Current Trends and Impact of Recreational Drug Use

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Disclosure Statement

- Darby Bryce and T.J. Grimm have no relevant financial relationship(s) with ineligible companies to disclose.

  and

- None of the planners for this activity have relevant financial relationships with ineligible companies to disclose.

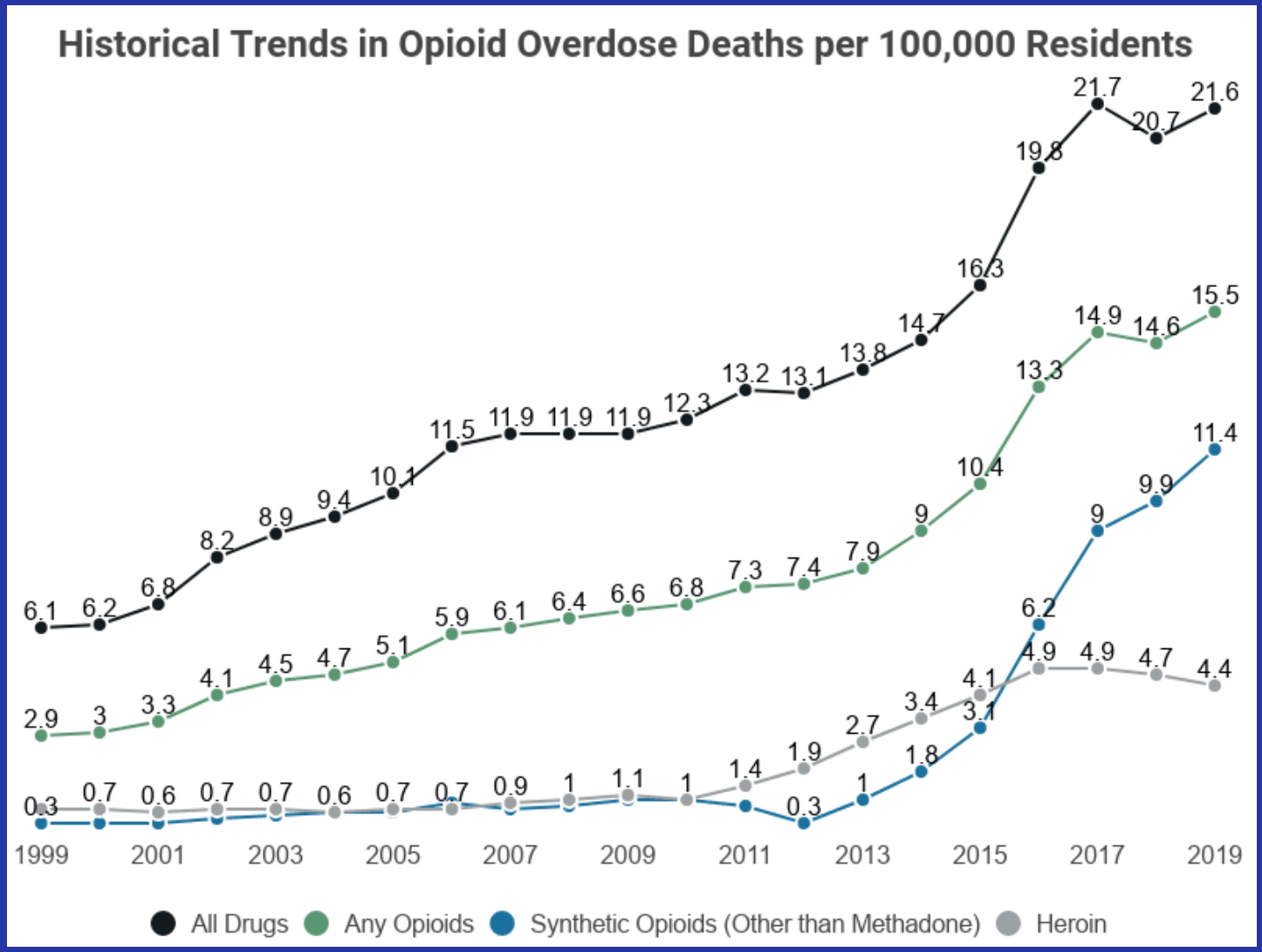
Learning Objectives

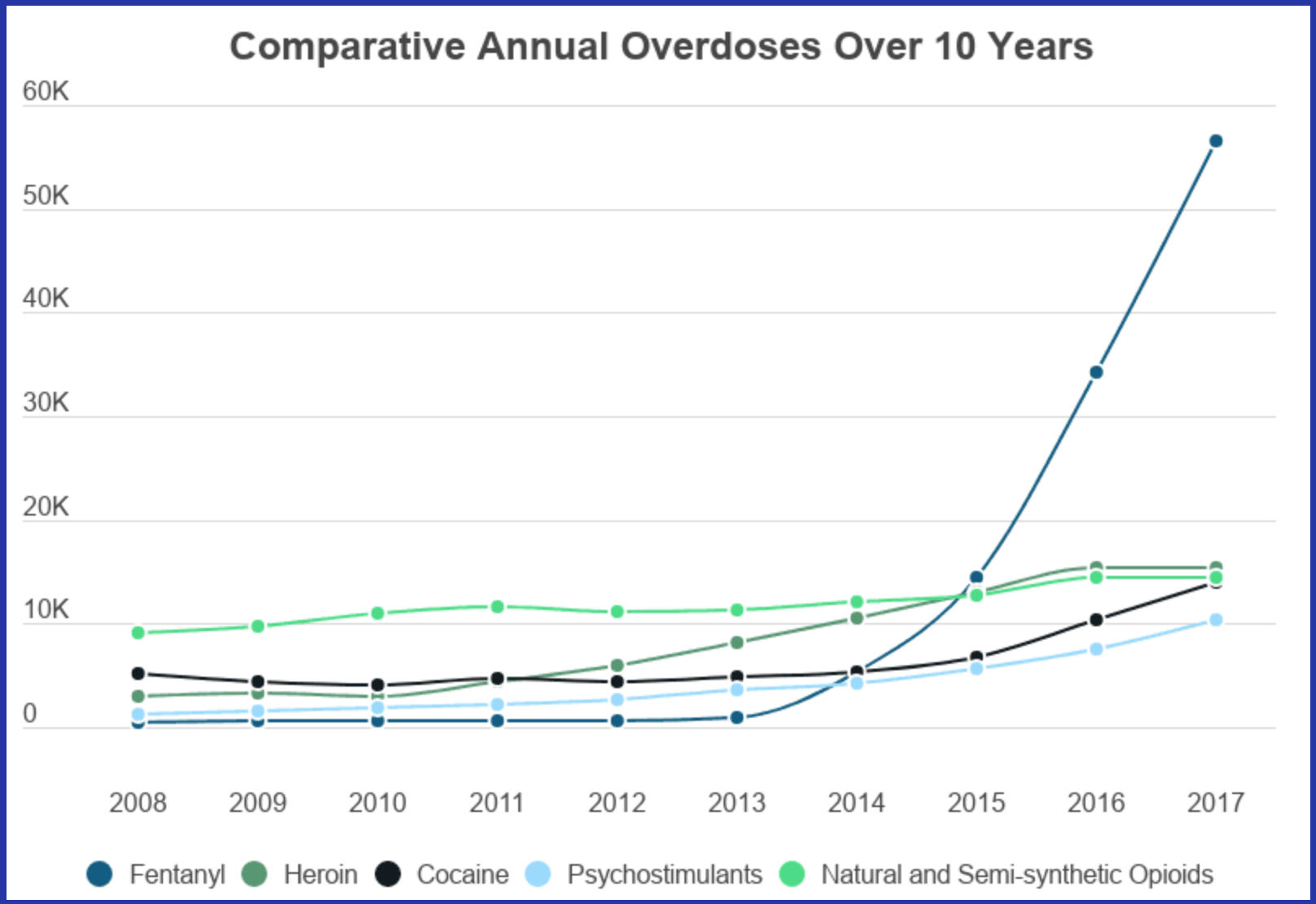
At the completion of this activity, the participant will be able to:

