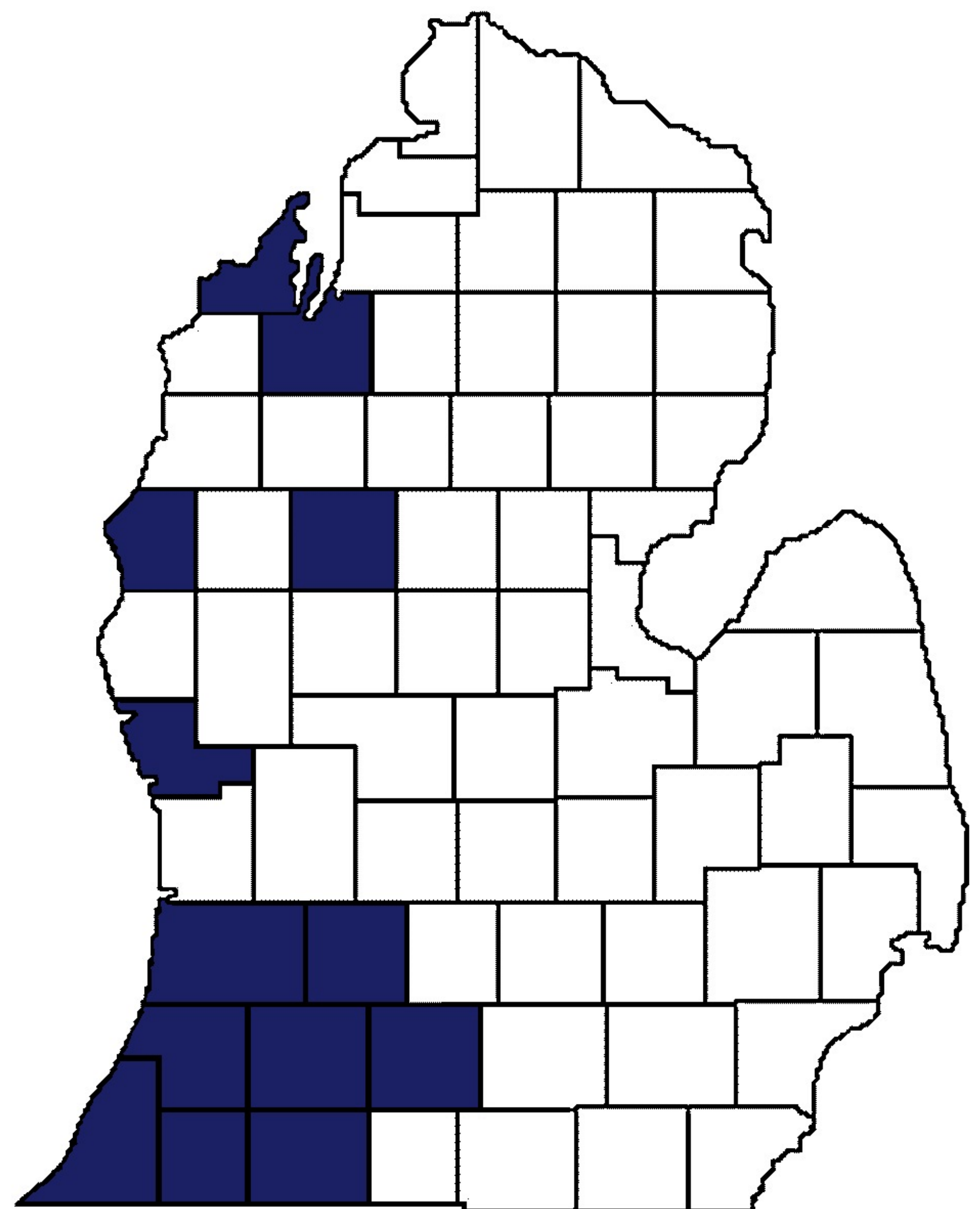


# Deaths Related to Opioids and Other Drugs

Medical Examiner Office

## Counties covered in this report:

**Allegan**  
**Barry**  
**Berrien**  
**Calhoun**  
**Cass**  
**Grand Traverse**  
**Kalamazoo**  
**Leelanau**  
**Mason**  
**Muskegon**  
**Osceola**  
**St. Joseph**  
**Van Buren**



### Purpose:

This data was collected from 13 counties served by the Office of the Medical Examiner in the Department of Pathology at WMed. Data includes deaths where drugs were the immediate cause of death.

