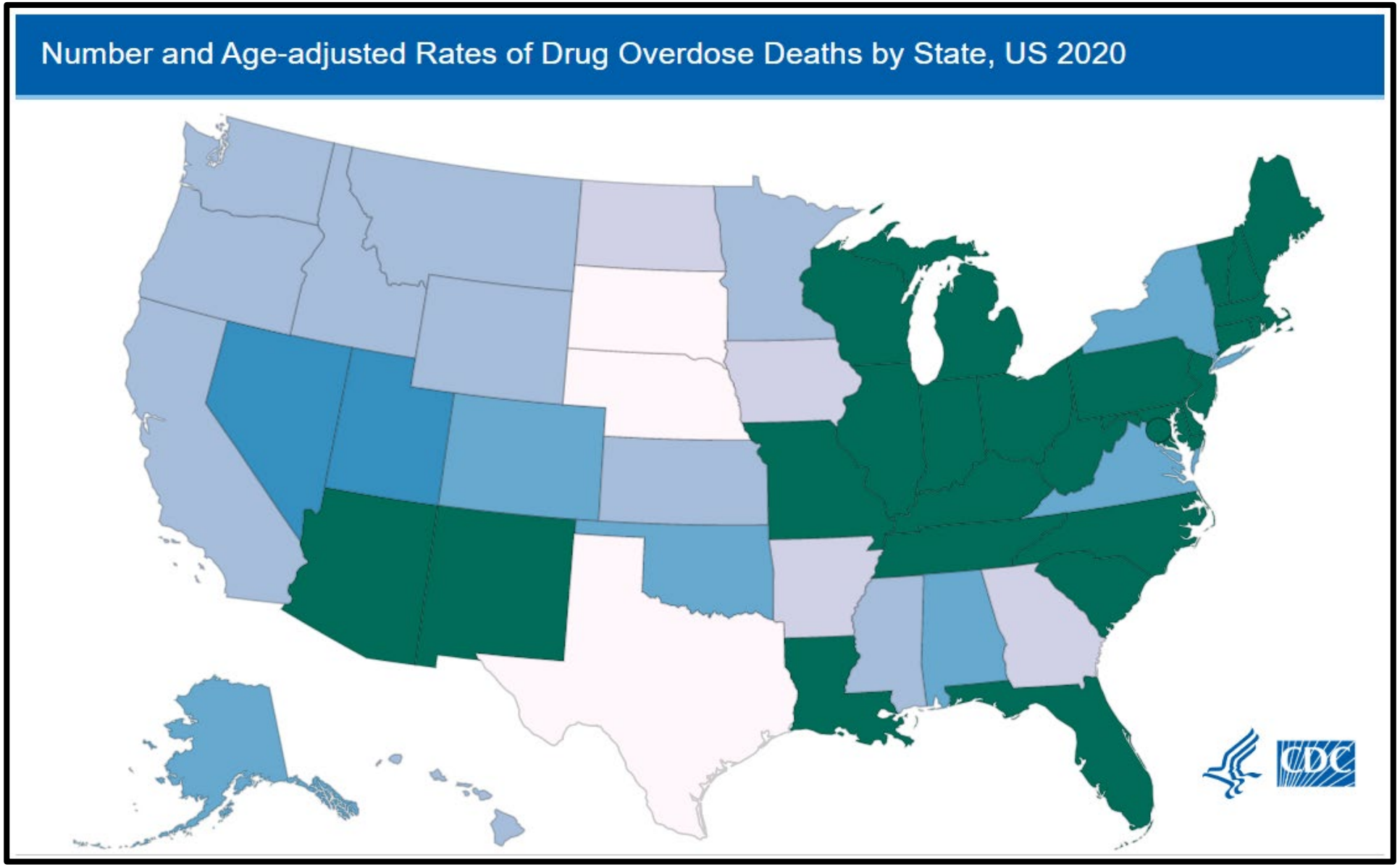



https://www.cdc.gov/drugoverdose/data/statedeaths.html

West Virginia

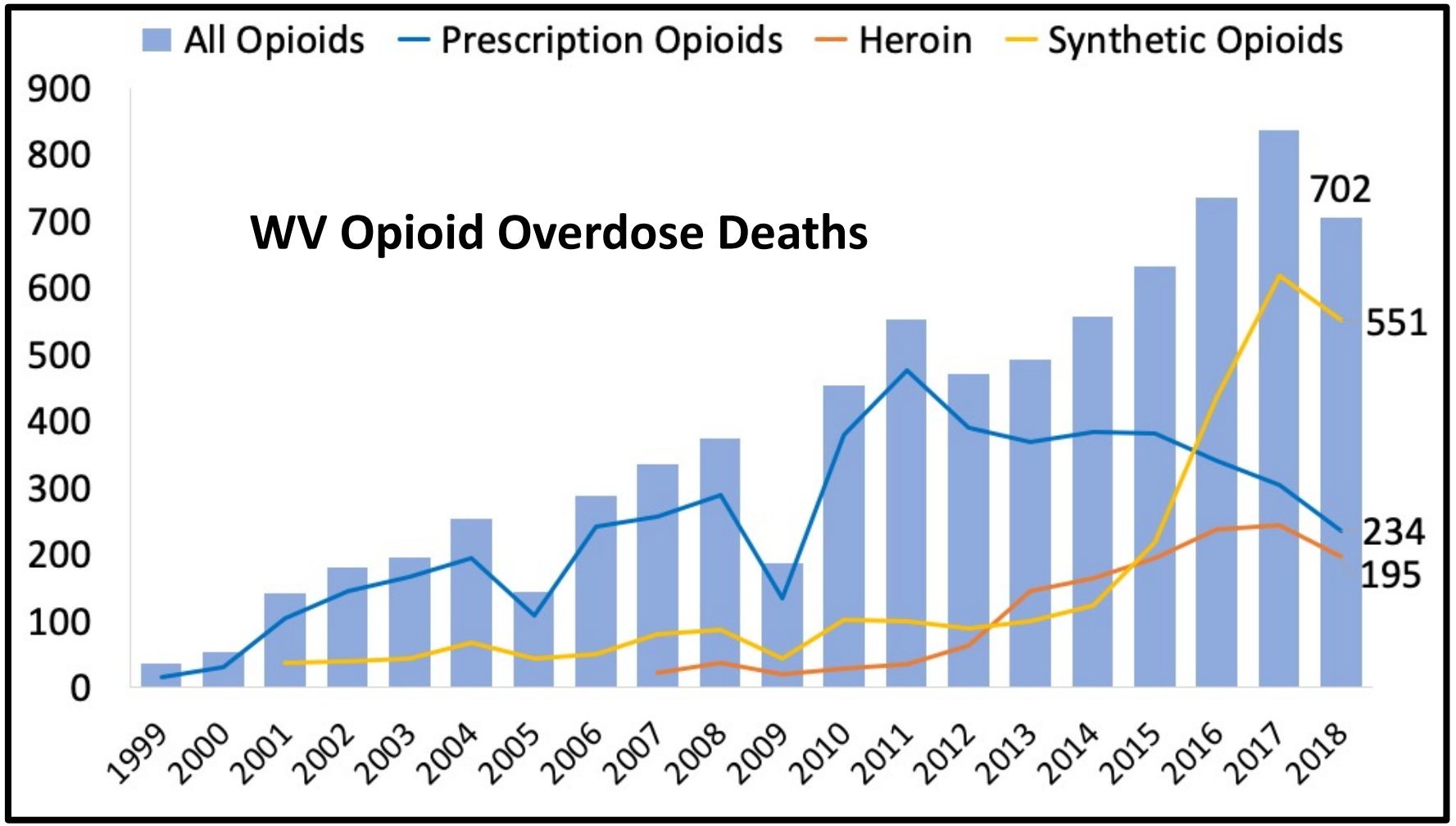
**81.4** per 100,000

**1330** total deaths




https://www.cdc.gov/drugoverdose/deaths/2019.html

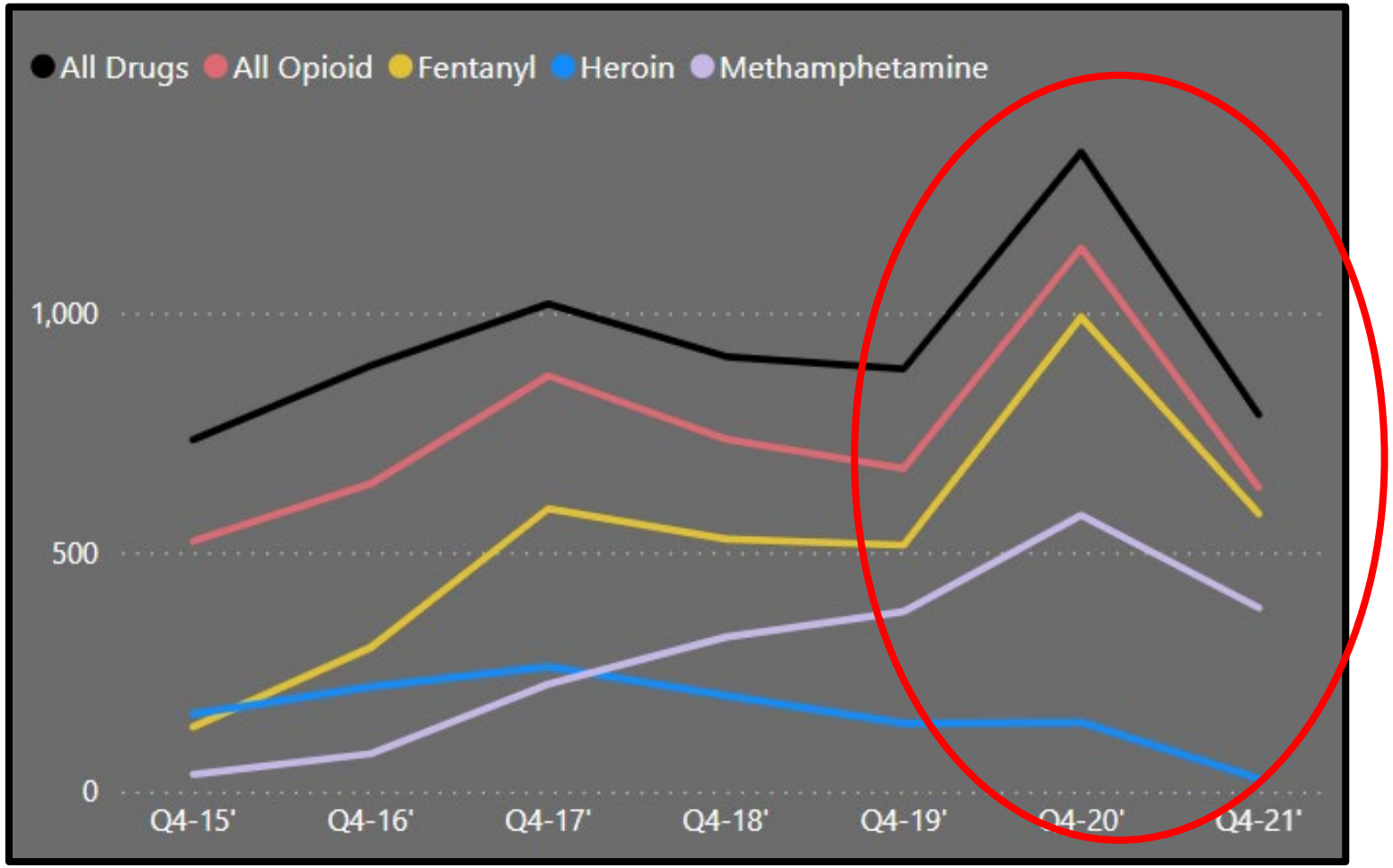
# Pre-COVID WV Trends




..WV follows national picture.

https://www.cdc.gov/drugoverdose/data/statedeaths.html

# Recent WV Overdose Trends



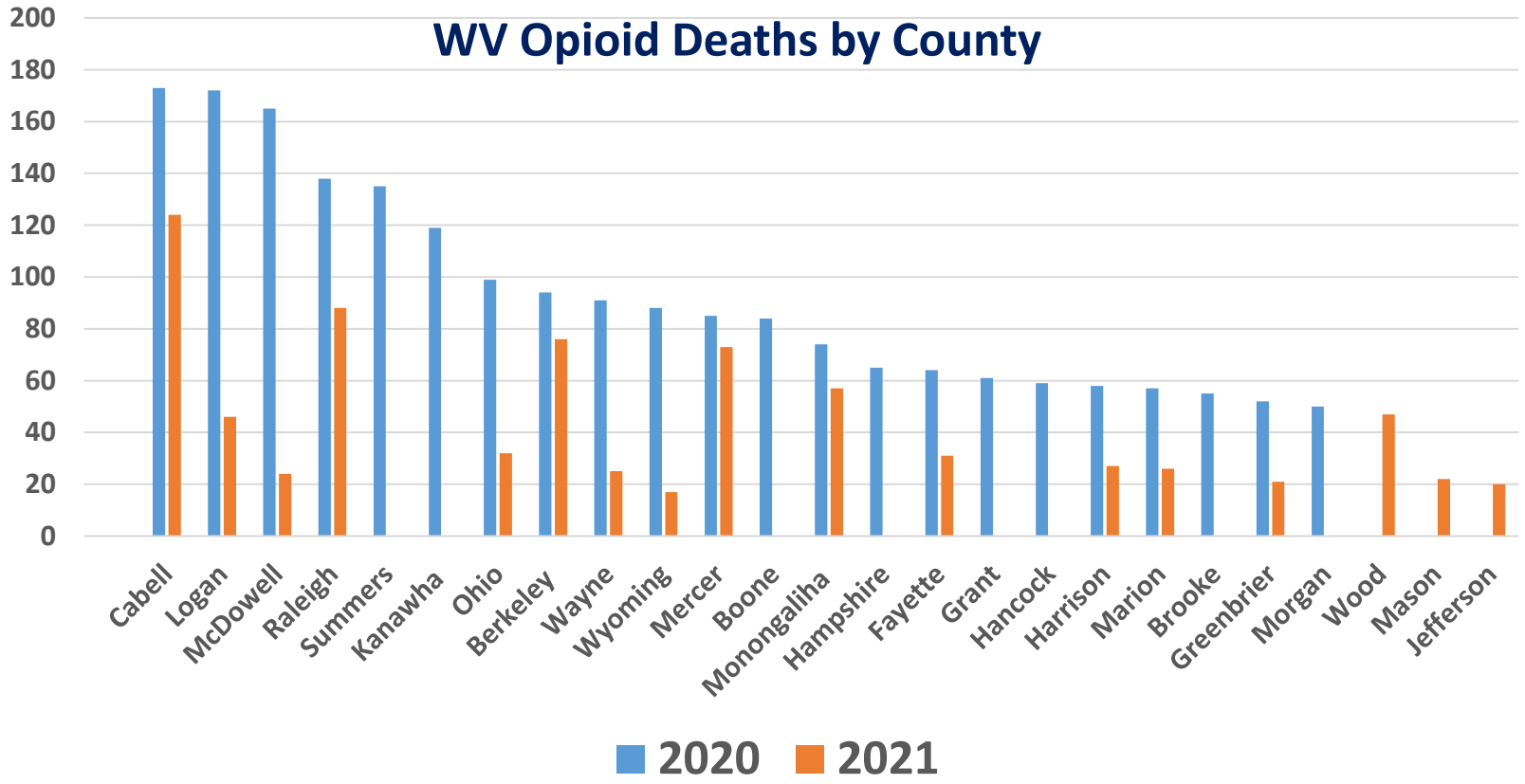

CDC data has lagged; and,

State data may not be directly comparable.

Regardless, **The COVID crisis resulted in an increase in opioid overdosing.**

https://dhhr.wv.gov/office-of-drug-control-policy/datadashboard/Pages/default.aspx 3/19/22