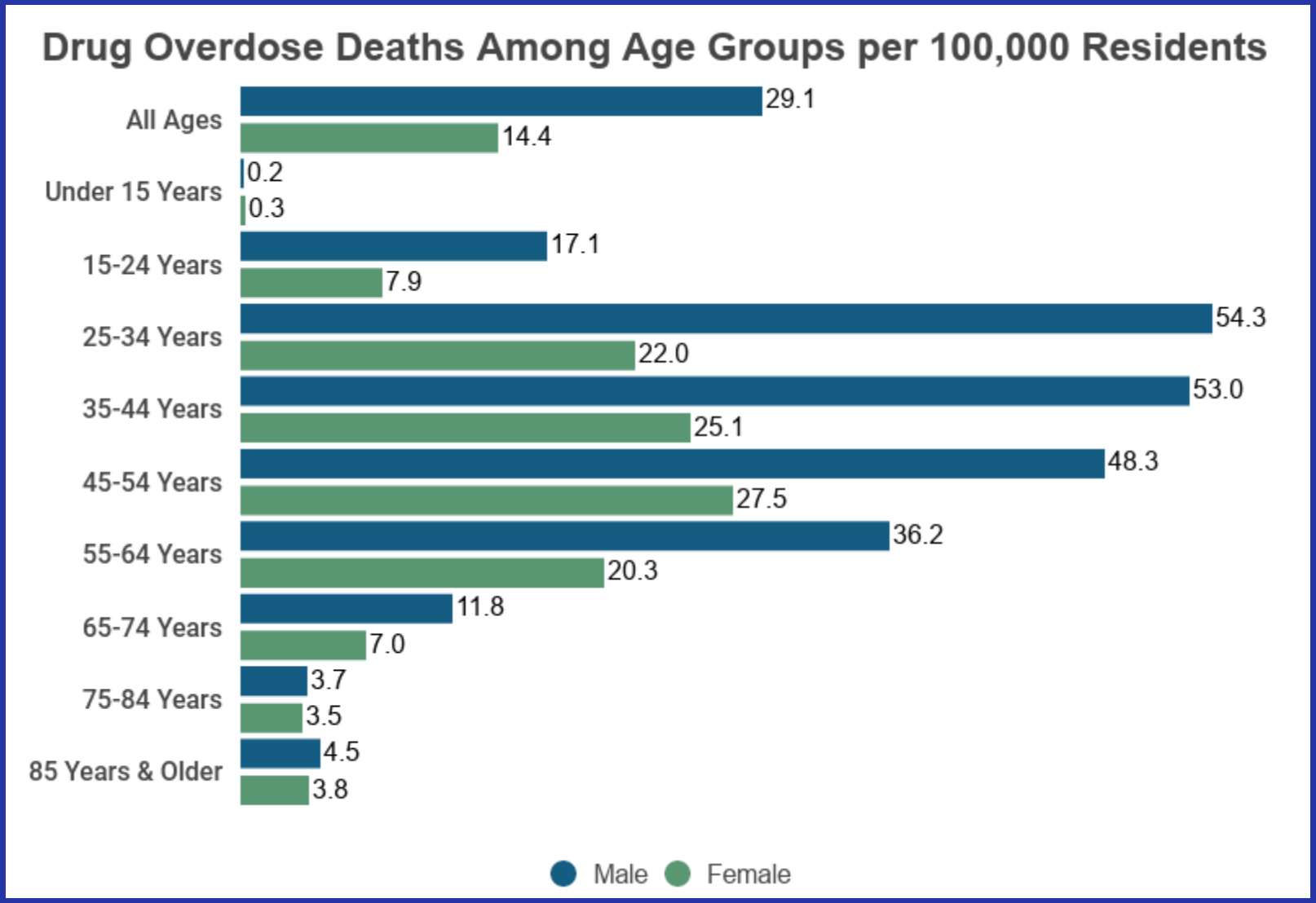
1. Identify established and novel drugs of concern in the United States
2. Discuss current state and national data and trends
3. Review naloxone history and access
4. Review narcotic prescribing laws in Ohio
5. Compare safety and efficacy of buprenorphine to conventional opioid therapies
6. Identify paths for pharmacists to mitigate repercussions of the opioid epidemic

Quick Statistics

- Deadliest drugs: US 2021
  - Opioids (67.8%)
  - Cocaine (21.2%)
  - Other Psychostimulants (20.6%)
  - Methadone (4.03%)
- January 2021- OD deaths exceeded homicide by 306.7%


Historical Trends in Opioid Overdose Deaths per 100,000 Residents
6.1 6.2 6.8 8.2 8.9 9.4 10.1 11.5 11.9 11.9 11.9 12.3 13.2 13.1 13.8 14.7 16.3 19.8 21.7 20.7 21.6
2.9 3 3.3 4.1 4.5 4.7 5.1 5.9 6.1 6.4 6.6 6.8 7.3 7.4 7.9 9 10.4 13.3 14.9 14.6 15.5
0.3 0.7 0.6 0.7 0.7 0.6 0.7 0.7 0.9 1 1.1 1 0.3 1 1.8 3.1 6.2 9 9.9 11.4
0.3 0.7 0.6 0.7 0.7 0.6 0.7 0.7 0.9 1 1.1 1 1.4 1.9 2.7 3.4 4.1 4.9 4.9 4.7 4.4
1999 2001 2003 2005 2007 2009 2011 2013 2015 2017 2019
All Drugs
Any Opioids
Synthetic Opioids (Other than Methadone)
Heroin