This report is meant to provide up to date statistics to those involved in efforts to reduce the number of drug-related deaths.

Please note all data is preliminary in quarterly reports.

**Sections with the following headings are approximations and frequencies may be higher than what is reported:**

Health Factors, Mental Health Factors,  
 Social Factors, and Decedent Substance Use History.

**Sources:** All data was extracted from a Medical Examiner database, law enforcement (LE) and EMS reports, death certificates, obituaries, STORM (Swift Toxicology of Overdose-Related Mortalities) results, toxicology reports, and autopsy reports.

**Please contact Chloe Bielby for additional information at [chloe.bielby@med.wmich.edu](mailto:chloe.bielby@med.wmich.edu)**

# Deaths Related to Opioids and Other Drugs

Allegan, Barry, Berrien, Calhoun, Cass, Grand Traverse, Kalamazoo, Leelanau, Mason, Muskegon, Osceola, St. Joseph, Van Buren

## Total Drug-Related Deaths

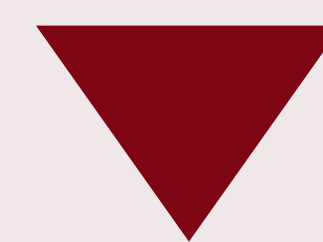
April to June, 2020

**103 deaths**

April to June, 2021

**87 deaths\***

Percent change

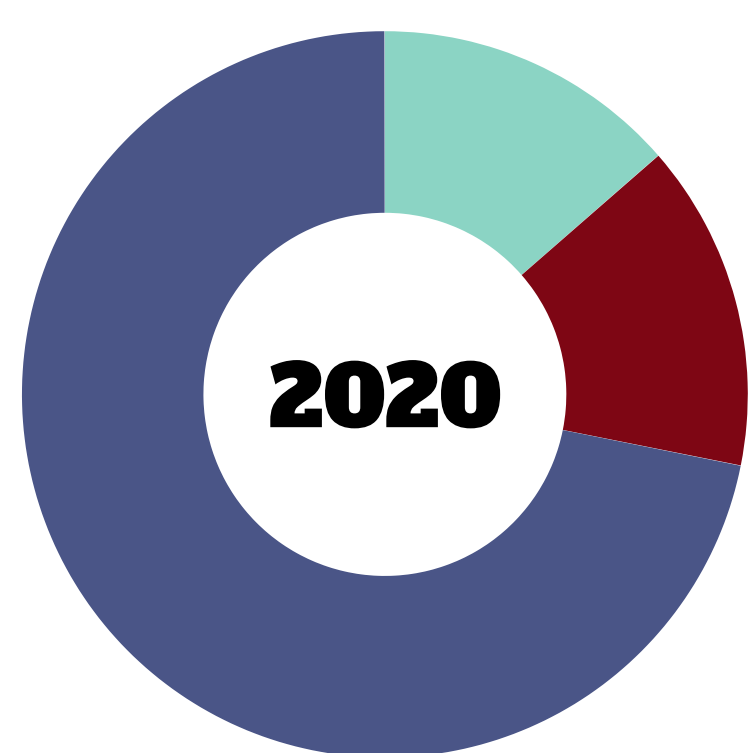
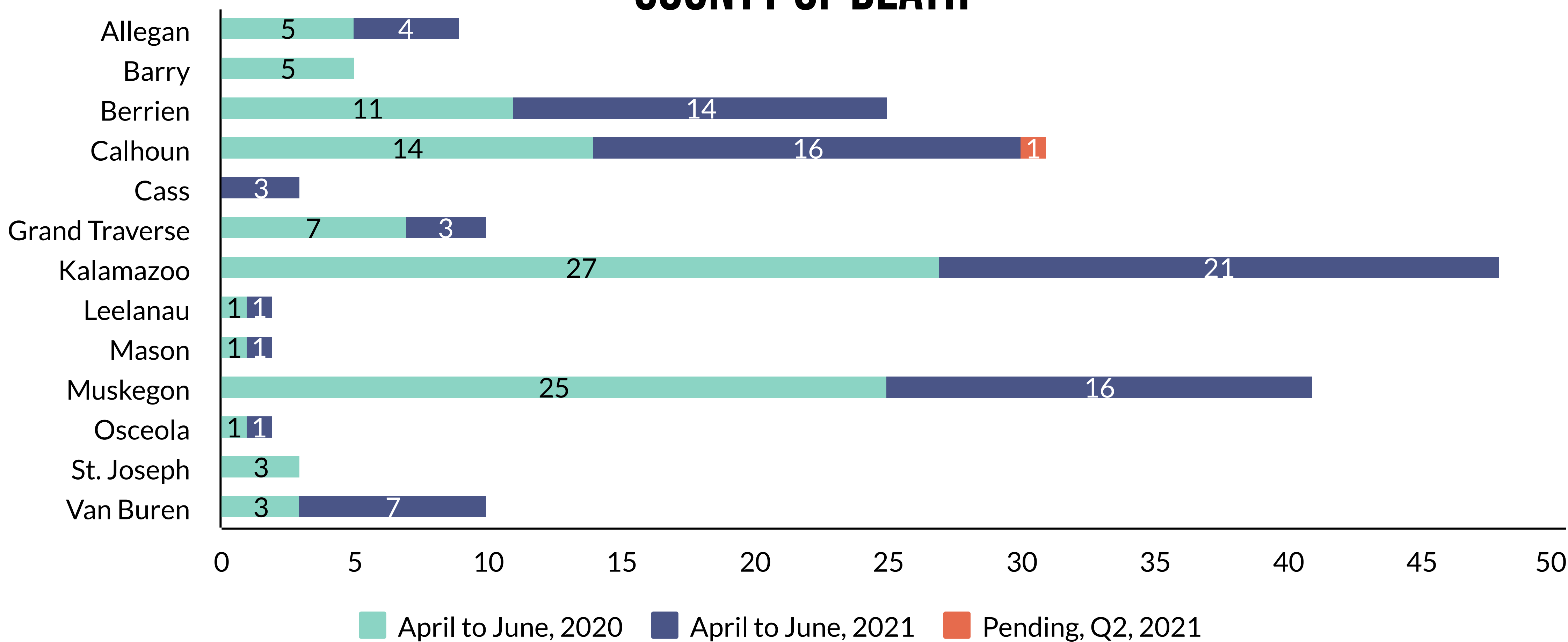