# WV Opioid County Deaths



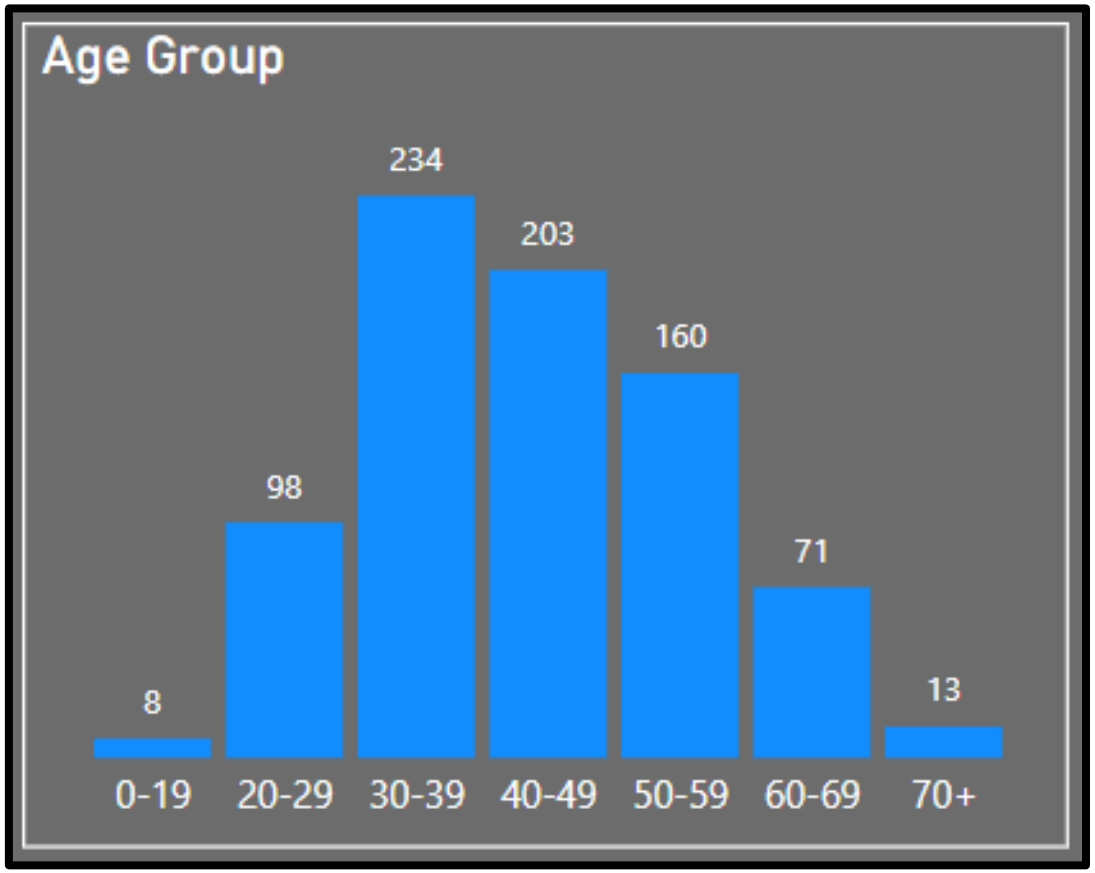

**Not CDC Data.**

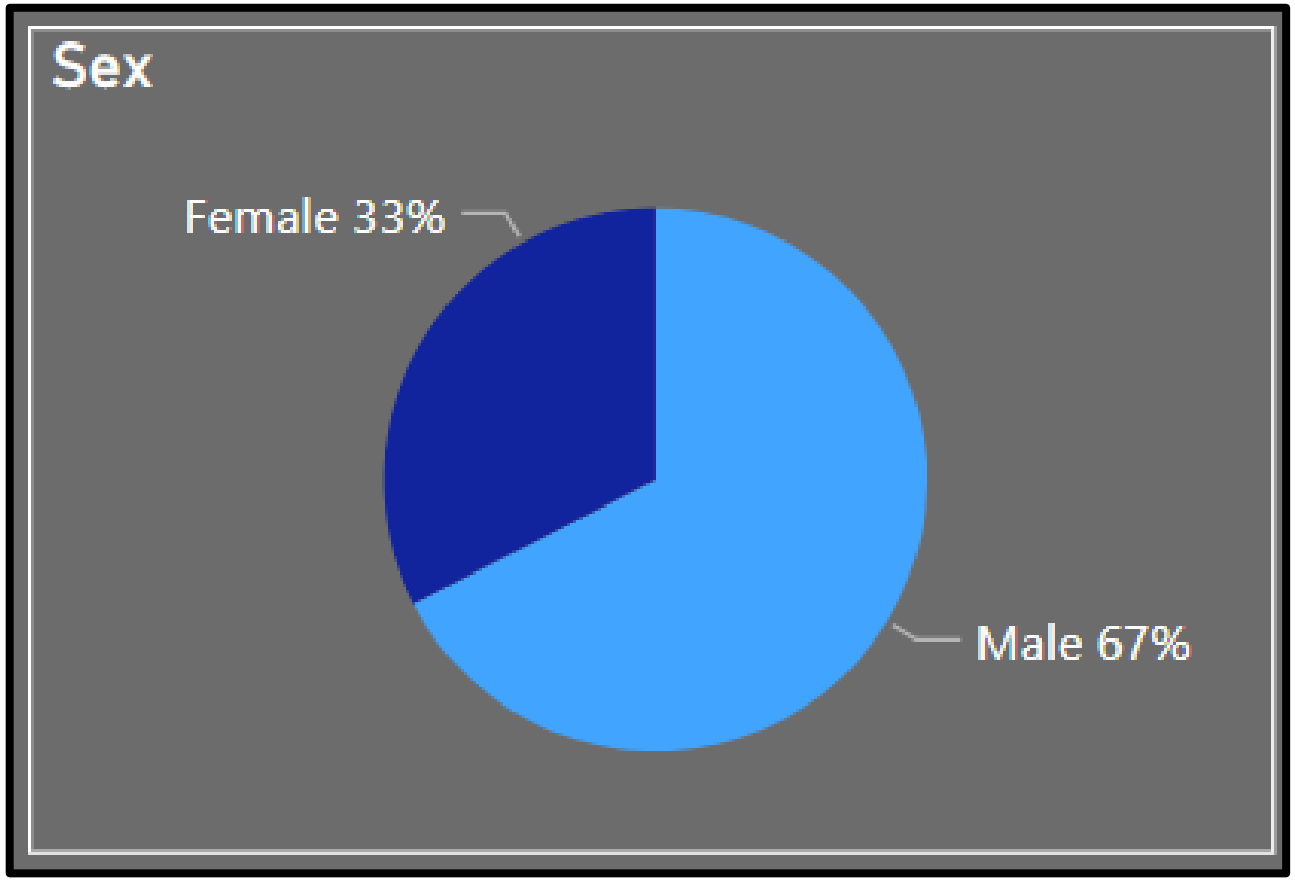
2021 data is incomplete as pending deaths have not been confirmed.

https://dhhr.wv.gov/office-of-drug-control-policy/datadashboard/Pages/default.aspx 9/17/21 and 3/19/22

# WV Demographics 2021

WV Fatal Overdoses by age and sex




https://dhhr.wv.gov/office-of-drug-control-policy/datadashboard/Pages/default.aspx 3/19/22

# Fentanyl is Leading  Opioid Deaths

**It continues to be illegal opioid deaths, not prescription opioids, that drive the current national epidemic.**

- 72.9% of overdose deaths are from synthetic opioids.
- Deaths involving psychostimulants such as **cocaine and methamphetamine are increasing** with and without synthetic opioid involvement.

**Drug overdose deaths have shifted geographically.**

- From 2018 to 2019, the largest increase in death rates involving synthetic opioids occurred in the West (67.9%).
- The largest increase in death rates involving psychostimulants occurred in the Northeast (43.8%).

https://www.cdc.gov/drugoverdose/deaths/index.html updated 4/3/22

Mattson CL, et al Trends and Geographic Patterns in Drug and Synthetic Opioid Overdose Deaths — United States, 2013–2019. MMWR Morb Mortal Wkly Rep 2021;70:202–207.

# Current National Trends

**The overall national opioid prescribing rate has declined from 2012 to 2029.**

In 2012 the national rate was **81.3** prescriptions per 100 persons.
In 2020 the rate had fallen to **43.3** prescriptions per 100 persons.

**However,**
the prescribing rates continued to remain high in a few counties across the country.

**In 3.6% of U.S. counties the rate is still 100:100**

(this is a drop from 11% in 2018)

https://www.cdc.gov/drugoverdose/rxrate-maps/index.html, updated 3/20/22

# WV Trends?

**In 2020, West Virginia providers wrote:**

53.7 opioid prescriptions for every 100 persons,

(**The 13th highest rate in the U.S**. that year)

**Positive news?**

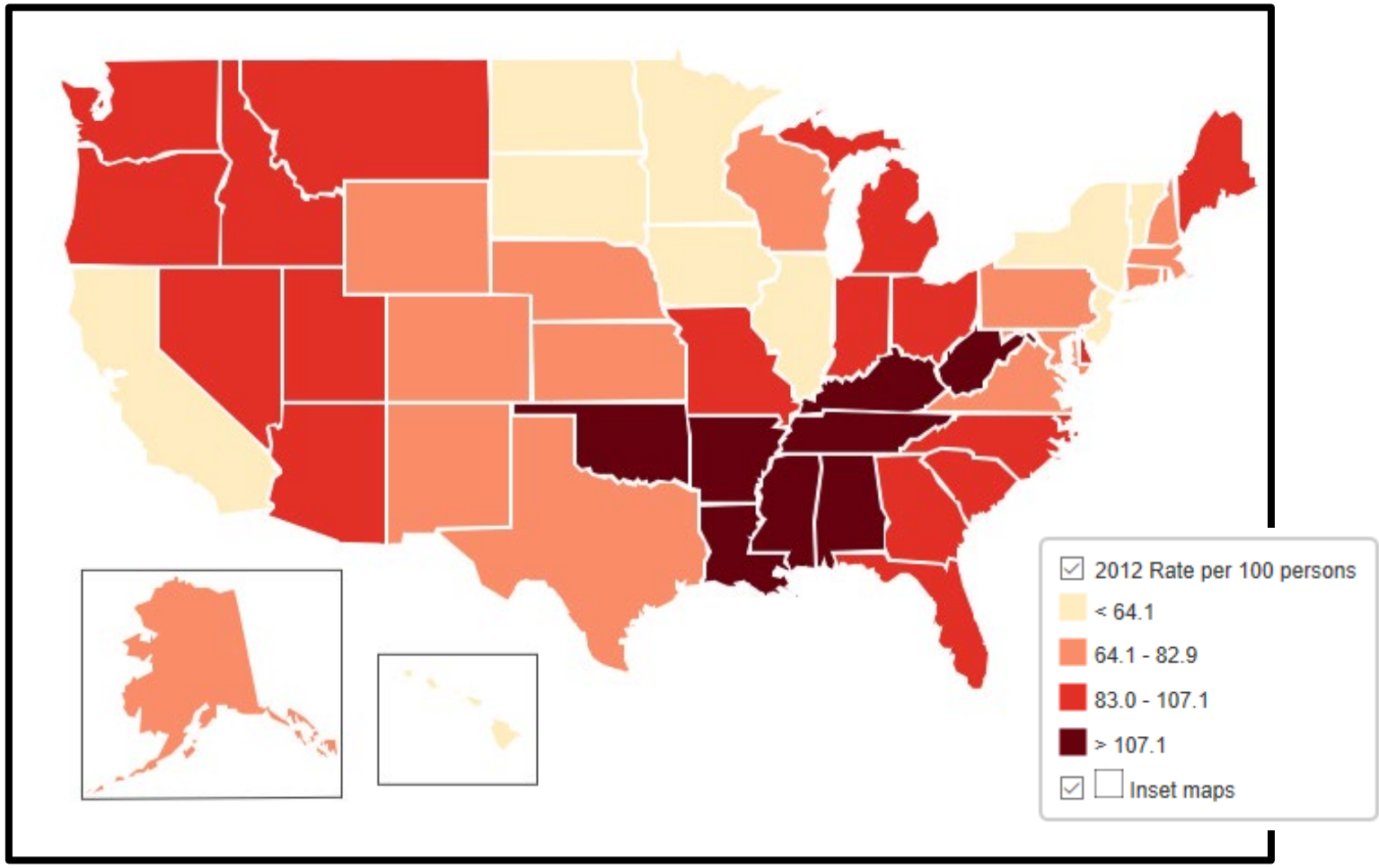
**This was the lowest WV rate since data became available in 2006**

https://www.drugabuse.gov/drug-topics/opioids/opioid-summaries-by-state/west-virginia-opioid-involved-deaths-related-harms
U.S. State Opioid Dispensing Rates, 2020 | Drug Overdose | CDC Injury Center updated 3/20/22

# U.S. State Prescribing Rates, 2009

West Virginia

**146.9**

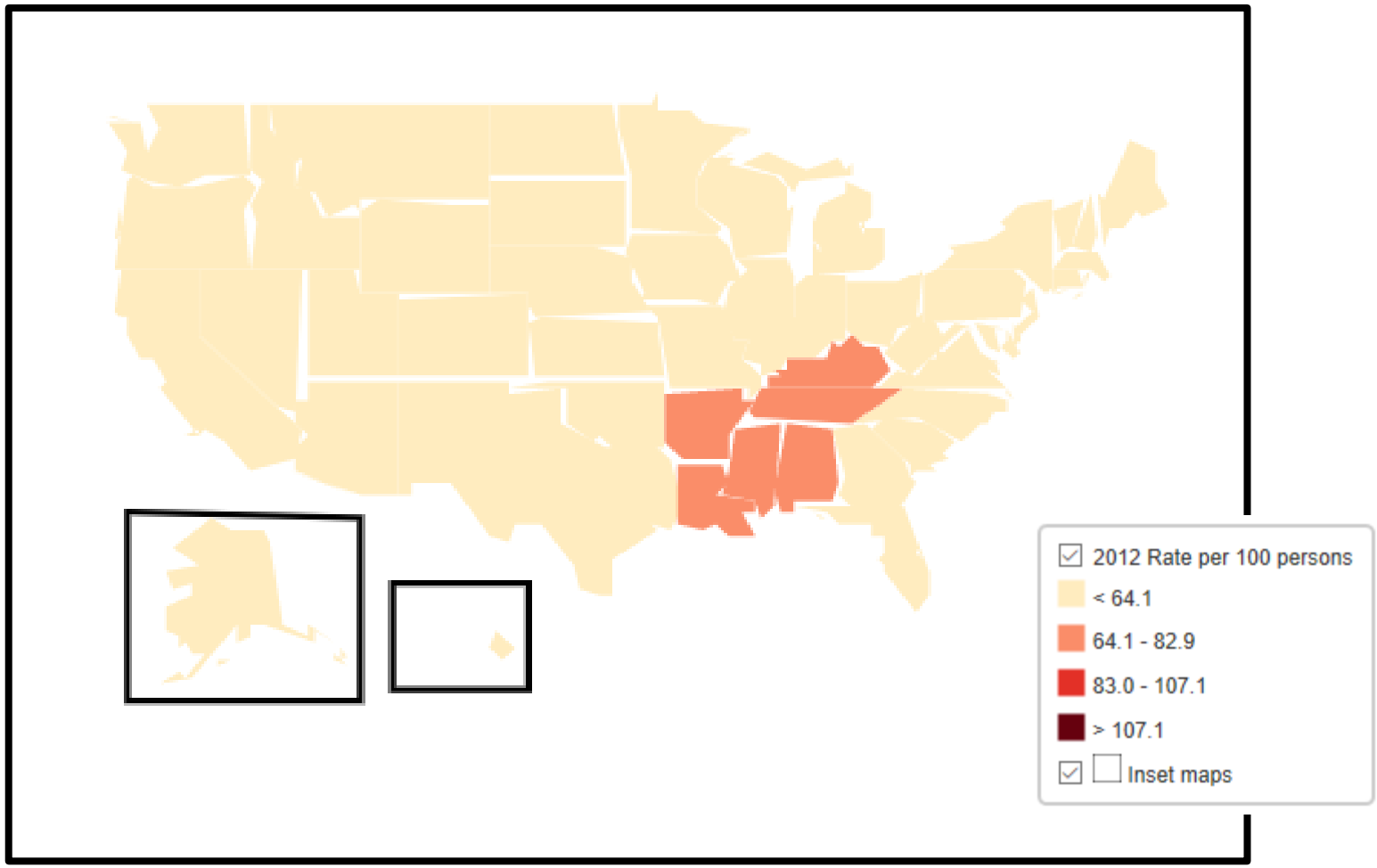



https://www.cdc.gov/drugoverdose/maps/rxstate2009.html

# U.S. State Prescribing Rates, 2020

West Virginia

**53.7**




https://www.cdc.gov/drugoverdose/maps/rxstate2018.html 3/19/22

# WV County Rx Data

By **2009 individual WV county physicians began to respond** to the crisis.

At that time, **Mingo county** lead the state in Rx rates-With **nearly triple** the rate of other high prescribing counties.

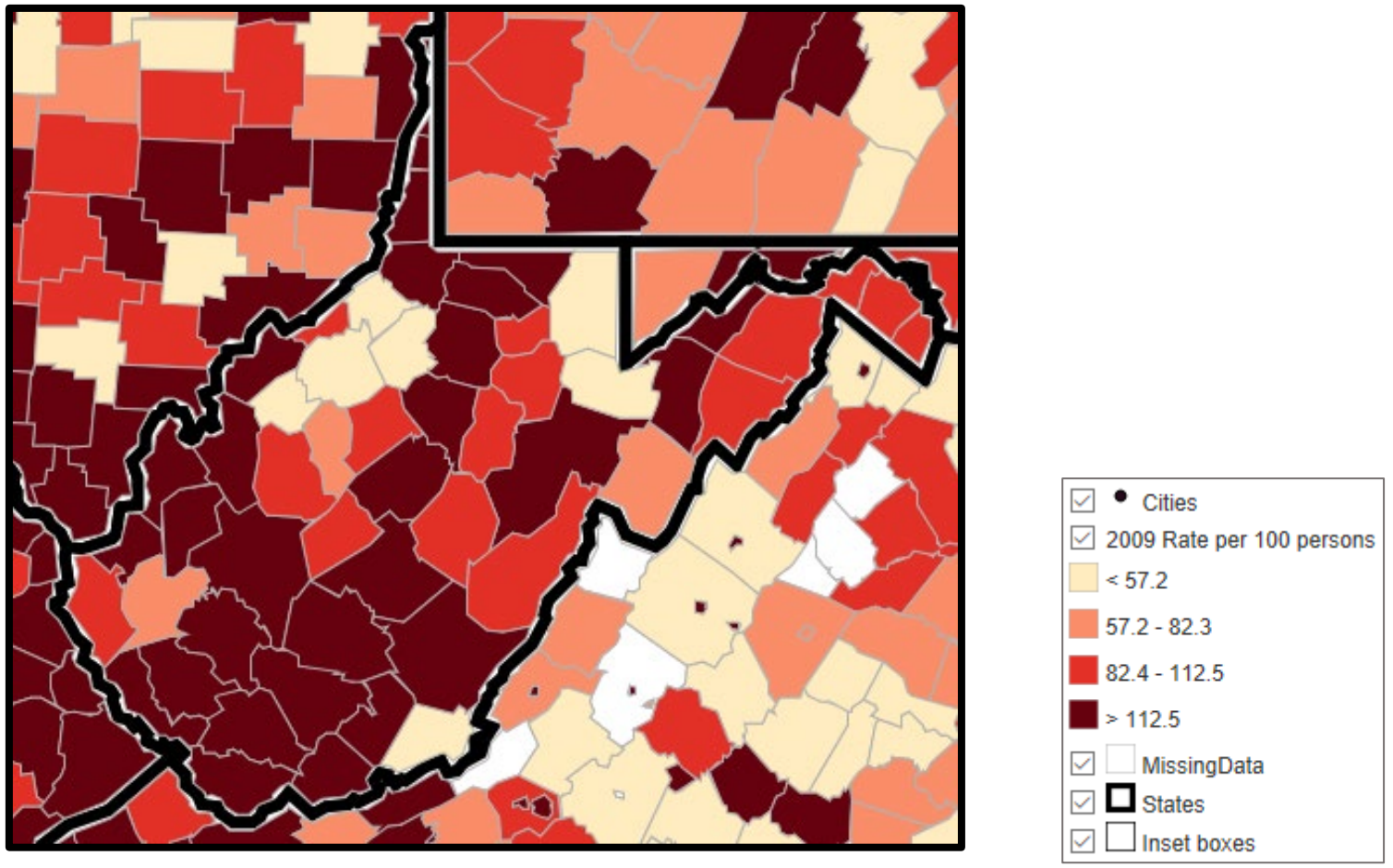
This abruptly stopped by 2010 and **Logan county** alone drove the WV outlier status.