Comparative Annual Overdoses Over 10 Years
60K
50K
40K
30K
20K
10K
0
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
Fentanyl
Heroin
Cocaine
Psychostimulants
Natural and Semi-synthetic Opioids

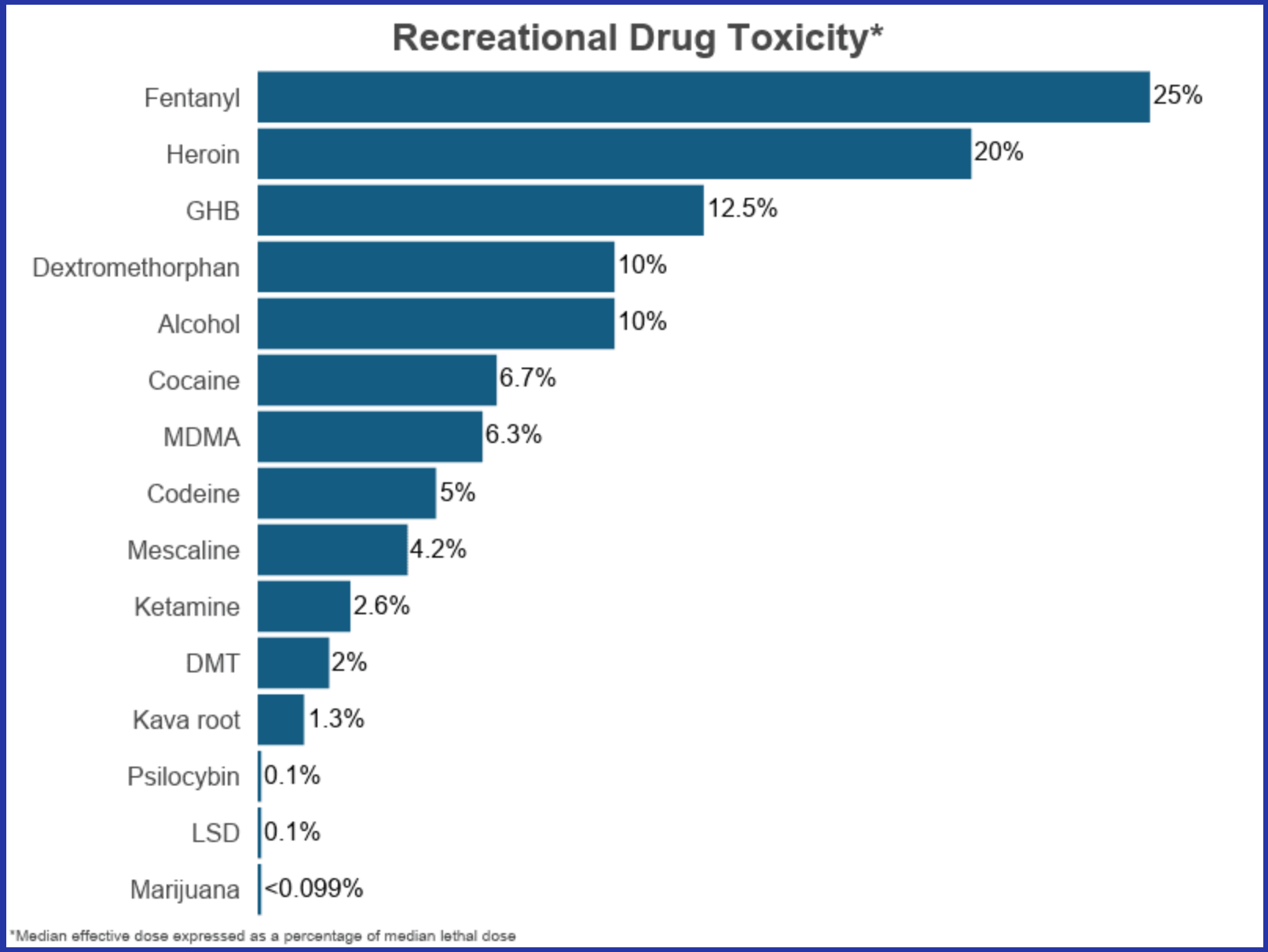

Drug Overdose Deaths Among Age Groups per 100,000 Residents
All Ages
29.1
14.4
Under 15 Years
0.2
0.3
15-24 Years
17.1
7.9
25-34 Years
54.3
22.0
35-44 Years
53.0
25.1
45-54 Years
48.3
27.5
55-64 Years
36.2
20.3
65-74 Years
11.8
7.0
75-84 Years
3.7
3.5
85 Years & Older
4.5
3.8
Male
Female