**16%**

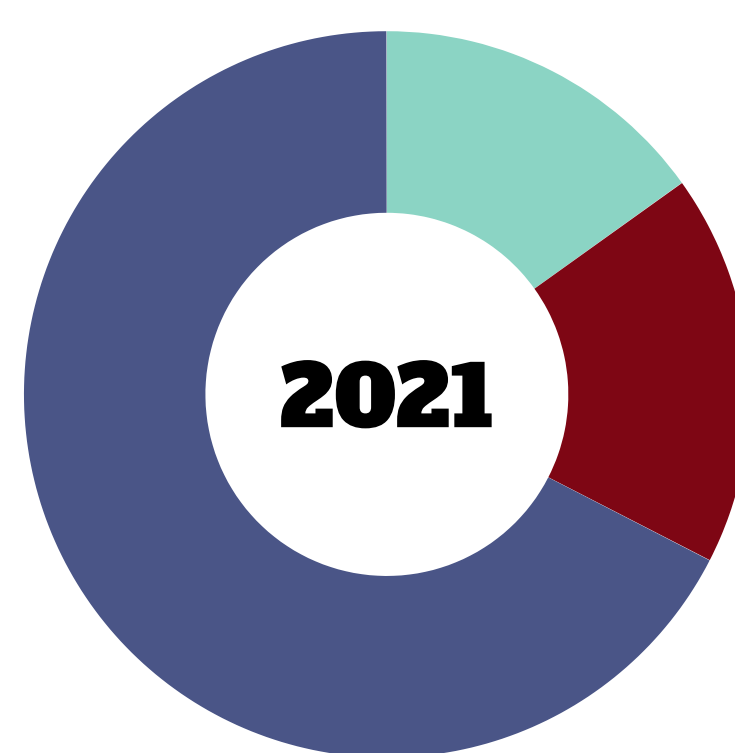
from Q2 2020 to 2021

\*There is 1 pending suspected drug-related death at the time of report being published. This report will only include information from confirmed drug-related deaths.