This because it has a larger population than other outliers and because its rate is triple the other outliers. (36,000 pop and 15$^{th}$ in WV)

# WV County Prescribing Rates, 2009

Mingo, WV

437.2

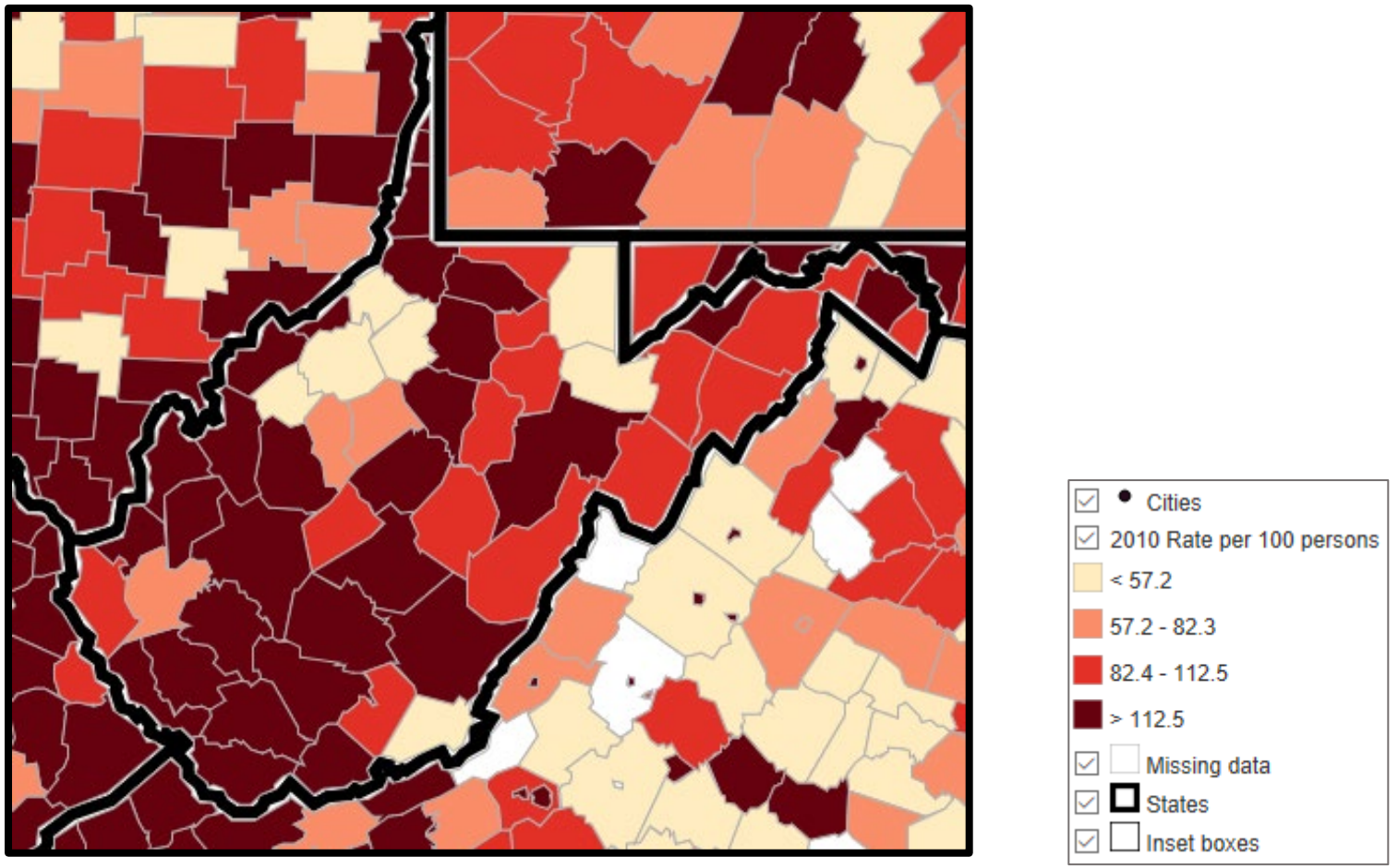



https://www.cdc.gov/drugoverdose/maps/rxcounty2009.html

# WV County Prescribing Rates, 2010

Logan, WV

287.4




https://www.cdc.gov/drugoverdose/maps/rxcounty2010.html

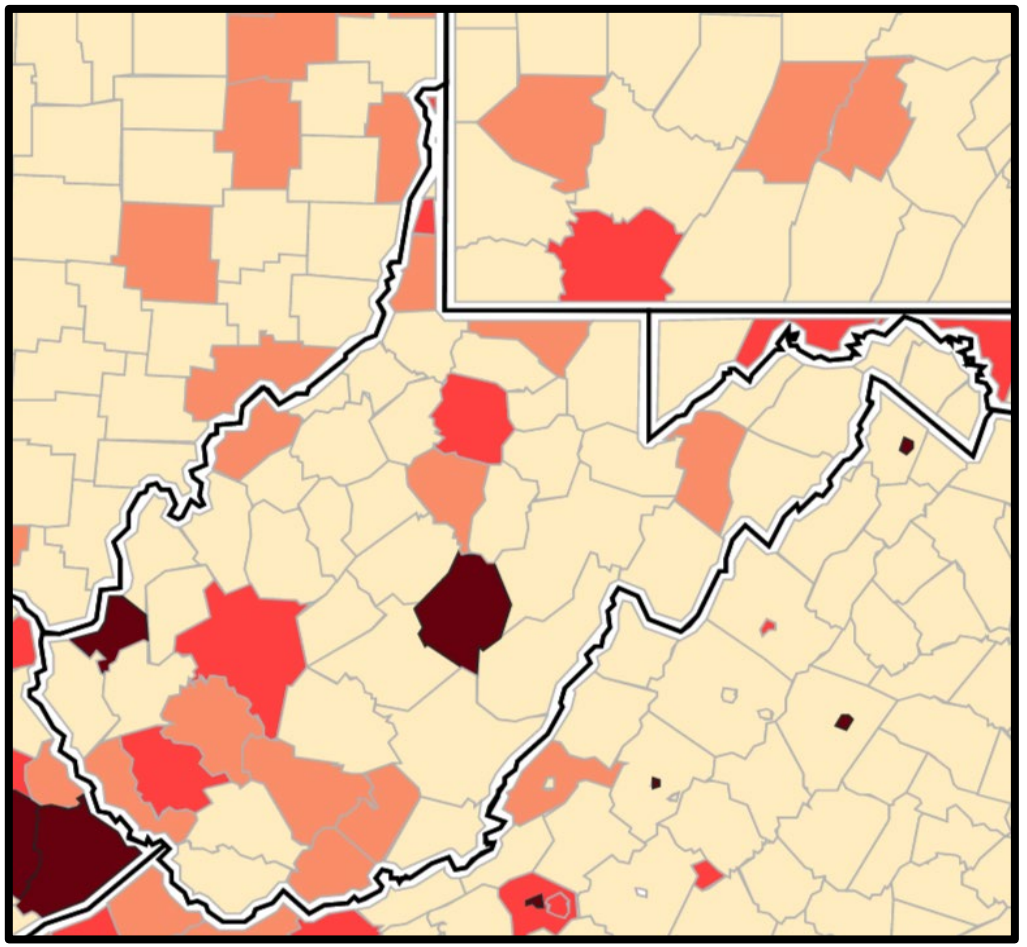
# WV County Prescribing Rates, 2019

Logan, WV

93.7

Webster, WV

124.8



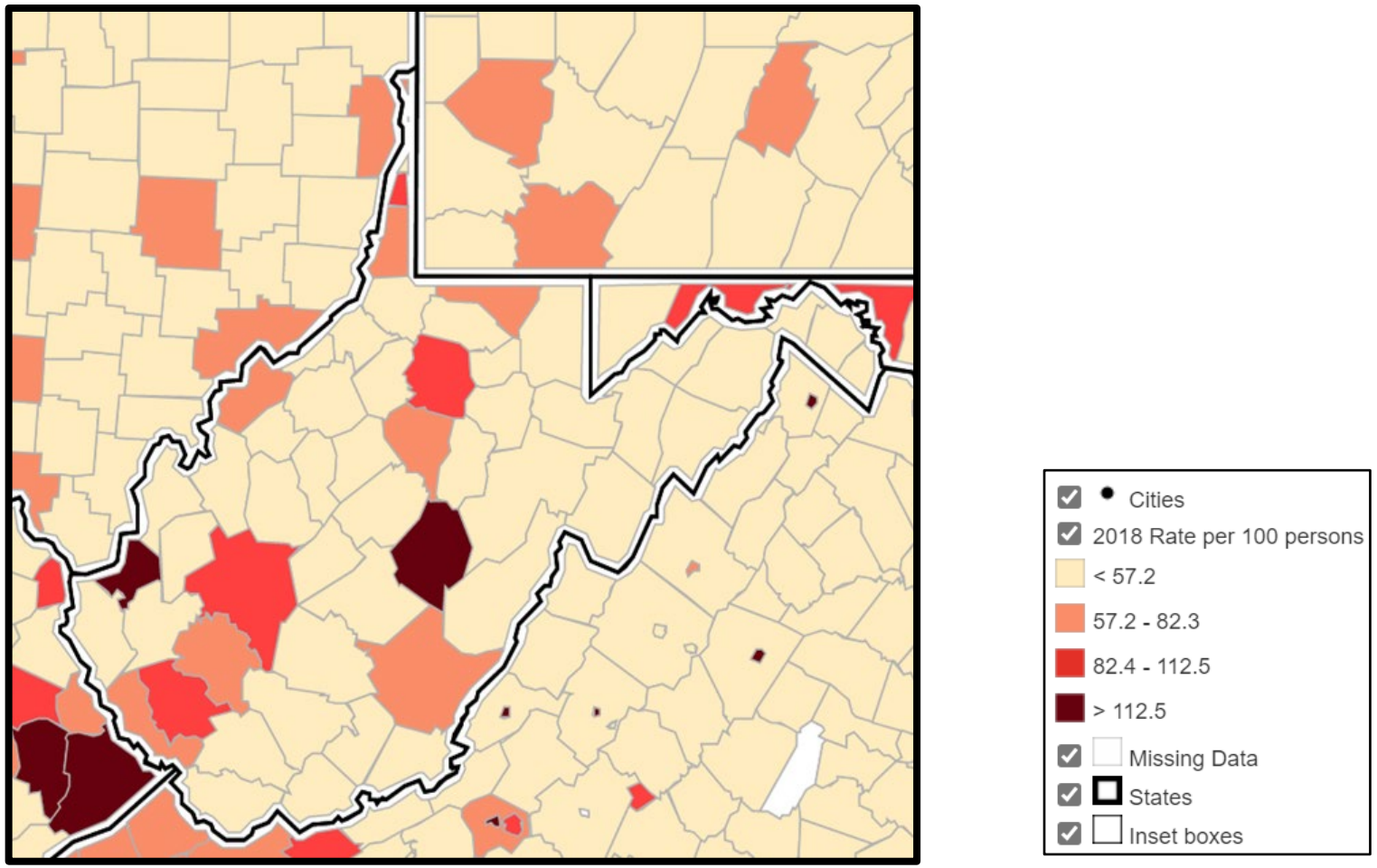
# WV County Prescribing Rates, 2020

Logan, WV

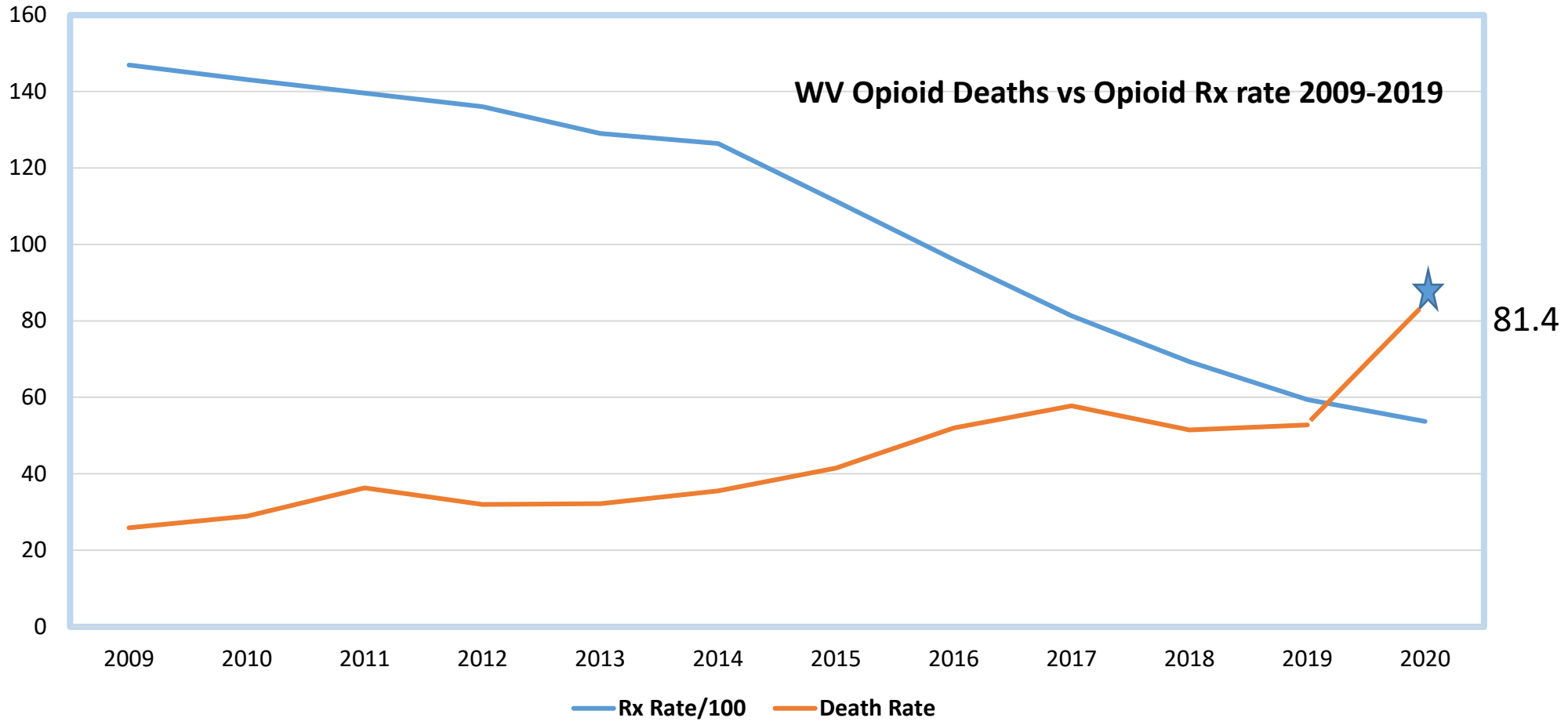
85.7

Webster, WV

118

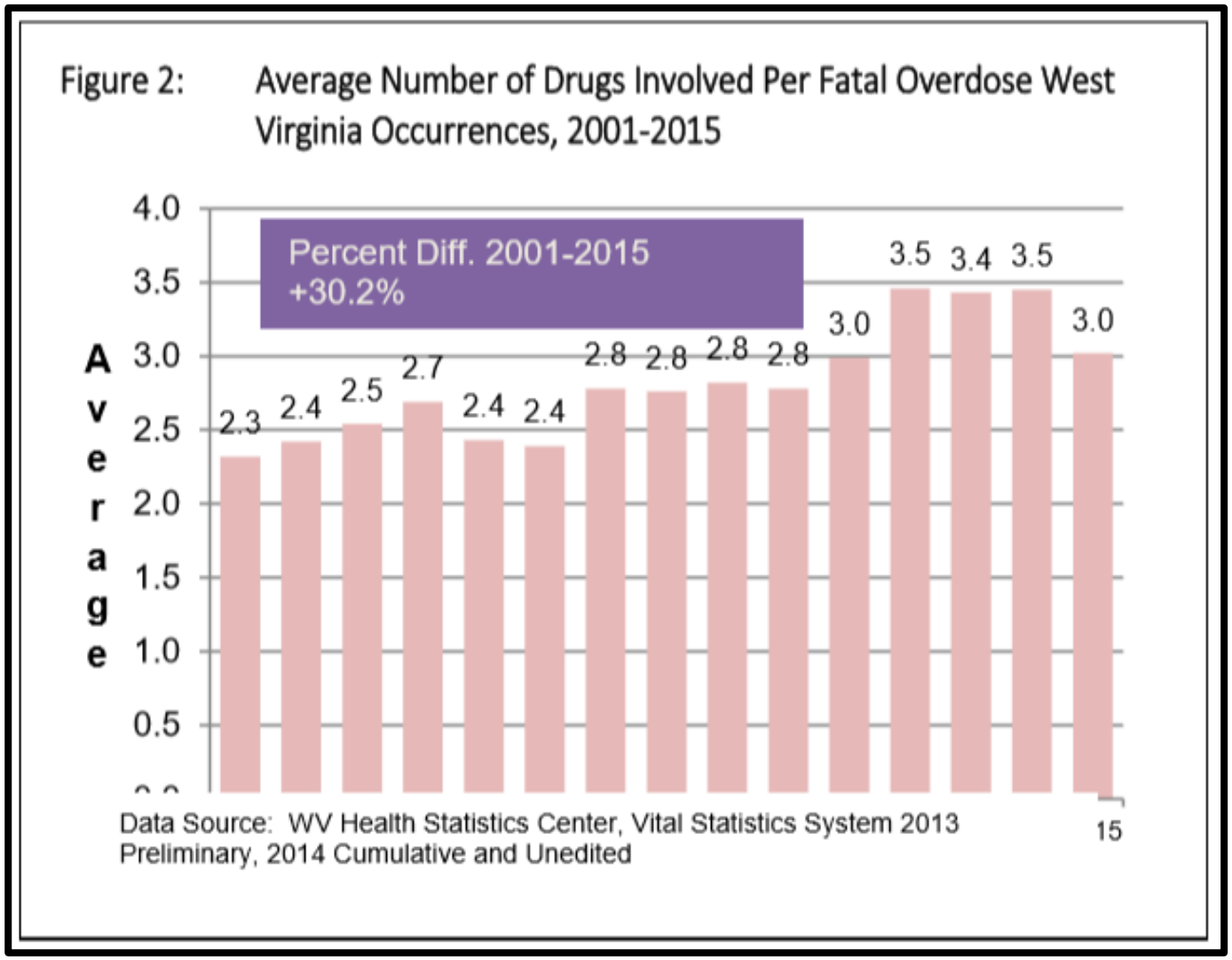


# WV Opioid Reduction Not Tied to Less Deaths




2019 Drug Overdose Death Rates | Drug Overdose | CDC Injury Center updated 8/231/22

# Illegal and Rx Opioids Often Mixed:




This is a primary rational for appropriate, ongoing, prescribing education as opposed to ongoing education regarding Addiction Treatment.

A new, good, reason for ongoing training is less physician experience with chronic opioid management.

# Break

# Starting a Patient on Opioids

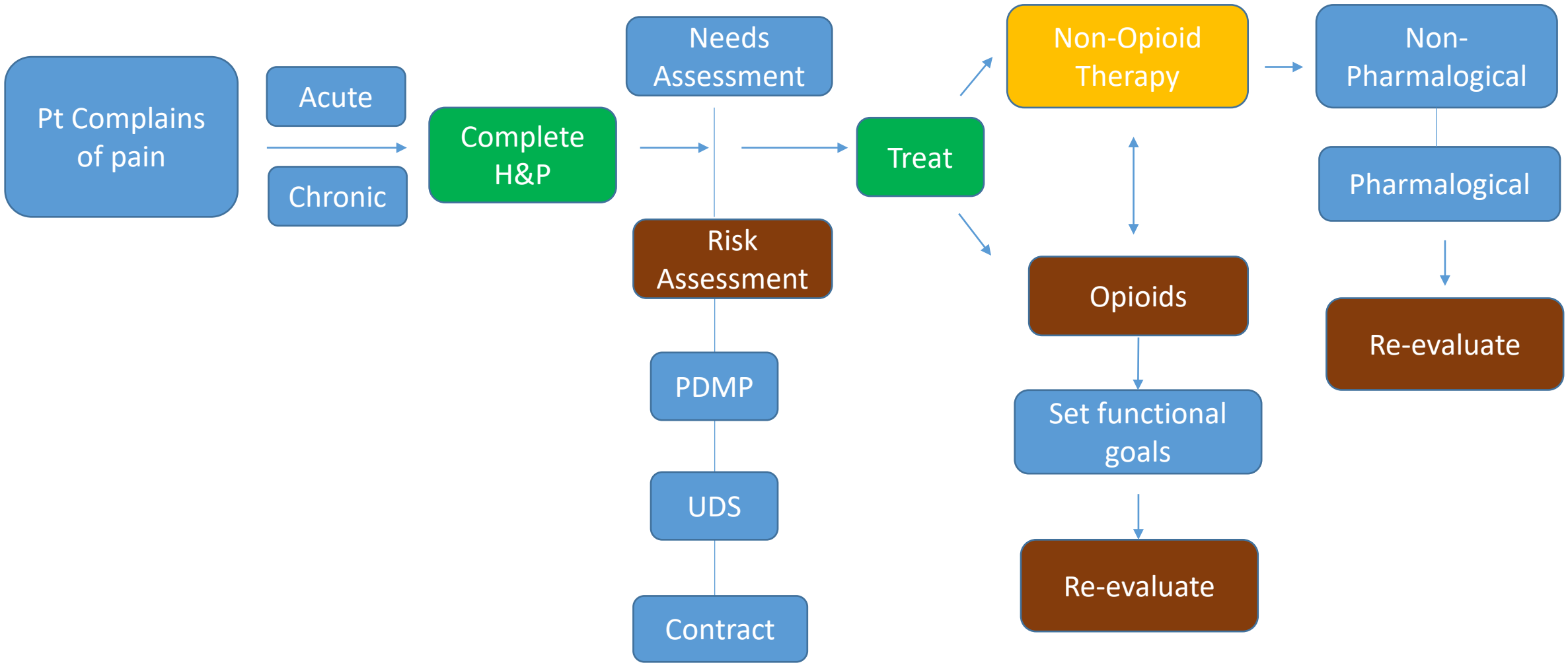

Clinical Practice Guideline
Opioid Prescribing for Chronic Pain
Affirmation of Value, **April 2016**


CDC Guideline for Prescribing Opioids for Chronic Pain — United States, **2016** Recommendations and Reports / March 18, 2016 / 65(1);1–49

Dowell D, Ragan KR, Jones CM, Baldwin GT, Chou R. CDC Clinical Practice Guideline for Prescribing Opioids for Pain — United States, 2022. MMWR Recomm Rep 2022;71(No. RR-3):1–95. DOI: http://dx.doi.org/10.15585/mmwr.rr7103a1.