Quick Statistics- Ohio

- 4,251 overdose deaths per year
- 3.83 deaths per 100,000 residents
  - 85.02% higher than national average

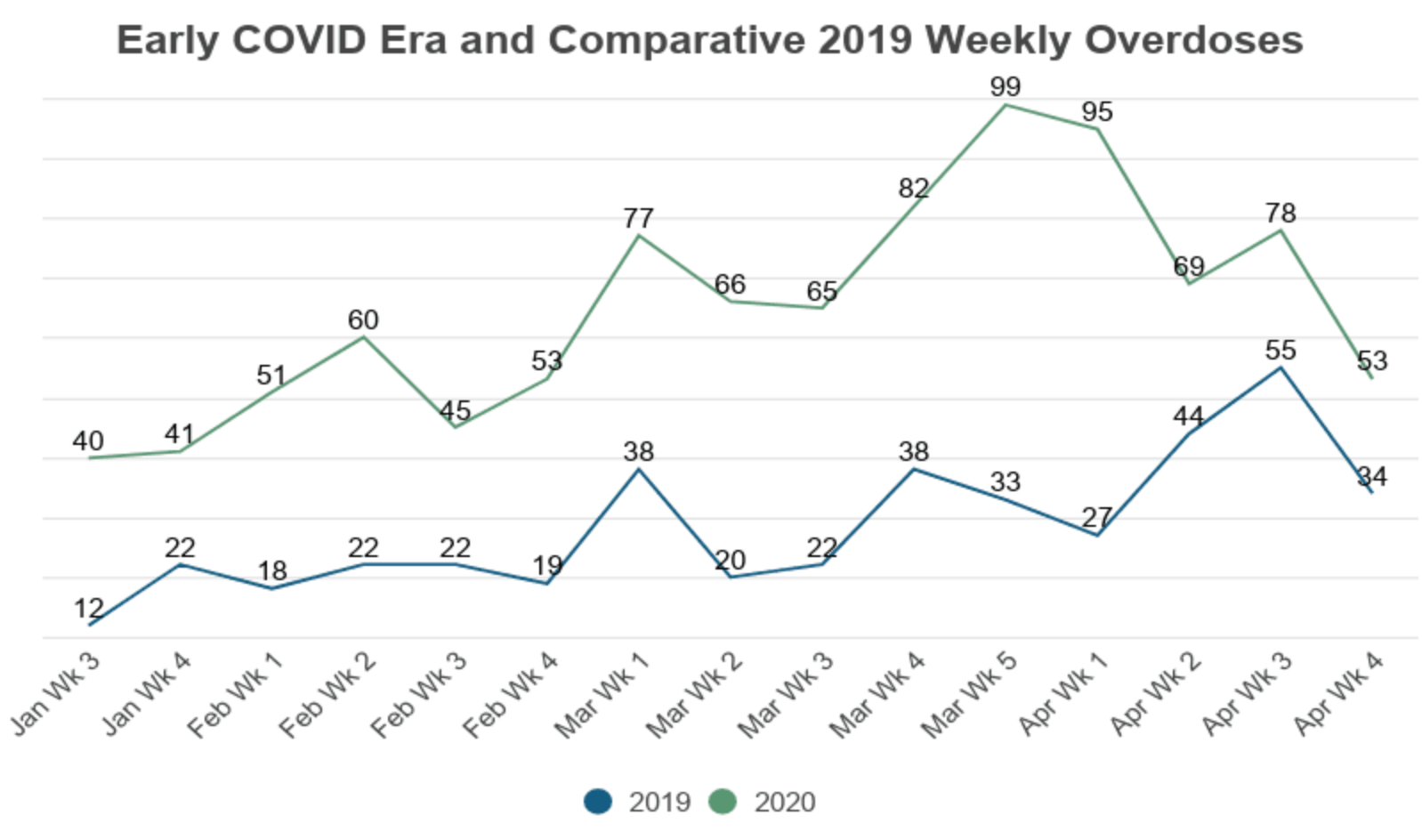
Fentanyl Facts

- 53% of overdose deaths involve fentanyl
- 2mg of fentanyl causes certain death
  - Compared to 100mg of heroin and 250mg of cocaine


Recreational Drug Toxicity*
Fentanyl
25%
Heroin
20%
GHB
12.5%
Dextromethorphan
10%
Alcohol
10%
Cocaine
6.7%
MDMA
6.3%
Codeine
5%
Mescaline
4.2%
Ketamine
2.6%
DMT
2%
Kava root
1.3%
Psilocybin
0.1%
LSD
0.1%
Marijuana
<0.099%
*Median effective dose expressed as a percentage of median lethal dose