### COUNTY OF DEATH

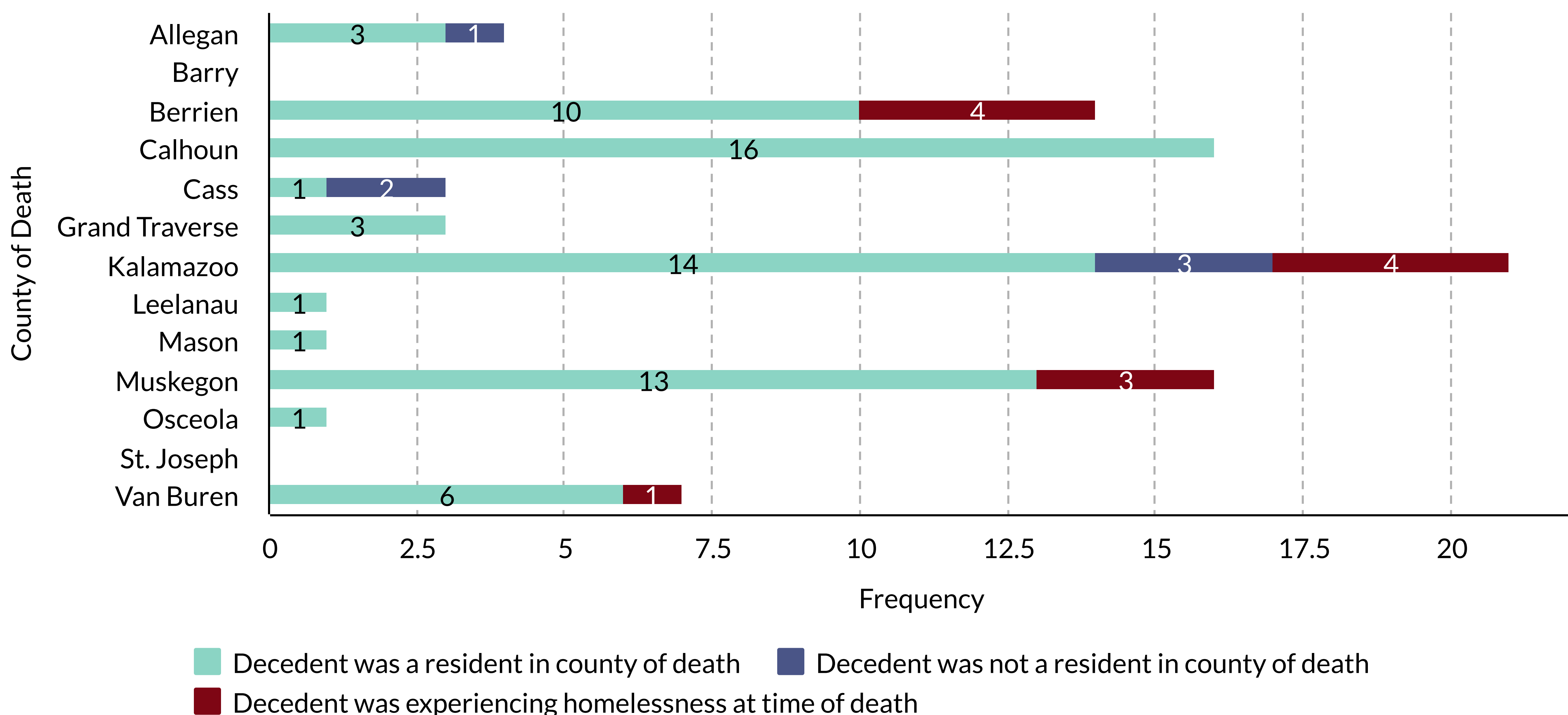


74 opioid and non-opioid  
14 opioid only  
15 non-opioid only



59 opioid and non-opioid  