Responsible, safe, and effective prescription of opioids for Chronic Non-Cancer Pain: ASIPP Guidelines. Pain physician 2017; 2017; 20;S3-S92. Year updated **2017**.

# Opioid Prescribing Flow:



# Assessment of Risk-ORT

Indicates the **probability of opioid-related aberrant behaviors**

In a study, 158 consecutive new patients treated in a pain clinic took the Opioid Risk Tool (ORT). It measured valid risk factors associated with substance abuse. All patients were monitored for aberrant behaviors for 12 months after their initial visits.

The ORT displayed **excellent discrimination** for both the male (c = 0.82) and the female (c = 0.85) prognostic models.

Webster LR, Webster RM. Predicting aberrant behaviors in opioid-treated patients: preliminary validation of the Opioid Risk Tool. Pain Med. 2005 Nov-Dec;6(6):432-42.

# Assessment of Risk-ORT

Those Scored as..

- **Low Risk: scores of 0-3**, 17 out of 18 (94.4%) did not display an aberrant behavior.
- **Moderate risk: Score of 4-7**
- **High Risk: Score of > or = to 8**, 40 out of 44 (90.9%) did display an aberrant behavior.

| Mark each box that applies | Female | Male |
|---|---|---|
| **Family history of substance abuse** | | |
| Alcohol | 1 | 3 |
| Illegal drugs | 2 | 3 |
| Rx drugs | 4 | 4 |
| **Personal history of substance abuse** | | |
| Alcohol | 3 | 3 |
| Illegal drugs | 4 | 4 |
| Rx drugs | 5 | 5 |
| **Age between 16—45 years** | 1 | 1 |
| **History of preadolescent sexual abuse** | 3 | 0 |
| **Psychological disease** | | |
| ADD, OCD, bipolar, schizophrenia | 2 | 2 |
| Depression | 1 | 1 |
| **Scoring totals** | | |

Webster LR, Webster RM. Predicting aberrant behaviors in opioid-treated patients: preliminary validation of the Opioid Risk Tool. Pain Med. 2005 Nov-Dec;6(6):432-42.

# Assessment of Risk-SOAAP

The **Screener and Opioid Assessment for Patients with Pain** (SOAPP)® helps determine how much monitoring a patient on long-term opioid therapy might require. It comes as a short and a standard form.

SOAPP endeavors to minimize the chances of missing high-risk patients. This means that patients who are truly at low risk may still get a score above the cutoff. The SOAPP is less good at identifying who is not at-risk.

The SOAPP is scored as > than 4 or less than 4.

# Assessment of Risk-SOAAP

**The tool asks interesting risk factors:**

How often do you have mood Swings?

How often do you smoke a cigarette within an hour after you wake up?

How often have you had legal problems or been arrested?

| SOAPP Version | SOAPP Cutoff Score | Sensitivity | Specificity | Positive Predictive Value | Negative Predictive Value | Positive Likelihood Ratio | Negative Likelihood Ratio |
|---|---|---|---|---|---|---|---|
| Short Form | Score 4 or above | .86 | .67 | .69 | .85 | 2.59 | .20 |
| Standard | Score 7 or above | .91 | .69 | .71 | .90 | 2.94 | .13 |

SOAPP® Version 1.0 - SF

Name: _____ Date: _____

*The following are some questions given to all patients at the Pain Management Center who are on or being considered for opioids for their pain. Please answer each question as honestly as possible. This information is for our records and will remain confidential. Your answers alone will not determine your treatment. Thank you.*

Please answer the questions below using the following scale:

**0 = Never, 1 = Seldom, 2 = Sometimes, 3 = Often, 4 = Very Often**

1. How often do you have mood swings? 0 1 2 3 4
2. How often do you smoke a cigarette within an hour after you wake up? 0 1 2 3 4
3. How often have you taken medication other than the way that it was prescribed? 0 1 2 3 4
4. How often have you used illegal drugs (for example, marijuana, cocaine, etc.) in the past five years? 0 1 2 3 4
5. How often, in your lifetime, have you had legal problems or been arrested? 0 1 2 3 4

*Please include any additional information you wish about the above answers. Thank you.*

# Keeping Patients on Opioids-The PEG

**Checking for Functional Improvement**

What number, from 0 – 10 best:

**Q1: Describes your Pain** in the past week?

**Q2:** Describes how, during the past week, pain has interfered with your **Enjoyment** of life?

**Q3:** Describes how, during the past week, pain has interfered with your **General activity**?

**PEG score** = **30% improvement from baseline is clinically meaningful.**

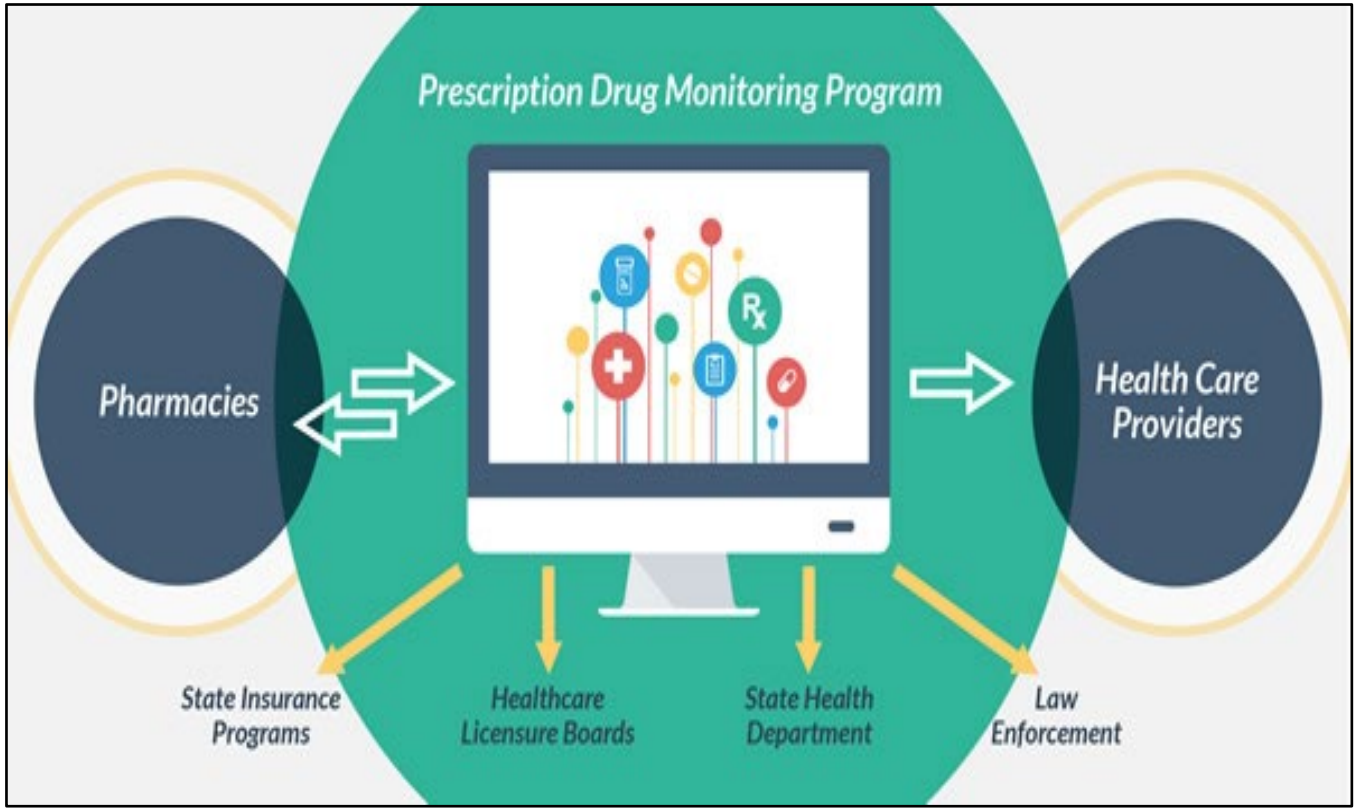
# BOP

## Evaluating for Misuse

Prescription Drug Monitoring Programs (PDMPs) collect data from pharmacies on dispensed controlled substance prescriptions and make those data available to authorized users through a secure, electronic database. Currently, all states have operating PDMPs. More than 20 have joined a shared database.

Some EMRs can pull PDMP data.

Making a query more convenient.




https://www.aafp.org/afp/2016/0615/p982.html#sec-1. https://www.cdc.gov/drugoverdose/pdmp/states.html. Missouri.

# Contracts

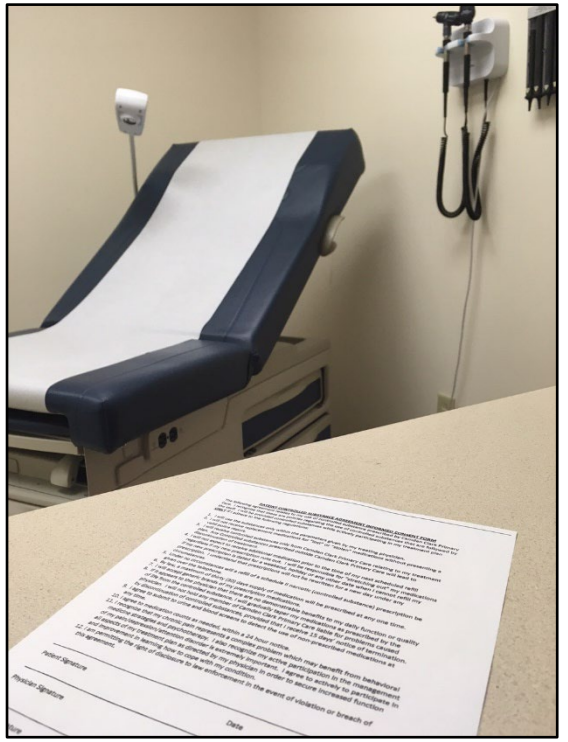
**In order to receive controlled medications, patients often sign a:**

“**Pain Contract**,” or

“**Treatment Consent Form**,” or

“**Narcotic Contract**, " or

“**Opioid Treatment Agreement**" (OTA),



There is some criticism that OSAs are ethically suspect, if not unethical, and should be used with extreme care.

Rager JB, Schwartz PH. *Defending Opioid Treatment Agreements: Disclosure, Not Promises.* Hastings Cent Rep. 2017 May;47(3):24-33. doi: 10.1002/hast.702.

# Contracts

**Use an agreement that defines the terms and expectations of therapy**

It should outline:

- Appropriate intervals for follow-up,
- Refill policies,
- Participation in any indicated multimodal management plan (e.g., physical therapy, psychological treatment),
- Use of only one prescriber and one pharmacy for all controlled medications, and prohibition of illicit substance use or prescription diversion.
- Should be part of an ongoing treatment plan for all patients receiving chronic opioid therapy, thereby avoiding reliance on physician judgment, suspicion, or bias.

https://www.aafp.org/afp/2016/0615/p982.html#sec-1

D. BERLAND, MD, and P. RODGERS, MD, Rational Use of Opioids for Management of Chronic Nonterminal Pain. *Am Fam Physician.* 2012 Aug 1;86(3):252-258

# Breaks

# Agenda

**The First 30  Hour:**

**Why We Are here**

The current situation

Assessment of Risk

Assessment of Need

BOP

Contracts

**The Hour After That:**

Prescribing Opioids

Opioid equivalents

Testing:
Urine
Pill counts

**The Last Hour:**

The New CDC Guidelines

The WV Opioid Reduction Act

# Medication Review:

# Initial Dosing

## Controlled Substances Act, (1970)

### WV Code: Chapter 60A

Recent change

| Schedule | Definition | Examples | WV Rx Authority |
|---|---|---|---|
| 1 | Drugs with potentially severe physiological and psychological dependence. Considered to have no acceptable medicinal qualities. | Heroin, **Marijuana,** MDMA (ecstasy), Lysergic acid diethylamide (LSD), GHB (date rape drug), Mescaline, Cathinone (used in bath salts), Peyote, Psilocybin and psilocin (mushrooms) | **(For Details check w/ Licensing Boards)** |
| 2 | Commonly abused and causing dependency. They have a legitimate medical use. Must be prescribed to a patient by their provider and received from a pharmacist | Cocaine, OxyContin, Dilaudid, Methadone, Fentanyl, Vicodin, Methamphetamine, Dexedrine, Adderall, Ritalin | **MD/DO PA/APRN** |
| | ies. on. | Ketamine, **Tylenol with codeine**, **Buprenorphine** (Suboxone, Subutex), Anabolic steroid, Testosterone, | MD/DO. PA: Prescribe. NP Prescribe, Dispense, Administer |
| 4 | Less chance of addiction or abuse. Providers allowed to include 5 refills in a 6 month period without additional consultation. | **Xanax,** Valium, Klonopin, **Ambien**, Sonata, Lunesta, Phenobarbital (long acting barbiturate), Modafinil (Stimulant-like drug), lomotil | **MD/DO. PA: Prescribe. NP Prescribe, Dispense, Administer** |
| 5 | Lowest likelihood for abuse, don't require a prescription and may be refilled. | **Robitussin AC**, Pyrovalerone (for chronic fatigue/appetite suppressant), Some anticonvulsants (Lyrica, gabapentin) | **MD/DO. PA: Prescribe. NP Prescribe, Dispense, Administer** |

**The Physician does not Rx Marijuana in WV, the Marijuana dispensary hires an employee to recommend dosing for the patient.**

https://www.dea.gov/drug-scheduling https://www.deadiversion.usdoj.gov/drugreg/practioners/mlp_by_state.pdf

# Initial Dosing

**Expect Adverse Effects:**

**Most Common** - Constipation

**Greatest Mortality** - **Respiratory Depression**

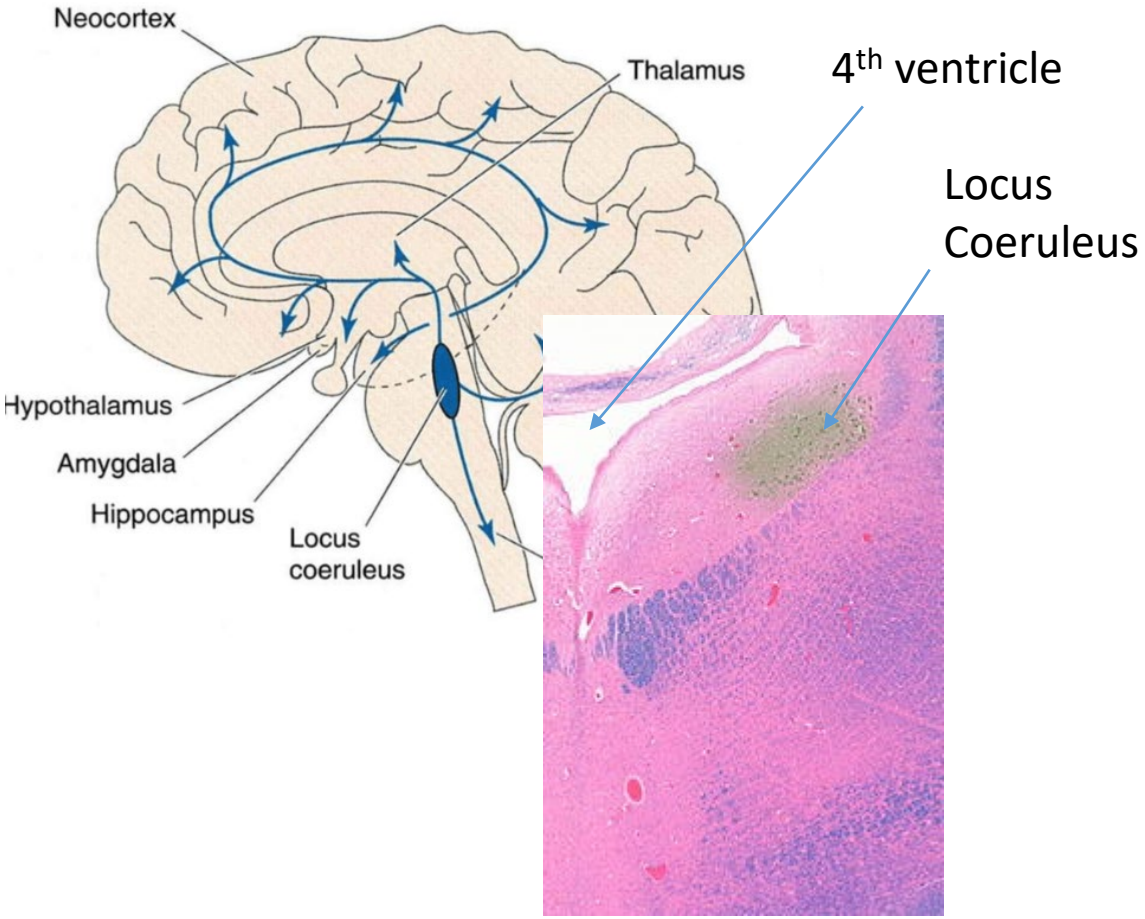
**Other serious Mortality** - Dependence, Hyperalgesia, Addiction

**Other concerns:** Sedation, Falls, Hypogonadism, Sweating, Miosis, Urinary Retention.

# Initial Dosing

**Why Respiratory Depression?**

When opioid receptors in the **locus coeruleus** (brainstem) are activated they **prevent the release of noradrenaline** – decreasing alertness and blood pressure, increasing drowsiness, slow respiration (breathing), and induce analgesic (pain relieving) effects.