Dose vs Death

Fentanyl Consumed	Risk of Death
0.00005g (0.05mg, 50mcg)	Unlikely
0.0001g (0.1mg, 100mcg)	Moderate risk
0.00015g (0.15mg, 150mcg)	Significant risk
0.00025 (0.25mg, 250mcg)	High risk
0.0004g (0.4mg, 400mcg)	Very high risk
0.0007g (0.7mg, 700mcg)	Likely
0.001g (1mg, 1000mcg)	Near-certain
0.002g (2mg, 2000mcg)	Certain


Early COVID Era and Comparative 2019 Weekly Overdoses
40
41
51
60
45
53
77
66
65
82
99
95
69
78
53
12
22
18
22
22
19
38
20
22
38
33
27
44
55
34
Jan Wk 3
Jan Wk 4
Feb Wk 1
Feb Wk 2
Feb Wk 3
Feb Wk 4
Mar Wk 1
Mar Wk 2
Mar Wk 3
Mar Wk 4
Mar Wk 5
Apr Wk 1
Apr Wk 2
Apr Wk 3
Apr Wk 4
2019
2020

COVID-19 Spike

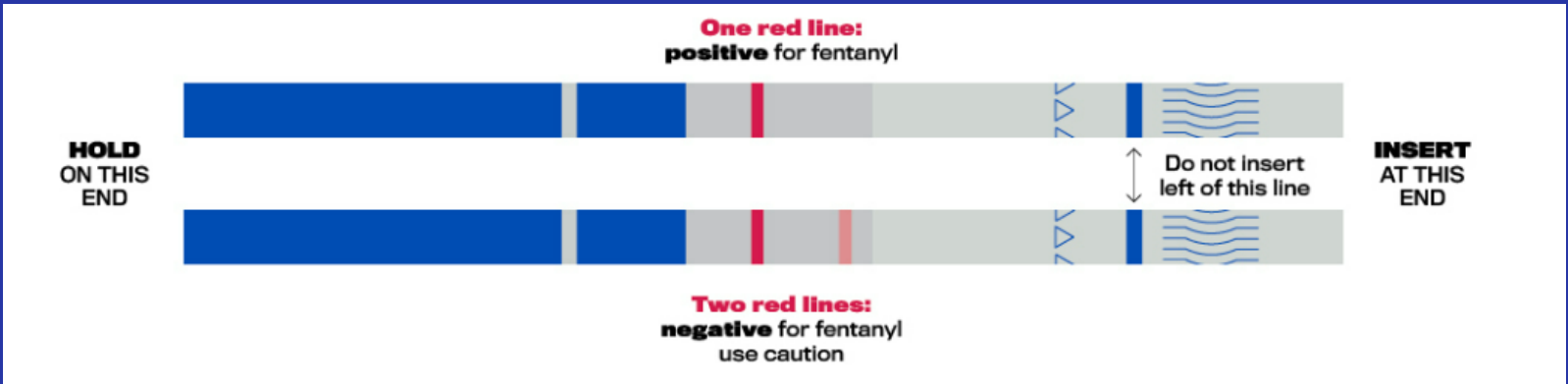
- From June 2018 to July 2019, OD rates increased 21.5%
  - Week 5 of March 2020 saw 200% increase in overdose deaths
    - Coincides with initiation of quarantines

Fentanyl Vaccine

- Prevents fentanyl entry into the brain by creating anti-fentanyl antibodies
  - Reduces antinociceptive, behavioral, and physiological effects
  - Antibodies are specific to fentanyl and analogs
- Proven effective in mice
  - No adverse effects

Fentanyl Test Strips

- Low cost method to help prevent overdose
- Small strips of paper that can detect fentanyl in different kinds of drugs in various forms



1. Place small amount (at least 10mg) in a clean, dry container
2. Add water and mix
   - Most drugs need ½ teaspoon of water, amphetamines require 1 teaspoon

3. Place wavy end of strip into water and let absorb for 15 seconds

4. Remove strip and set on flat surface for 2-5 minutes

New Kid on the Block

- Xylazine increasingly present in overdose deaths
- Non-opioid veterinary tranquilizer
- Often used in combination with fentanyl to extend euphoric effects
- Exact nationwide numbers unknown
  - In PA, deaths involving xylazine increased from 2% to 26% from 2015 to 2020
  - In 2021 in MD, involved in 19% of overdose deaths
  - In 2020 in CT, 10%

What Does Xylazine Do?