13 opioid only  
15 non-opioid only

### COUNTY OF RESIDENCE BY COUNTY OF DEATH



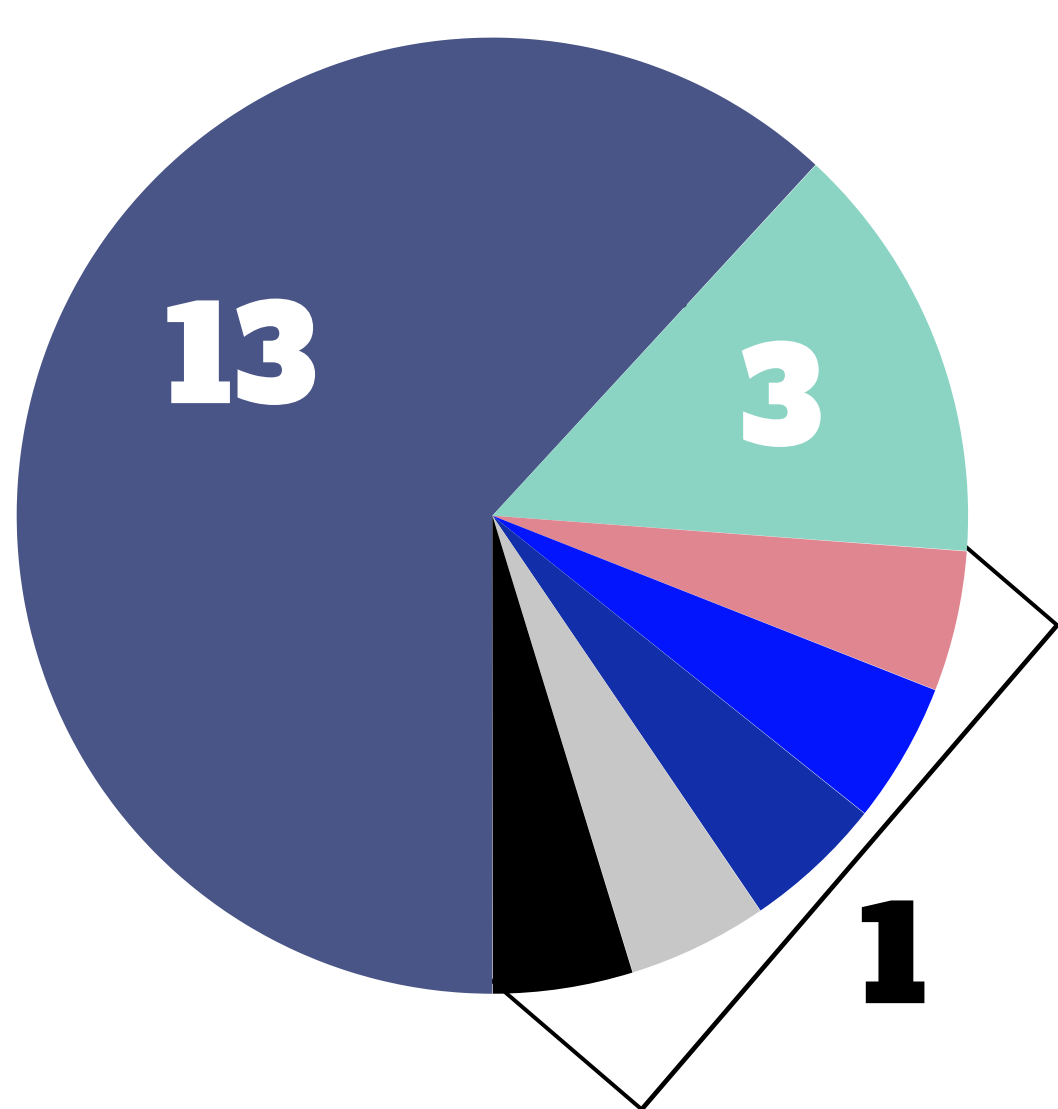
# Deaths Related to Opioids and Other Drugs