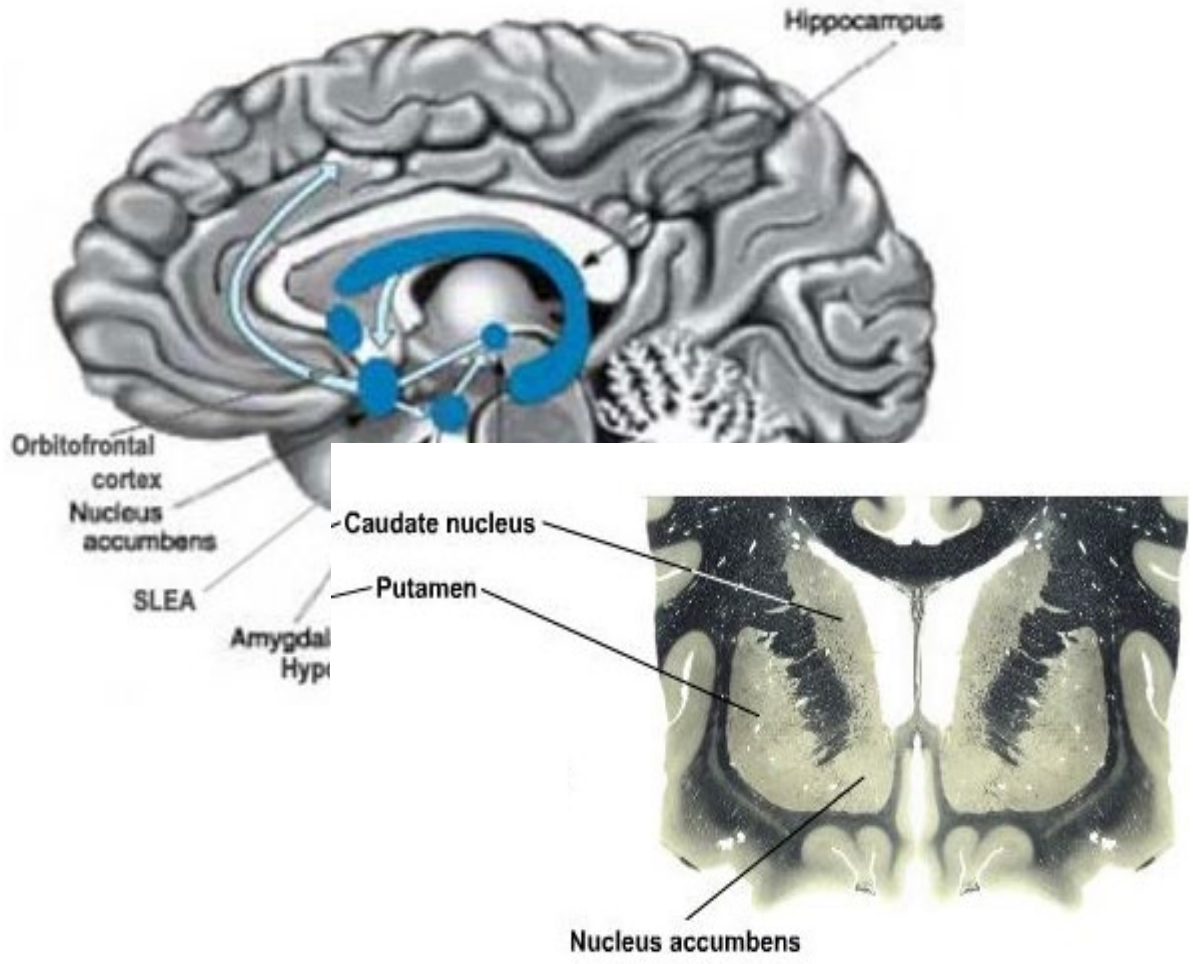



https://www.workithealth.com/blog/science-of-suboxone. https://en.wikipedia.org/wiki/Locus_coeruleus.

# Initial Dosing

**Why Respiratory Depression?**

Opioid receptor activation in the **nucleus accumbens releases dopamine**, stimulating feelings of pleasure.




https://www.basisonline.org/2003/08/the-wager-833-.html

# Initial Dosing

**Expect Adverse Effects:**

Identify Risk of Respiratory Depression

- Elderly, Debilitated
- Co-administered with other Resp Depressants
- Opioid Naive patients
- **Contraindicated** in those with Respiratory Suppression risks (COPD?)


http://oxygenadvantage.co.za/2017/02/15/simulate-high-altitude-training-acclimatization/

# Initial Dosing

**Expect Adverse Effects:**

Greatest Mortality-Respiratory Depression

- Discuss risk with patient
- Explain how hypercapnia exacerbates the sedating effect of opioids
- Urge supervision during initial use
- Encourage immediate use of 911 if respiratory depression suspected
- Offer Opioid Antagonists-**Naloxone**

# Initial Dosing

**Sustained-release preparations..**

**Offer more consistent drug levels.**

Use caution when a patient demands only short-acting medication.

**High potential for abuse or diversion:**

fentanyl (Duragesic) patches

oxycodone (Roxicodone)

methadone (but easily monitored)

**Lower risk, and has less abuse potential:**

sublingual or transdermal buprenorphine

D. BERLAND, MD, and P. RODGERS, MD, Rational Use of Opioids for Management of Chronic Nonterminal Pain. *Am Fam Physician.* 2012 Aug 1;86(3):252-258

# Initial Dosing

**Black Box Warnings:**

**All opioid agonist**-

- Addiction, abuse, misuse.
- Respiratory Depression.
- Accidental Ingestion.
- Neonatal withdrawal syndrome.
- CYP450 3A4 interactions.
- Risk of Concomitant use w/ Benzo./ CNS Depressants.

**Acetaminophen warning**-for acute liver failure.

**MOA:** Opioid Receptor Agonist.

# Initial Dosing

**Safety and Monitoring**

**Renal Dosing:** Cr at baseline, then if severe renal disease or >65YOA check periodically.

**Hepatic Dosing:** if acetaminophen check LFTs, esp if severe hepatic disease.

**Pregnancy/Lactation**: may result in androgen deficiency-limited studies. Weigh risk/benefit if prolonged use. Risk of NAS. The risk of fetal harm is low. Acetaminophen is analgesic drug of choice while breast feeding.

# Initial Dosing

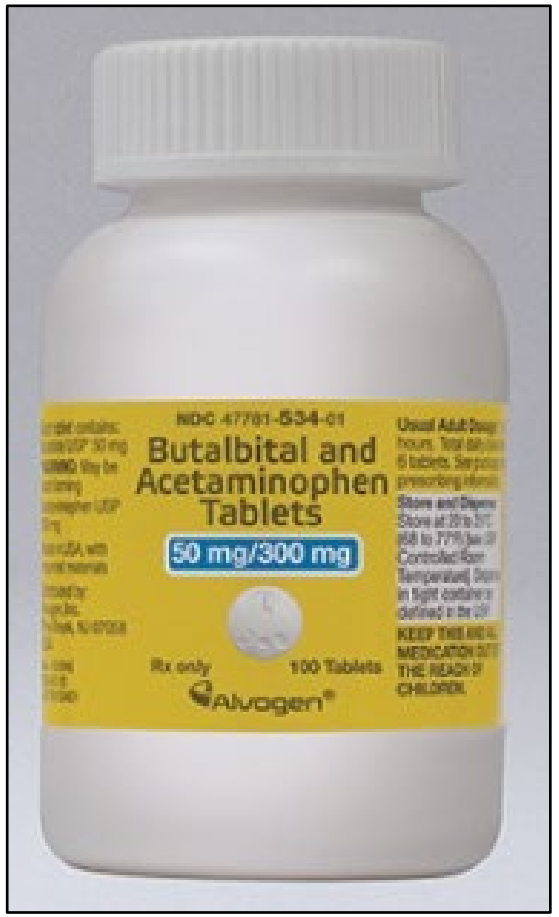
**Butalbital/Acetaminophen**

**Brand Name: Bupap, Allzital**

DEA Schedule II-V, status by state laws

**MOA:** Butalbital produces sedation/Selective COX-2 inhibitor. **Half-life 35 hours.**

**Tension HA**: 1-2 tabs PO q 4h prn. Limit to <300mg/day butalbital, 1g/4hrs and 4 g/day acetaminophen




http://alvogenus.com/products/product/butalbital-and-acetaminophen

# Initial Dosing

## Butalbital/Acetaminophen/Caffeine/Codeine

**Brand Name:** Fioricet with Codeine, 50/300/40/30

DEA Schedule III status by state laws

**MOA:** Butalbital produces sedation/Selective COX-2 inhibitor/binds to opioid receptors.

**Tension HA**: 1-2 caps PO q 4hrs prn**. Max 6 caps a day.** Limit to <300mg/day butalbital, 1g/4hrs and 4 g/day acetaminophen, 360 mg/day codeine.

**Taper:** 25-50% q 2-4 days


http://buynembutal.com/shop/fiorinal-codeine-side-effects/

# Initial Dosing

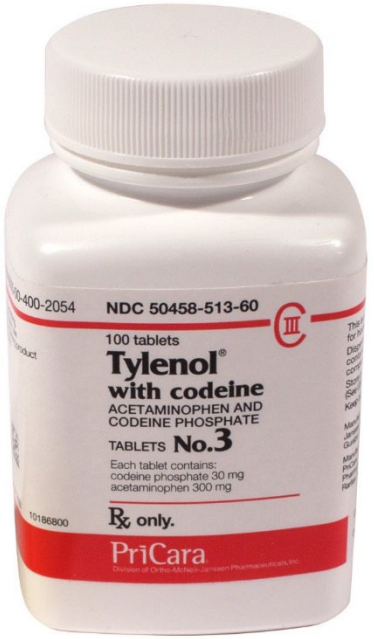
**Acetaminophen/Codeine**

**Brand Name: Tylenol No. 3 (300/30mg)**

DEA Schedule III with Black Box warnings

**MOA:** Selective COX-2 inhibitor /Binds to Opioid receptors

**Mild to Mod pain**:15-60mg of codeine PO q 4-6hrs PRN, >60mg not more effective.




http://canacopegdl.com/keyword/tylenol-bottle-3.html

# Initial Dosing

## Tramadol

**Brand Name: Ultram (50mg, ER 100, 200,300mg)**

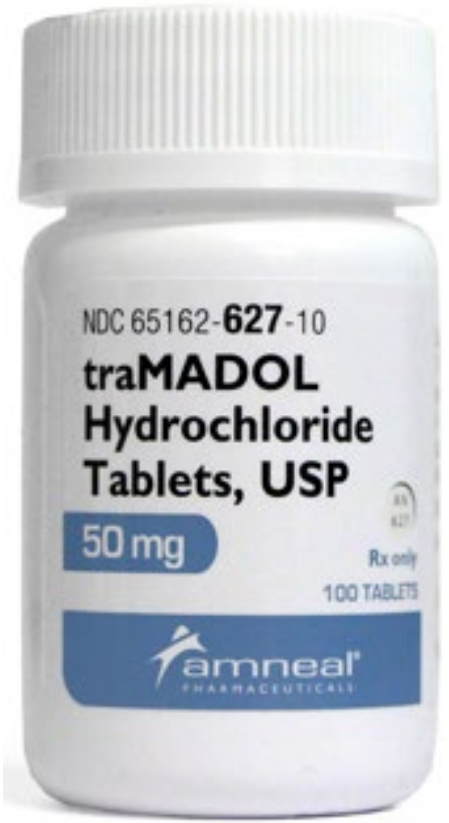
DEA schedule IV, Black Box warnings

**Half-life**: 6-8 hours, **Renal Dosing** CrCl < 30.

**MOA:** Binds to MU Opioid receptors (Central opioid agonist) and inhibits Norepinephrine/serotonin reuptake.

**Mod-severe pain**: Start 25 mg PO q AM. Increase 25 mg Q 3 days. Titrate to Q 4 hrs., Max 400mg. PRN, >60mg not more effective.

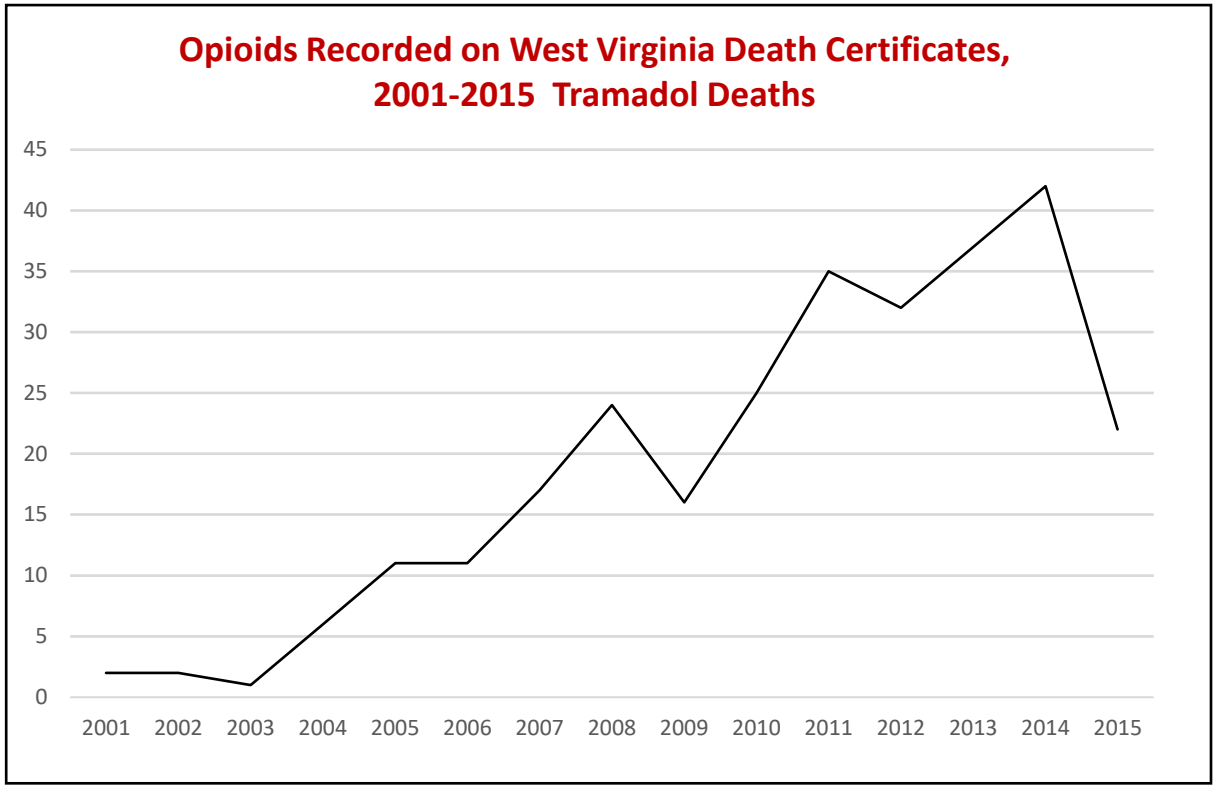
**Chronic, Mod-severe Pain**: ER PO Q day increase by 100 mg/day q 5 days, Max of 300 Q day. Conversion from IR 1:1




https://drugsdetails.com/wp-content/uploads/2016/03/tramadol-50mg-100ct-3.jpg

# Initial Dosing

## Tramadol-Associated Deaths




The opioid painkiller Tramadol has increased from less than **1 million pills in 2011 to 35.7 million in 2016.**

"It's way less potential for abuse, way less diversion," (Mike) Goff said.

- Eric Eyre WV Gazette.
Jan 21, 2017

https://www.wvgazettemail.com/news/health/opioid-alternative-linked-to-spike-in-wv-overdose-deaths/article Eric Eyre Jan 21,2017
WV Drug Overdose Deaths Historical Overview 2001-2015. Jim Justice, Bill Couch, Rahaul Gupta, MD. August 17, 2017.

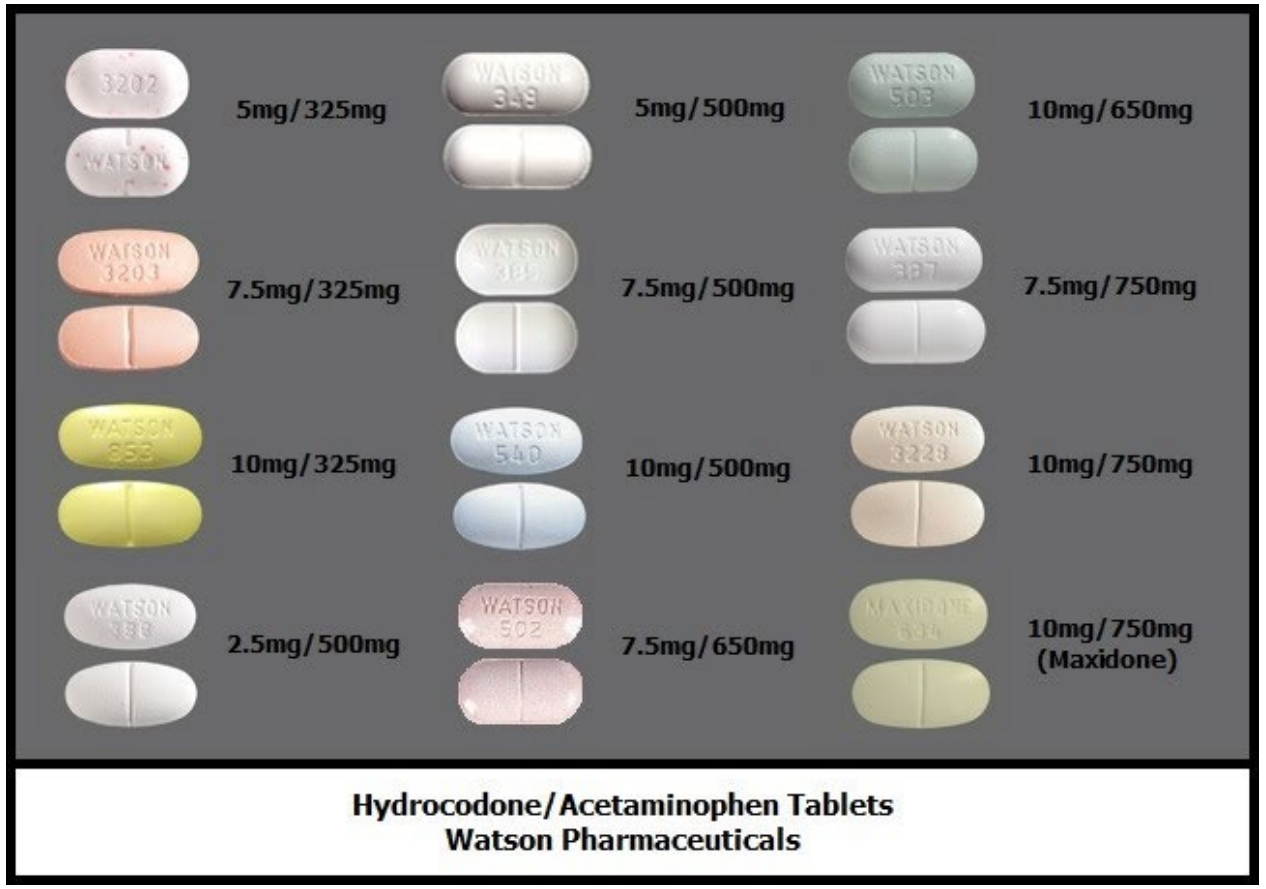
# Initial Dosing

**Hydrocodone/Acetaminophen**

**Brand Name: Norco, Vicoden, Lortab, etc.**

DEA Schedule II

**Pain, Moderate-Moderate Severe**
2.5-10mg hydrocodone PO q**4**-6hrs PRN. DO NOT Exceed 1g/4hr or 4 g/day of acetaminophen from all sources




http://www.opiateaddictionresource.com/media/images/hydrocodone_acetaminophen

# Initial Dosing

**Oxycodone/Acetaminophen**

**Brand Name- Percocet.** An alternative for patients with morphine intolerance or allergy.

**DEA Schedule II.**

**Pain, Moderate-Moderate Severe** 2.5-10mg oxycodone **PO 6hrs PRN**. May use Q 4 four hours for uncontrolled pain/tolerance.


http://www.empr.com/percocet/drug/8161/

# Initial Dosing

**Oxycodone**

An alternative for patients with morphine intolerance or allergy.

Has a higher risk of abuse use with caution in patients with higher risk scores.

**Long-acting oxycodone: not** recommended for patients with chronic pain because it is not truly long-acting, is expensive, and has a high street value.

https://www.aliem.com/2012/08/trick-of-trade-oral-naloxone-for-opioid/oxycodone/

# Initial Dosing

**Oxycodone**

**Brand Names: Roxicodone, Oxycontin**

**DEA Schedule II**

**Pain, Mod-Severe:** 5-15mg PO q 4-6hrs, PRN, Titrate slowly in elderly, (renal). Taper dose 25-50% q 2-4 days.

**Pain Severe, Chronic**: Start 10 mg ER PO q 12 increase 25-50% q1-2 days. Titrate slowly in elderly. Reduce dose 50% in debilitated pt > 65YOA. >40mg ER for use in opioid tolerant patients only.

https://www.aliem.com/2012/08/trick-of-trade-oral-naloxone-for-opioid/oxycodone/

# Initial Dosing

**Transdermal Fentanyl**

More steady, may be a better alternative, it is expensive and can produce tolerance relatively quickly. DO NOT use on opioid naive patients.