- CNS depressant that causes drowsiness, amnesia, bradypnea, bradycardia, and hypotension
- Repeated use is associated with skin ulcers, abscesses, and other similar complications
- Reported to be used by injection, nasally, orally, and inhalation
- Recommended to use naloxone in event of overdose, but this only helps if opioid is present

Naloxone History

- First US patent in 1961 by Mozes Lewenstein, Jack Fishman
- FDA approved in 1971 for opioid overdose via IV/IM route
  - Nasal route approved in 2015 with Narcan
- In 2018, US Surgeon General called for "heightened awareness and availability of naloxone"

Availability of Naloxone

- Available in all 50 states
  - As of 2022, all states have access laws or arrangements for patients to get naloxone without a prescription
- November 2022, FDA released preliminary report that naloxone may be approved for OTC use
  - Intranasal products up to 4mg and autoinjectors up to 2mg

Naloxone in Ohio

- Pharmacist or pharmacy intern authorized to dispense naloxone without a prescription in accordance with physician-approved protocol
  - Must counsel over risk factors of overdose, strategies to prevent, signs of overdose, how to respond to overdose, information about naloxone and how to administer, how to store medication, and where to get a referral for substance abuse treatment

1 Identify Opioid Overdose and Check for Response

Ask person if he or she is okay and shout name. **Shake** shoulders and firmly rub the middle of their chest. **Check for signs of an opioid overdose:**

- Will not wake up or respond to your voice or touch
- Breathing is very slow, irregular, or has stopped
- Center part of their eye is very small, sometimes called "pinpoint pupils"

Lay the person on their back to receive a dose of NARCAN® Nasal Spray.

2 Give NARCAN® Nasal Spray

REMOVE NARCAN® Nasal Spray from the box. Peel back the tab with the circle to open the NARCAN® Nasal Spray. **Hold** the NARCAN® Nasal Spray with your thumb on the bottom of the red plunger and your first and middle fingers on either side of the nozzle.

Gently insert the tip of the nozzle into either nostril.

- Tilt the person's head back and provide support under the neck with your hand. Gently insert the tip of the nozzle into **one nostril**, until your fingers on either side of the nozzle are against the bottom of the person's nose

Press the red plunger firmly to give the dose of NARCAN® Nasal Spray.

- Remove the NARCAN® Nasal Spray from the nostril after giving the dose

3 Call for Emergency Medical Help, Evaluate, and Support

Get emergency medical help right away. Move the person on their side (recovery position) after giving NARCAN® Nasal Spray. **Watch the person closely. If the person does not respond** by waking up, to voice or touch, or breathing normally, another dose may be given. NARCAN® Nasal Spray may be dosed every 2 to 3 minutes, if available. **Repeat Step 2 using a new NARCAN® Nasal Spray to give another dose in the other nostril.** If additional NARCAN® Nasal Sprays are available, repeat step 2 every 2 to 3 minutes until the person responds or emergency medical help is received.

Project DAWN

- Deaths Avoided with Naloxone
- Network of opioid overdose education and naloxone distribution programs coordinated by Ohio Department of Health
- First site established in Portsmouth in 2012
  - Now there are more than 380 distribution sites in 77 counties
  - 145 Project DAWN programs
- 10 programs offer online mail-order naloxone to all residents of Ohio

OUD Treatment Availability

- Buprenorphine recently became available without a DATA-Waiver
- Methadone still requires treatment by a SAMHSA-certified opioid treatment program
- Naltrexone is available by any provider licensed to prescribe medications

Acute Pain Prescription Laws

- Cannot use extended release or long-acting opioids
- First prescription cannot exceed 7-day supply
  - Minors- 5 days
- MED cannot exceed 30, except:
  - Severe medical conditions, surgeries, or injuries that cannot be managed within 30 MED limit

The New Rules for for Physicians and Physician Assistants

Generally, the rules limit the prescribing of opioid analgesics for acute pain, as follows:

1. No more than seven days of opioids can be prescribed for the first prescription for adults.
2. No more than five days of opioids can be prescribed for the first prescription for minors, and only after the written consent of the parent or guardian is obtained.
3. Health care providers may prescribe opioids in excess of the day supply limits only if a specific reason is provided in the patient's record.
4. Except as provided for in the rules, the total morphine equivalent dose (MED) of a prescription for acute pain cannot exceed an average of 30 MED per day.
5. The new limits do not apply to opioids prescribed for cancer, palliative care, end-of-life/hospice care or medication-assisted treatment for addiction.