DEA/FDA schedule II

Fentanyl is lipophilic, and absorption is affected in patients with little subcutaneous fat and in those prone to edema at application sites

https://www.ctvnews.ca/health/fentanyl-patch-return-program-saves-lives-ontario-politician-says-1.2536908

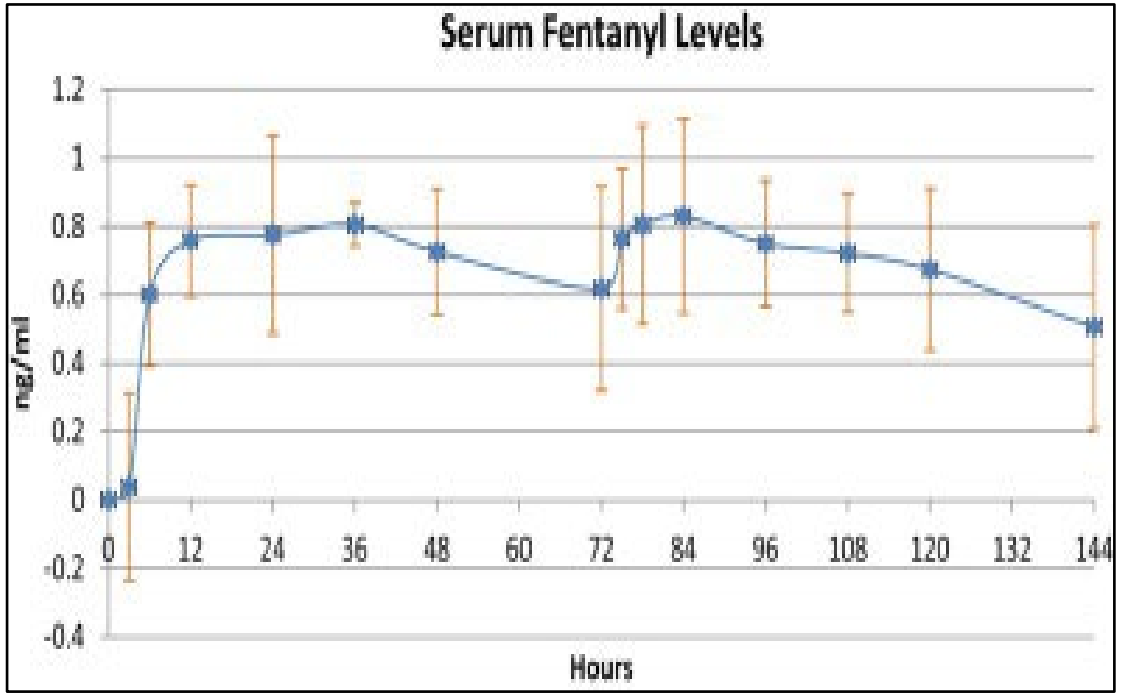
# Initial Dosing

**Transdermal Fentanyl**

The pkg insert has conversion tables. Adjust dose after three days, then no more frequently than Q 6 days. Do not cut patch.

Start lower dose in the elderly.
Renal/Hepatic dosing-moderate impairment, start dose at 50%.

**To discontinue:** Taper dose 50% q 6days.




Chris Christou, Rema A Oliver, John Rawlinson, William R. Walsh Transdermal fentanyl and its use in ovine surgery. Research in Veterinary Science. Volume 100, June 2015, Pages 252-256

# Initial Dosing

**Methadone**

Effective for many patients, may produce less tolerance than other opioids.

DEA/FDA schedule II,

It is inexpensive, long-acting, and has a combination of opioid and *N*-methyl-D-aspartate receptor activity that may make it **a good choice for patients with mixed somatic and neuropathic pain.**

However, **physicians who prescribe methadone must be familiar with its use.**

D. BERLAND, MD, and P. RODGERS, MD, Rational Use of Opioids for Management of Chronic Nonterminal Pain. *Am Fam Physician.* 2012 Aug 1;86(3):252-258

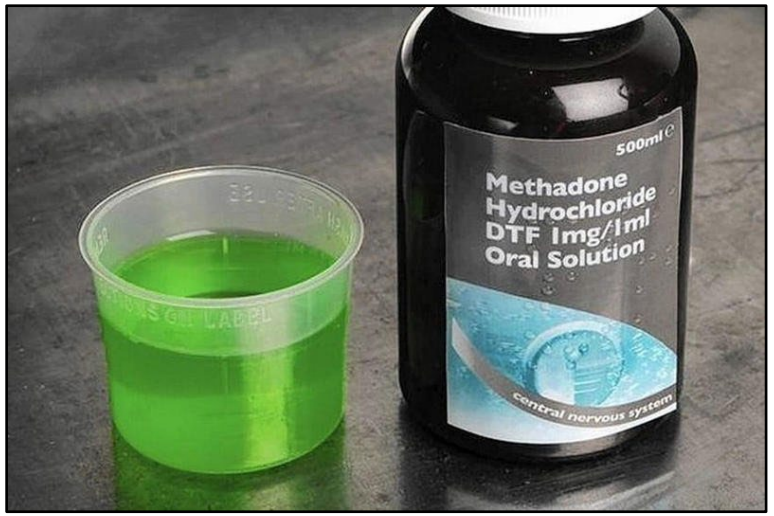
# Initial Dosing

**Methadone**

**Unique pharmacokinetics!**

Very **long elimination half-life**(12 hrs.), and its MME conversion ratio increases as dosages increase.

Starting dosages in opioid-naive patients are 2.5 to 5 mg q 8-12 hours.




https://www.saukvalley.com/2018/04/24/lawmakers-push-to-have-medicare-cover-methadone-treatment-to-combat-opioid-addiction/aiwdh6z/

# Initial Dosing

**Methadone**

Brand Name: Methadose, 40mg dispersible tab

Can be used for treatment of **opioid dependence**

**Start:** 15-30 mg PO X1 then 5-10 mg PO q 2-4 hours PRN.

**Max:** 40 mg on day 1, stabilize dose Q 2-3 days, **then decrease dose** by up to 20% q 24-48 hours. Document if using > 40 mg.

D. BERLAND, MD, and P. RODGERS, MD, Rational Use of Opioids for Management of Chronic Nonterminal Pain. *Am Fam Physician.* 2012 Aug 1;86(3):252-258

# Initial Dosing

**Methadone**

After initial control of symptoms, dosages should be titrated slowly and no more than once per week.


**Side Effects:** **Methadone can prolong the QT interval,** avoid co-use with other QT-prolonging medications. Serum drug levels can be used for monitoring.

Methadone does not interfere with urine testing for other opioids.

http://onlinepillsstore.net/?product=buy-methadone-online

# Initial Dosing

**Methadone**

**Onset of Action-0.5-1 hour.**

**Peak effect: 1-7.5 hours.**

**Steady state w/ continuous dosing: 3-5 days**

**Methadone can prolong the QT interval,** avoid co-use with other QT-prolonging medications. Serum drug levels can be used for monitoring.

# Initial Dosing

## Methadone:

**Elimination** of methadone is **by hepatic metabolism** , followed by renal and fecal excretion.

**Transformed to :**

2-ethylidene-1,5-dimethyl-3,3-diphenlypyrroline **(EDDP)** and 9 other metabolites.

## Metabolized by CYP 3A4

So plasma concentrations are **increased** by:

Macrolides, fluoroquinolones, SSRIS, TCAs (decrease dose by 25%), and

**Decreased** by:

Antiepileptics, Antipsychotics, antiretrovirals. (encourage rescue medications)

https://www.painweek.org/assets/PAINWeekEnd%20Slides/2018/Dallas/Saturday_06_IV%20Methadone%20(Aljassem).pdf

Chin B. Eap, et. Al, Interindividual Variability of the Clinical Pharmacokinetics of Methadone. Implications for the Treatment of Opioid Dependence. Clin Pharmacokinetics 2002: 41(14) 1153-1193

# Initial Dosing

## Buprenorphine Transdermal

**Brand Names: Butrans**

DEA/FDA schedule III

10mcg/hour

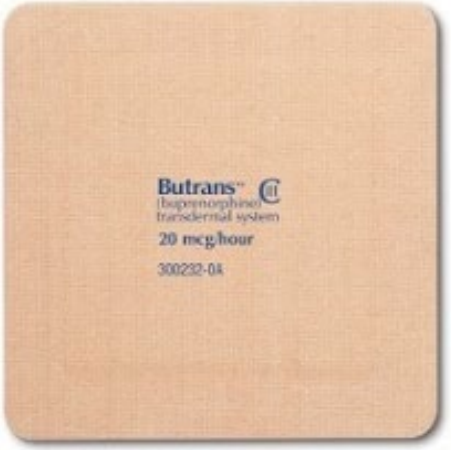
5mcg/hour

**Dosed by Equivalents:**

**Opioid Naïve:** 5 mcg patch Q 7 days.

**<30 MME mg/day:** Start 5 mcg patch, increase q 72 hours. Max is 20 mcg.

**30-80 MME mg/day:** Start 10mcg patch, increase q 72 hours. Max is 20 mcg.



20mcg/hour

**Half Life**: **26 hours. Watch Resp Depression onset-24-72 hours**

http://www.newbridgerecovery.com/spotlight-buprenorphine-patches

# Initial Dosing

**Buprenorphine**

DEA/FDA schedule III partial opioid agonist that is less likely to produce tolerance.

It is effective for treatment of pain, has lower abuse potential, and is easily monitored.

It is expensive, and its use requires special prescriber training (**except for the transdermal patch**).

**May use while breast feeding.**


https://www.blvdcenters.org/opiate-rehab-treatment-centers/need-know-guide-buprenorphine

# Initial Dosing

**Gabapentin**

**Brand Name: Neurontin**


Scheduled-IV. States regulate for association with overdoses.

**MOA:** blocks voltage dependent calcium channel

**Post Herpetic Neuralgia**: Start 300 mg PO Q Day X 1 day, then 300 mg PO BID, then 300 Mg TID, Max 1800 mg. Taper dose over 7 days to D/C.

https://www.painnewsnetwork.org/stories/2016/1/30/lyrica-and-neurontin-face-uk-restrictions

# Initial Dosing

**Gabapentin**

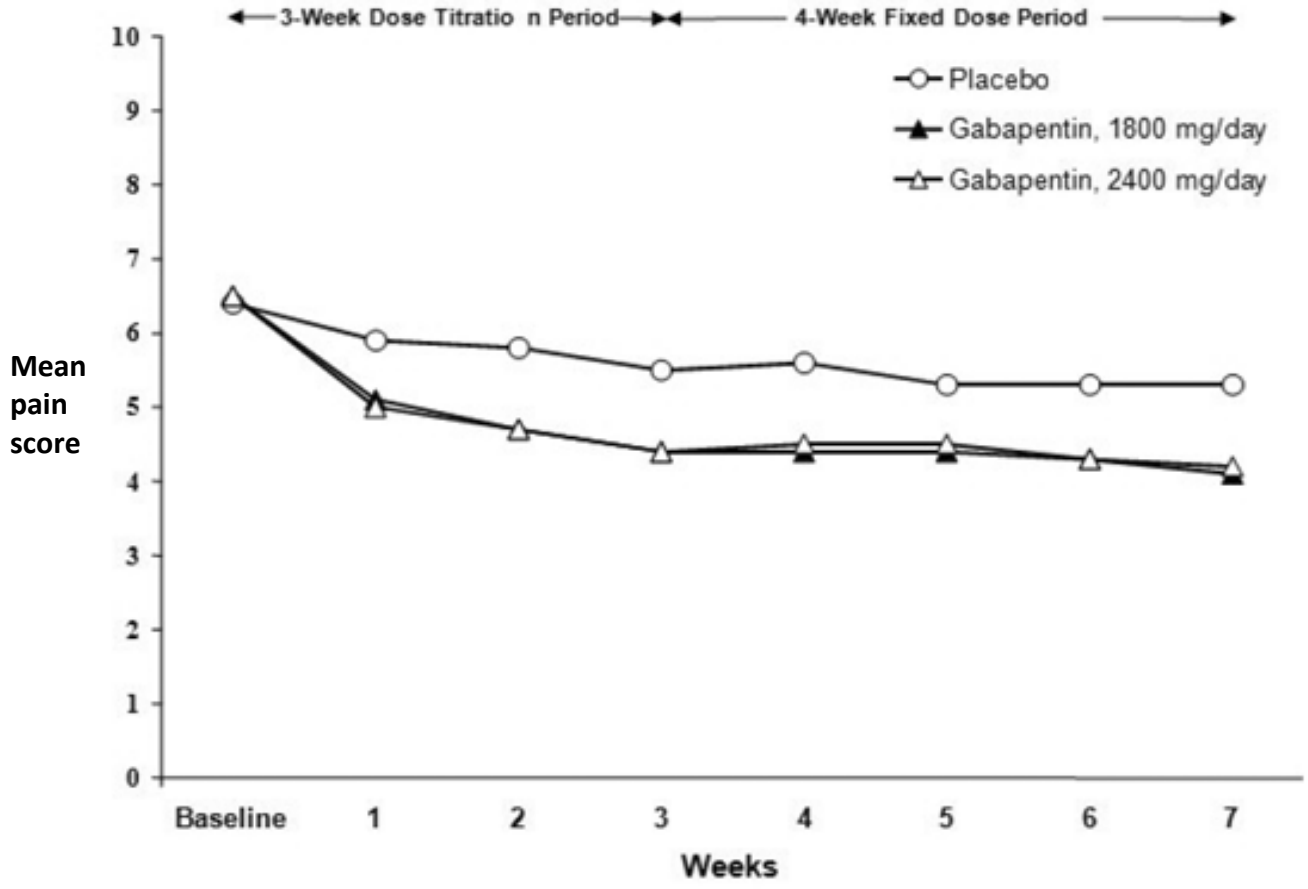
**Neuropathic Pain:**

**Start** 300 mg PO Q Day X 1 day,

**Then** 300 mg PO BID,

**Then** 300 mg TID. **Max 3600 mg**.

Taper dose over 7 days to D/C.




https://www.rxlist.com/neurontin-drug.htm

# Initial Dosing

## Neurontin Associated w/ Opioid Overdose?

Smith et al (2016) completed a **literature review on gabapentin misuse.**

- The authors defined misuse as taking a larger dosage than prescribed or use without a prescription, or diversion.
- 33 varied peer-reviewed papers demonstrating gabapentin misuse were reviewed.
- **Prevalence of misuse in the general population was reported to be 1%,**
- 40-65% among individuals with prescriptions and
- **15 and 22% within populations of people who abuse opioids.**
- Gabapentin was misused for recreational purposes, self-medication or intentional self-harm and was misused alone or in combination with other substances, especially opioids, benzodiazepines and/or alcohol.

They concluded that **gabapentin is being misused internationally, within substance abuse populations**

Smith RV, Havens JR, Walsh SL. Gabapentin misuse, abuse and diversion: a systematic review. Addiction. 2016 Jul;111(7):1160-74. doi: 10.1111/add.13324. Epub 2016 Mar 18.

# Initial Dosing

## WV Gabapentin Associated Deaths

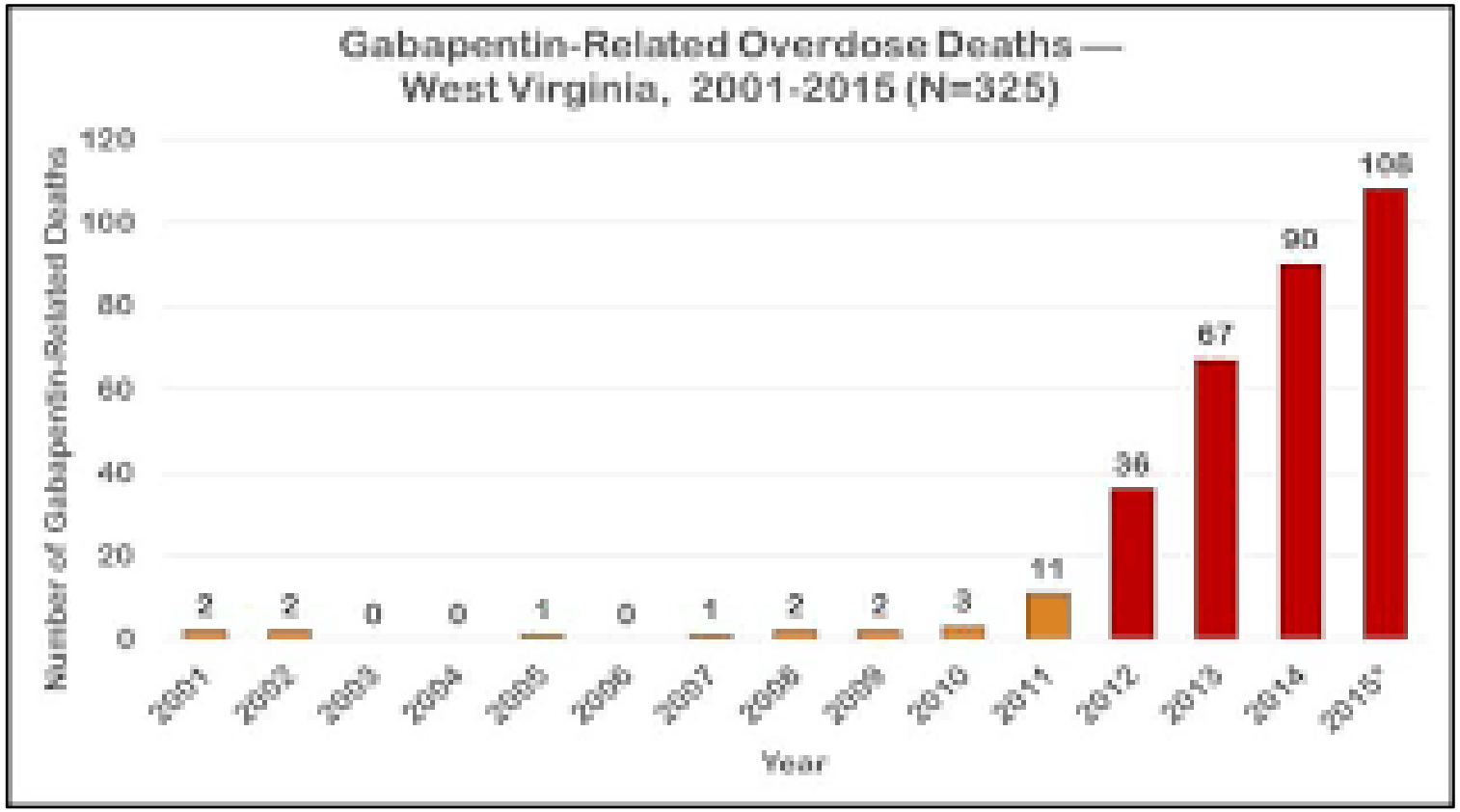
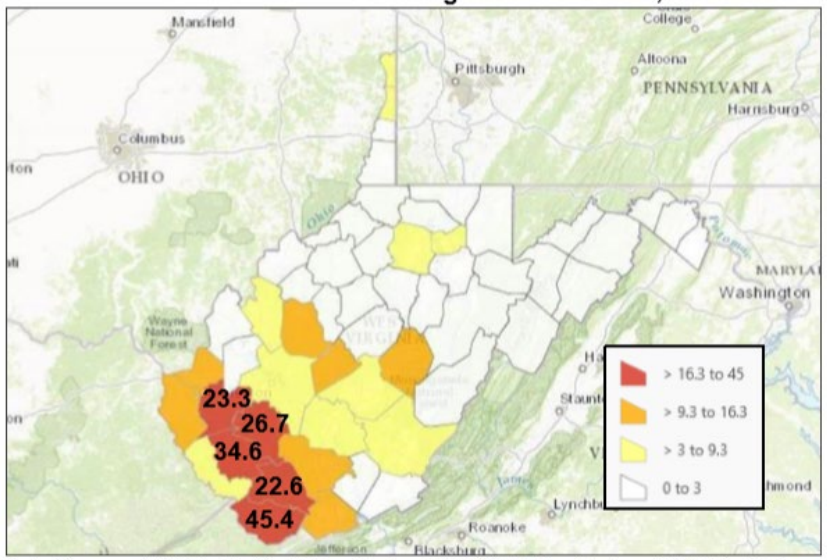



Figure 25: County-Level Distribution of Gabapentin-Related Overdose Deaths West Virginia Occurrences, 2001-2015


Data Source:
Data

Figure 26: County-Level Distribution of Gabapentin-Related Overdose Deaths West Virginia Occurrences, 2001-2015




Data Source: WV Health Statistics Center, Vital Statistics System 2015 Preliminary Data

https://dhhr.wv.gov/oeps/disease/ob/documents/opioid/wv-drug-overdoses-2001_2015.pdf

# Initial Dosing

## Pregabalin

**Brand Name: Lyrica**

DEA Scheduled V. States may regulate for association with overdoses.

**MOA:** Binds Alpha2-Delta subunit of voltage dependent calcium channel reducing neurotransmitter release

**Diabetic Neuropathic Pain** Start 50 mg PO TID X 1 week, then 100 mg PO TID if needed. Taper dose over 7 days to D/C.

**Post Herpetic Neuralgia or Other Neuropathic Pain** Start 75 mg PO BID X 1 week, then 150 mg PO BID X 2 week, then 300 mg BID if needed. Taper dose over 7 days to D/C.

# Initial Dosing

**Recent Lyrica Concerns**

A 2018 study describe **Australian patterns of pregabalin use** and intentional poisoning and identify people potentially at high risk of misuse.

Pregabalin dispensing **increased by between 2013 and 2016** and there were 88 pregabalin-associated deaths, a 57.8% yearly increase per year of intentional pregabalin poisonings.

Cairns R, Schaffer AL, Ryan N, Pearson SA, Buckley NA. **Rising pregabalin use and misuse in Australia: trends in utilisation and intentional poisonings.** Addiction. 2018 Aug 11.

# Initial Dosing

## Recent Lyrica Concerns

Patients overdosing on pregabalin commonly co-ingested opioids, benzodiazepines, and illicit drugs, and had high rates of psychiatric and substance use comorbidities.


http://prescriptionassistance123.com/blog/lyrica-prescription-assistance-programs/

14.7% of pregabalin users were at high-risk of misuse.

Cairns R, Schaffer AL, Ryan N, Pearson SA, Buckley NA. **Rising pregabalin use and misuse in Australia: trends in utilization and intentional poisonings.** Addiction. 2018 Aug 11.

# Initial Dosing

**Recent Lyrica Concerns**

Those at high-risk of misuse were more likely to be:

- Younger
- Male
- Co-prescribed benzodiazepines or opioids
- Have more individual prescribers, and
- Have higher pregabalin strengths dispensed

Cairns R, Schaffer AL, Ryan N, Pearson SA, Buckley NA. **Rising pregabalin use and misuse in Australia: trends in utilisation and intentional poisonings.** Addiction. 2018 Aug 11.

# Initial Dosing

## Naloxone

**Routes:** Pre-filled syringe, Vial, intranasal routes

**MOA:** opioid antagonist, blocks opioids. ½ life is 60-90 minutes.

**Opioid Overdose (child or adult):**

Narcan Nasal Spray: 4 mg dose sprayed into one nostril

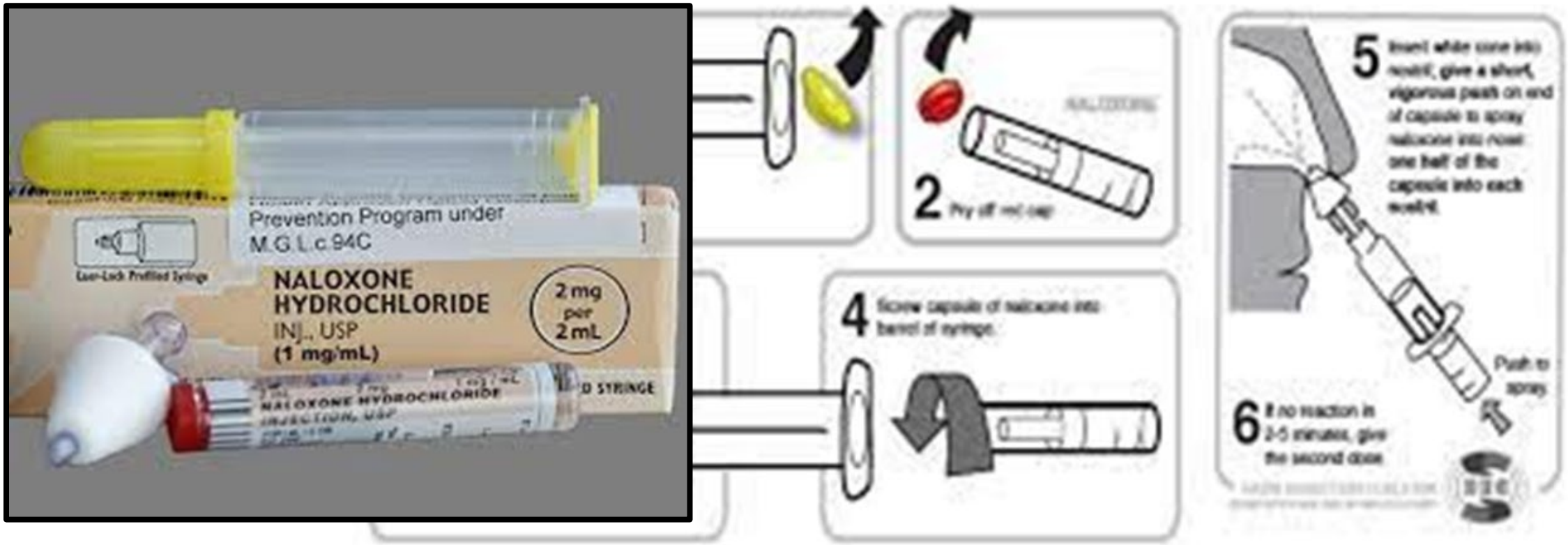
Naloxone Nasal via Atomizer: 2 mg dose sprayed into the nostrils (half in each nostril)

Evzio Auto-injector: 2 mg dose of naloxone injected into the outer thigh


**Call 911, Repeat after 4 min if symptoms reoccur.**

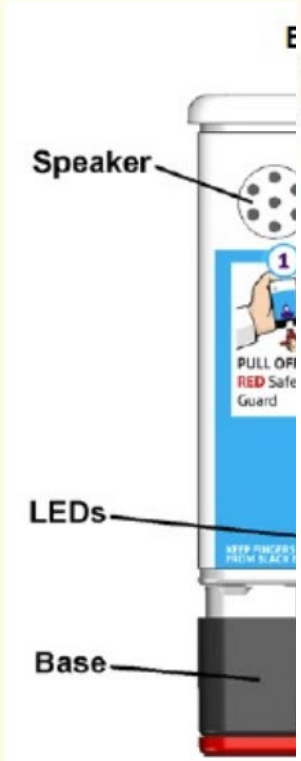
https://dhhr.wv.gov/office-of-drug-control-policy/Documents/Naloxone%20Video%20End%20User%20approved%2011-2019.pdf

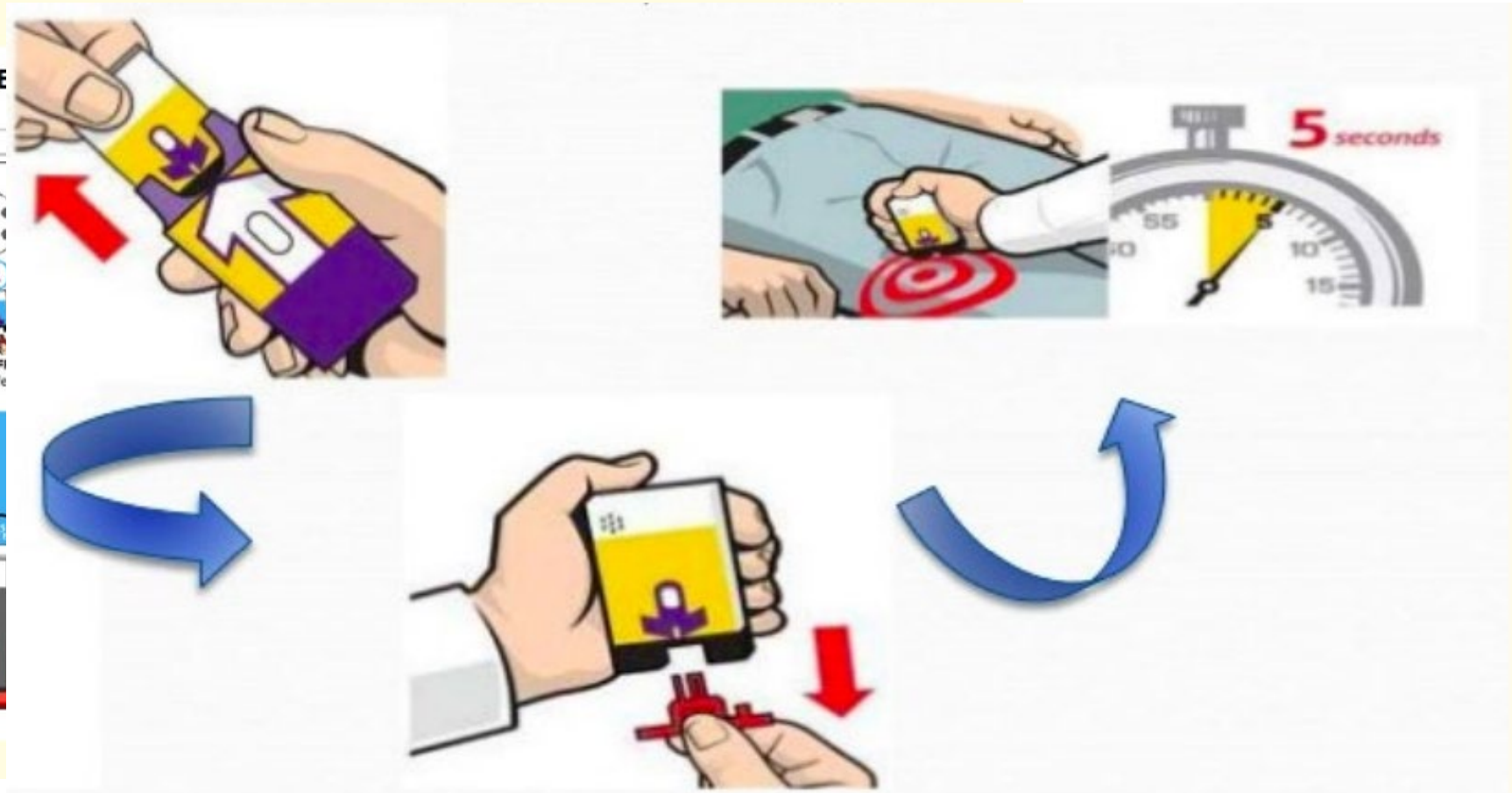
# Initial Dosing-Naloxone




https://dhhr.wv.gov/office-of-drug-control-policy/Documents/Naloxone%20Video%20End%20User%20approved%2011-2019.pdf

# Initial Dosing-Naloxone

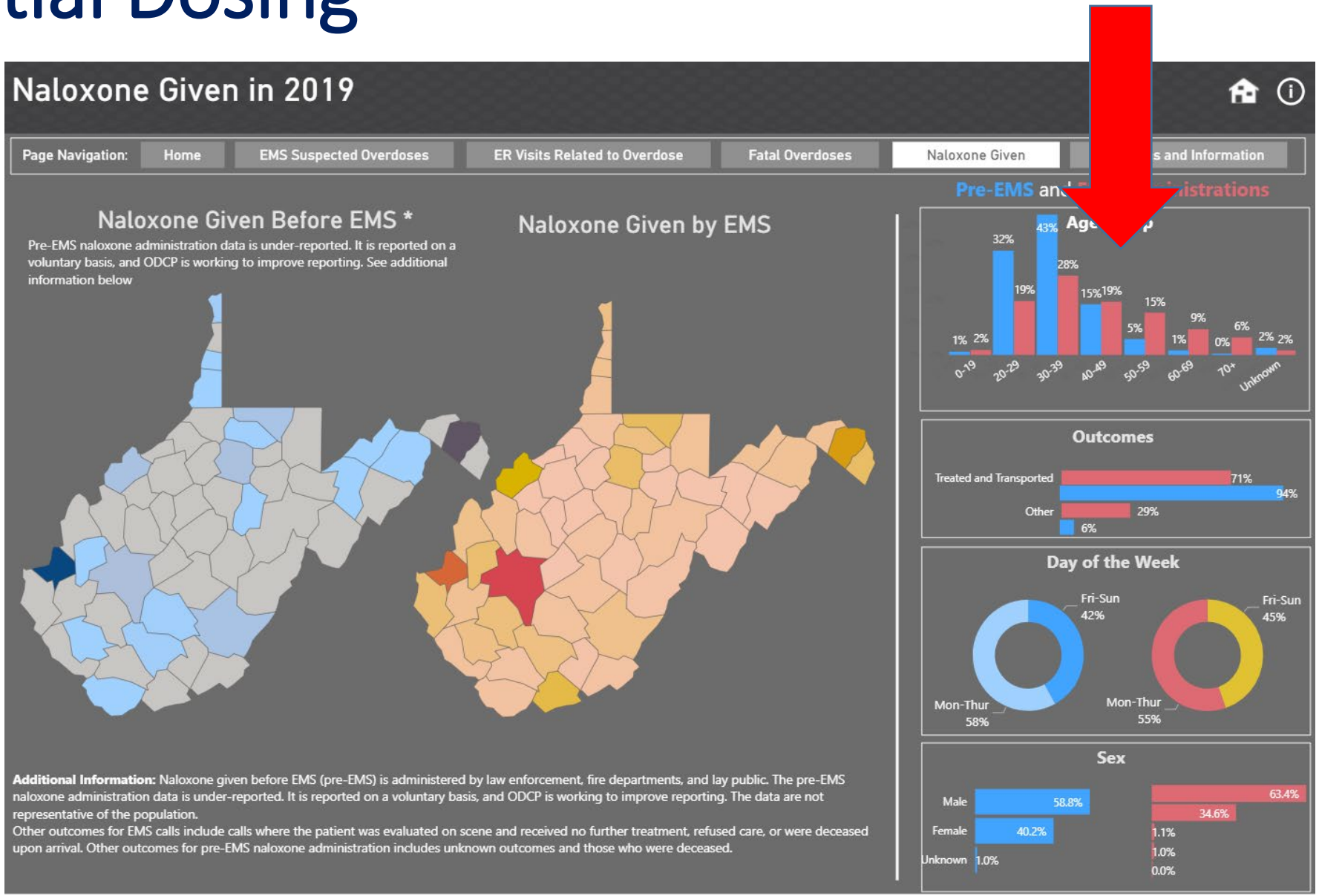



Evzio® Auto-Injector [package insert] Richmond, VA: kaleo;2014.

https://dhhr.wv.gov/office-of-drug-control-policy/Documents/Naloxone%20Video%20End%20User%20approved%2011-2019.pdf

# Initial Dosing




**Of note:**
If older than 40YOA EMS more likely to administer first dose.

Kanawha: 1905

Cabell: 1608

Berkeley: 1154

https://dhhr.wv.gov/office-of-drug-control-policy/datadashboard/Pages/default.aspx 9/17/21

# Opioid Equivalents

**Determine** the total daily amount of each opioid the patient takes.

**Convert** each to MMEs—multiply the dose for each opioid by the conversion factor.

**Add** them together.

**Warning:** Do not use the calculated dose in MMEs to determine dosage for converting one opioid to another—**the new opioid should be lower to avoid unintentional overdose** caused by incomplete cross-tolerance and individual differences in opioid pharmacokinetics. Consult the medication label.

**Calculating morphine milligram equivalents (MME)**

| OPIOID (doses in mg/day except where noted) | CONVERSION FACTOR |
|---|---|
| Codeine | 0.15 |
| Fentanyl transdermal (in mcg/hr) | 2.4 |
| Hydrocodone | 1 |
| Hydromorphone | 4 |
| Methadone | |
| 1-20 mg/day | 4 |
| 21-40 mg/day | 8 |
| 41-60 mg/day | 10 |
| ≥ 61-80 mg/day | 12 |
| Morphine | 1 |
| Oxycodone | 1.5 |
| Oxymorphone | 3 |

*These dose conversions are estimated and cannot account for all individual differences in genetics and pharmacokinetics.*

https://www.cdc.gov/drugoverdose/pdf/calculating_total_daily_dose-a.pdf

# Opioid Equivalents

## 50 MME/day:

**50mg Hydrocodone**: 10 tablets of hydrocodone/ acetaminophen 5/300

**33mg of oxycodone**: 2 tablets of oxycodone sustained-release 15 mg

**12mg of methadone**: <3 tablets of methadone 5 mg

## 90 MME/day:

**90mg Hydrocodone**: 9 tablets of hydrocodone/ acetaminophen 10/300

**60 mg of oxycodone:** 2 tablets of oxycodone sustained-release 30 mg

**20 mg of methadone:** 4 tablets of methadone 5 mg

https://www.cdc.gov/drugoverdose/pdf/calculating_total_daily_dose-a.pdf

# Case Study:

Your employer has recently lost three long established family physicians and management has informed you that, as a physician, you will have to assume the care of their patients on controlled medications. Your area has lost it's only non-interventionist pain specialist to a recent drug sweep.

On Monday, after this conference, the first patient presents.  He's a 56 years of age former timber worker on disability for the last 22 years after being crushed by a tree and suffering a flailed chest and multiple vertebral fractures. He smokes, has COPD, his A1C is 9.8% and his LDL is 140.

He's on Metformin, Pro-air, and hydrocodone 5 mg TID. He's been on these meds for the last 6 years. He has refused preventative efforts and your EMR informs you of multiple care gaps including colonoscopy and immunizations.

# Case Study:

Preparing for the 15 minute visit (he's established in the system) you prioritize your efforts.

Which of the following is the most worrisome health concern?

A) His socioeconomic status
B) His lack of preventative care
C) His uncontrolled diabetes
D) His chronic opioid use

Rx Opioid Overdose 17.2 per 100,000
**Diabetes mellitus 47.6 per 100,000**
Diseases of heart 267.0
Malignant neoplasms 256.3
Chronic lower respiratory diseases 92.6
Cerebrovascular diseases 58.3

https://www.cdc.gov/nchs/nvss/mortality/lcwk5_hr.htm

# Case Study:

You decide to focus on his diabetes during todays visit, but recognize you must address his opioid use as well.

You decide to make an effort to reduce his opioid use by limiting his number of pills but not his total MMEs.

What is his current MME use:

A) 50 MME
B) 30.5 MME
C) 15 MME
D) 5 MME

# Case Study:

What choice or choices offer an equivalent MME?