Part 2 of the Acute Prescribing Rules

Starting December 29, 2017 prescribers are required to:

1. Include the first four alphanumeric characters of the diagnosis code or full procedure code on opioid prescriptions. The inclusion of a diagnosis/procedure code (CDT) will be required for all other controlled substance prescriptions on June 1, 2018.
2. Indicate the days' supply on all other controlled substance and gabapentin prescriptions.

Chronic/Subacute Opioid Prescriptions

- Required to engage in conversations to increase awareness of risk of misuse/addiction
- Check points at 50, 80, 120 MED
  - Patient assessment required every 3 months at 50 MED
  - Pain management agreement needs to be obtained at 80
  - >120 MED needs approval from pain specialist or hospice/palliative care

What are the Rules?

Found in Ohio Administrative Code 4731-11, the rules establish procedures that all Ohio prescribers need to follow when prescribing opioids for the treatment of subacute and chronic pain.

What are Subacute and Chronic Pain?

Subacute: Pain lasting between 6 and 12 weeks.
Chronic: Pain which lasts 12 weeks or more.

How Do I Know Opioid Medication is Appropriate for My Patient?

Before starting a patient on opioid medication, the rules require the following:

- Complete and document a full patient history.
- Complete and document an appropriate physical exam, imaging studies, lab tests and urine drug testing.
- Complete and document functional pain assessment and treatment plan.
- Perform an OARRS check.
- Review patient's prescription history and risk for substance use disorder.

Established Checkpoints for MEDs

At certain Morphine-Equivalent Doses (MEDs), the rules require the following:

50 MED

- Obtain written, informed consent from patient regarding treatment.
- Review and update status of patient's underlying condition.
- Assess functioning and look for signs of prescription misuse.
- Consider consulting with a specialist or obtaining a medication therapy management review.
- Consider offering a prescription for Naloxone.
- Conduct a review of patient response and adherence at least every three months.

80 MED

- Obtain written, informed consent from patient regarding treatment.
- Look for signs of opioid prescription misuse.
- Consult with a specialist or obtain a medication therapy management review.
- Offer the patient a prescription for Naloxone.

120 MED

- Obtain a recommendation from a board-certified pain medicine, hospice or palliative care physician.
- Recommendation must be based on a face-to-face examination.

Exceptions

The rules do not apply to:

- Patients being treated for terminal conditions, in hospice care or a hospital setting.
- Patients who were already on a dosage of 120 MED prior to December 23rd, 2018.

Buprenorphine Basics

- Phenanthrene derivative
  - Partial mu-receptor agonist
  - Delta- and kappa-receptor antagonist
- Long duration of action due to slow disassociation from receptors
  - Causes resistance to naloxone reversal
- Sublingual administration preferred to avoid first-pass effect

Buprenorphine for Acute Pain

- Previously believed to have analgesic ceiling effect, but has recently been found to be incorrect
  - Does have ceiling effect in regards to adverse effects and respiratory depression
    - Has not been studied in extremely high doses or with concomitant administration of other CNS depressants
- Found to be as effective as morphine within first hour of administration
  - Study found that 0.4mg SL buprenorphine is as safe and effective as 5mg IV morphine

Buprenorphine Benefits

- Between July 2019 and June 2021, study involving 74,474 patients showed 2.6% of deaths involved buprenorphine
  - More flexible prescribing practices were in effect due to COVID-19
    - No increase of buprenorphine overdose during this time
- Between 2007 and 2012 in England and Wales, 0.022 deaths per 1000 buprenorphine prescriptions
  - 0.137 deaths per 1000 methadone prescriptions

Buprenorphine Risks

- Suboxone package insert states that there still is increased risk of respiratory depression in opioid-naïve patients receiving 2mg buprenorphine
  - 2 studies in meta-analysis found no significant difference in analgesia and adverse effects between 2mg buprenorphine and 10mg morphine in opioid-naïve patients
- Could be increased risk of opioid-induced ventilatory impairment in older patients or with concomitant administration of additional CNS depressants

How Can Pharmacists Help?

- Continue looking for “red flags” when patients fill opioid medications
  - Forged or altered prescriptions, doctor/patient outside of geographical area, multiple prescribers
  - Check PDMP
  - Communicate with prescriber if any concerns
- Patient counseling on proper use, adverse effects, availability of naloxone

Advocate for Naloxone

- Offer naloxone with any chronic pain medication
- Approach patient from a safety point of view instead of addiction
  - "Preventing accidental deaths" vs risk of addiction

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