A) Oxycodone 7.5mg BID

B) Hydrocodone 7.5 mg BID

C) Oxycodone 10mg QHS

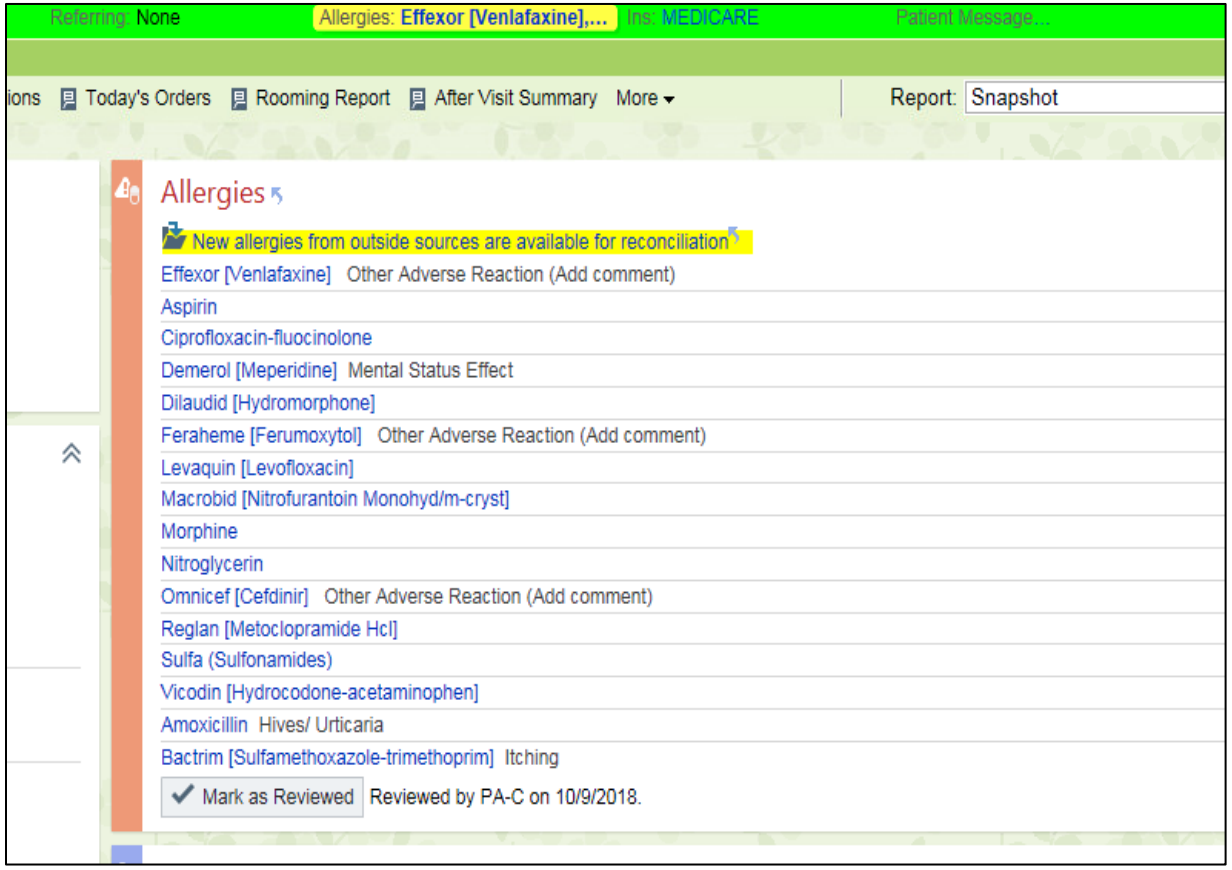
D) Hydrocodone 10mg Q AM

# Behaviors Suspicious for Misuse or Dependency

- Taking a controlled substance for a long period of time (new patients)
- Refusing to grant permission to obtain old records or communicate with previous physicians
- Demonstrating reluctance to undergo a comprehensive history, physical examination, or diagnostic testing (especially urine drug screening)

# Behaviors Suspicious for Misuse or Dependency

- Requesting a specific drug (often because of the higher resale value of a brand name)
- Professing multiple allergies to recommended medications
- Resisting other treatment options



# Behaviors Suspicious for Misuse or Dependency

**Other aberrant behavior**

- Issuing threats or displaying anger
- Targeting appointments at the end of the day or during off hours (nights or weekends)
- Giving excessive flattery

https://lane.stanford.edu/about/donations.html

# Behaviors Suspicious for Misuse or Dependency

- Calling and visiting a physician's associates
- Repeatedly losing a prescription
- Requesting a dose escalation
- Demonstrating noncompliance with prescription instructions
- Demonstrating other evidence of alcohol or illicit drug misuse

# Testing:

**Schedule patients additional time:**

For example, writing a new prescription for a controlled substance would require evaluating the patient for a history of abuse or addiction, and may include screening.

https://uk.rs-online.com/web/p/stopwatches/0329727/

# Testing:

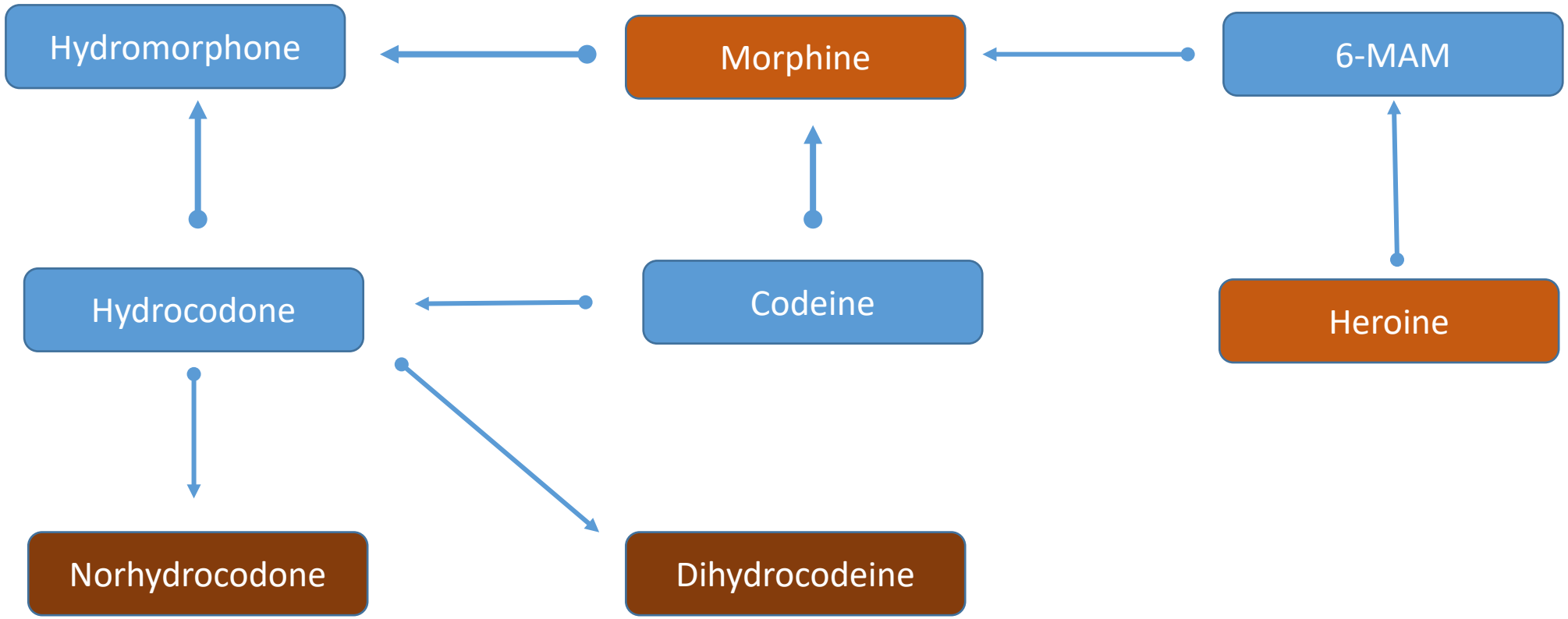
**There are two main types of Urine Drug Screening:**

- **immunoassay testing,** and
- **chromatography** (i.e., gas chromatography/mass spectrometry [GC/MS] or high-performance liquid chromatography

- **Immunoassay tests are the preferred initial test for screening.** They use antibodies to detect the presence of drugs. These tests can be processed rapidly, are inexpensive.

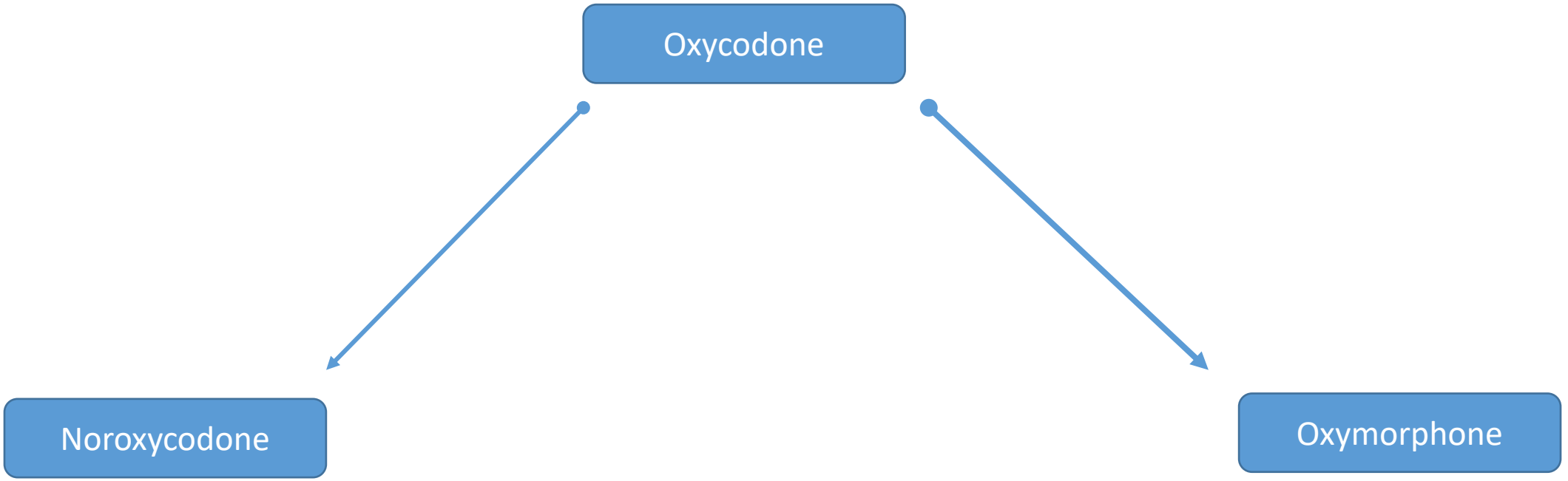
JOHN B. STANDRIDGE, MD; STEPHEN M. ADAMS, MD; and ALEXANDER P. ZOTOS, MD, Urine Drug Screening: A Valuable Office Procedure. *Am Fam Physician.* 2010 Mar 1;81(5):635-640.

# Opioids Metabolism



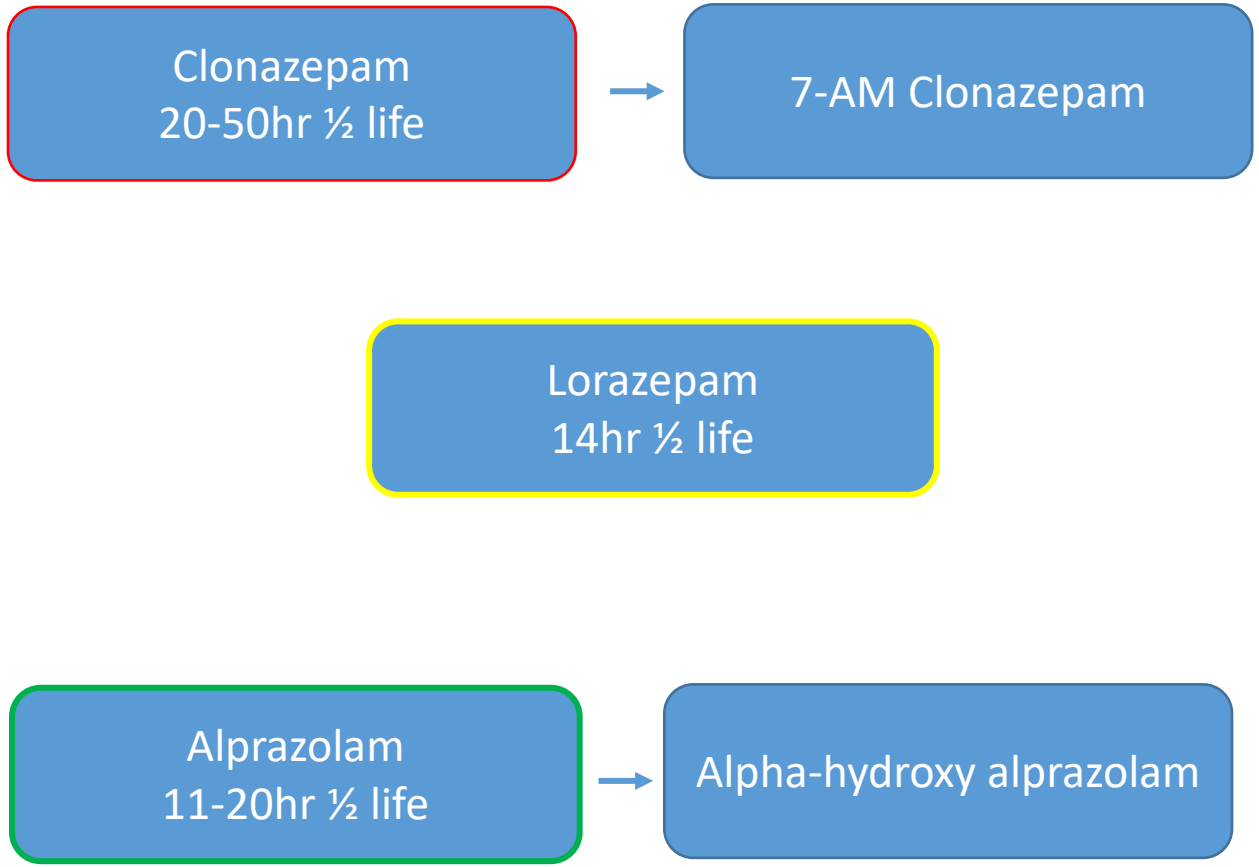

https://premierbiotech.com/innovation/opi-vs-oxy/

# Opioids Metabolism




http://insourcedx.com/services/compliance/udt/drug_metabolism.html

# Benzodiazepines Metabolism




http://insourcedx.com/services/compliance/udt/drug_metabolism.html

# Urine Drug Screens

**The most commonly ordered drug screens are for:**

- Cocaine metabolites
- Amphetamines
- Phencyclidine
- Marijuana metabolites
- Opiate metabolites.

https://www.protocoldrugtesting.com/

The **U.S. Department of Transportation** requires testing for these five substances when conducting urine drug screenings for transportation employees

# Urine Drug Screens

**The Accuracy of Immunoassay**

**It varies..**

-high predictive value for marijuana and cocaine,

-lower predictive value for opiates and amphetamines.

Many commonly prescribed medications can cause positive immunoassay tests


https://www.wcpo.com/news/national/urine-screens-are-big-business-report-shows-costs-quadrupled-from-2011-to-2014

# Reducing UDS Tampering

- Request removal of any unnecessary outer clothing
- Remove anything in the collection area that could be used to adulterate or substitute a urine specimen
- Request the display and removal of any items in the patient's pockets, coat, hat, etc.



https://www.synthetix5.com/synthetic-urine-belt-kit/

https://peepack.com/product/peepack-sterile-urine-kit-3-pack/

# Reducing UDS Tampering

- Require all other personal belongings (e.g., briefcase, purse) to remain with the outer clothing
- Instruct the patient to wash and dry his or her hands (preferably with liquid soap) under direct observation and not to wash again until after delivering the specimen
- Place a bluing agent in the commode and turn off the water supply to the testing site

https://www.zoomtesting.co.uk/bluing-tablets/

# Methods and Criteria for UDS

**Collection Methods and Criteria**

- Direct observation of specimen collection (when required)
- **Sample size:** 30 mL or more
- **Temperature:** between 90°F (32.2°C) and 100°F (37.7°C)
- **Urine pH:** 4.5 to 8.5

- Use of an approved chain of custody form to track specimen handling

# Methods and Criteria for UDS

**Findings Suggestive of Adulterated, Diluted, or Substituted Specimens**

General: Temperature < 90°F or > 100°F

Unusual appearance (e.g., bubbly, cloudy, clear, dark)

Adulterated: Nitrite concentration >5 mg per dL

Urine pH < 3 or ≥ 11

Diluted/Substituted: Creatinine concentration < 2.0 mg per dL

# Drugs that cause a false positive on UDS

**Opiates**

Dextromethorphan,
fluoroquinolones,
quinine,
verapamil‡

diphenhydramine,
**poppy seeds,**
rifampin,

**Duration of Detectability:** One to three days

‡—In methadone assays only.

# Drugs that cause a false positive on UDS

**Phencyclidine (PCP/Angel Dust)**

dextromethorphan
ibuprofen
ketamine
thioridazine
venlafaxine

diphenhydramine
imipramine
meperidine
tramadol

**Duration of Detectability:** 7 to 14 days

# Drugs that cause a false positive on UDS

## Benzodiazepines

Oxaprozin and Sertraline

**Duration of Detectability**: 3 days for short-acting agents (e.g., lorazepam). Up to 30 days for long-acting agents (e.g., diazepam).

## Cocaine

Topical anesthetics containing cocaine

**Duration of Detectability**: 2-3 days with occasional use, Up to 8 days with heavy use.

# Drugs that cause a false positive on UDS

**Amphetamines**

Amantadine (Symmetrel),
Bupropion (Wellbutrin),
Chlorpromazine,
Desipramine (Norpramin),
**Fluoxetine** (Prozac),

L-methamphetamine
(in nasal decongestants*),
Labetalol (Normodyne),
Methylphenidate (Ritalin),
**Phentermine,**
Phenylephrine,

Phenylpropanolamine,
**Promethazine**(Phenergan),
Pseudoephedrine,
Ranitidine (Zantac),
Thioridazine,
**Trazodone** (Desyrel)

**Duration of Detectability:** Up to 3 days. *Current immunoassays have corrected the false-positive result for nasal decongestants containing L -methamphetamine.

# Drugs that cause a false positive on UDS

**Tetrahydrocannabinol**

**Dronabinol** -(Marinol),

**NSAIDs**-ibuprofen, naproxen (Naprosyn), and sulindac (Clinoril),

**PPIs**- (pantoprazole [Protonix])

**Duration of Detectability**: 3 days with single use, 5-7 days with use around 4X per week, 10-15 days with daily use, **More than 30 days with long-term, heavy use**

# Testing: Pill Counts

The main goal of a pill count is **to prevent diversion, misuse and abuse.**

https://www.affirmhealth.com/blog/pill-counts-a-tool-for-medication-adherence-and-diversion-reduction

https://www.youtube.com/watch?v=v6gyDV8YOuQ

# Testing: Pill Counts

Request that the patient bring all unused pills to an appointment in the original container.

Notify the patient the **day before or the same day** as the appointment.

Check if the number of pills in the container match what the expected number would be if the patient followed the prescribed dosage.

# Case Study:

Your 55 YO tree harvester has returned for his second visit.
His A1C is now 10.2%
You refer him to a local endocrinologist and focus on his opioid use.

**What is the best way to determine he's using his opioids as ordered?**

A) UDS
B) BOP
C) A pill count
D) the word of his wife who is here to attest to his need of opioids and his compliance

# Case Study:

To set the appropriate expectations, you complete a UDS today.
The results come back the next day and show THC.

**At this point the best course of action is to:**

A) Inform the patient he will be dismissed.
B) Repeat the test.
C) Order a confirmation on the same sample.
D) Ask the patient to return for an interview.

# Break