Allegan, Barry, Berrien, Calhoun, Cass, Grand Traverse, Kalamazoo, Leelanau, Mason, Muskegon, Osceola, St. Joseph, Van Buren

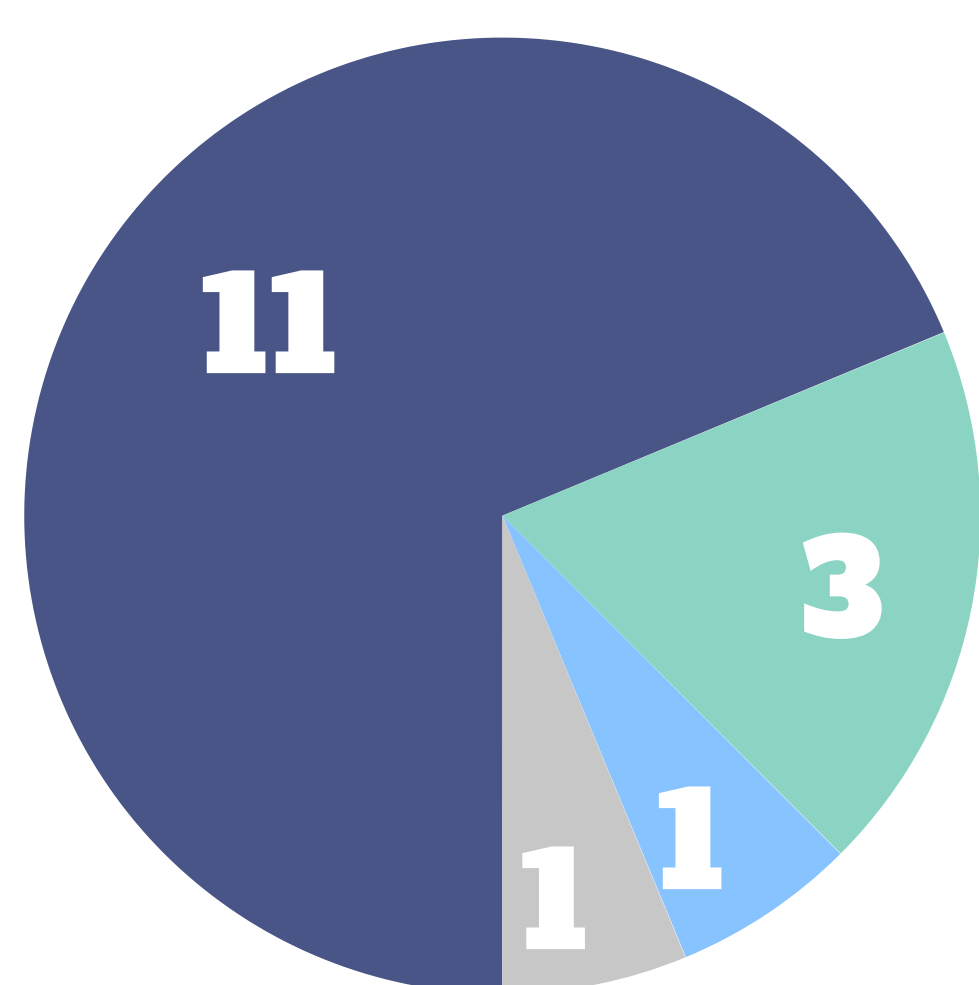
## Naloxone Administration



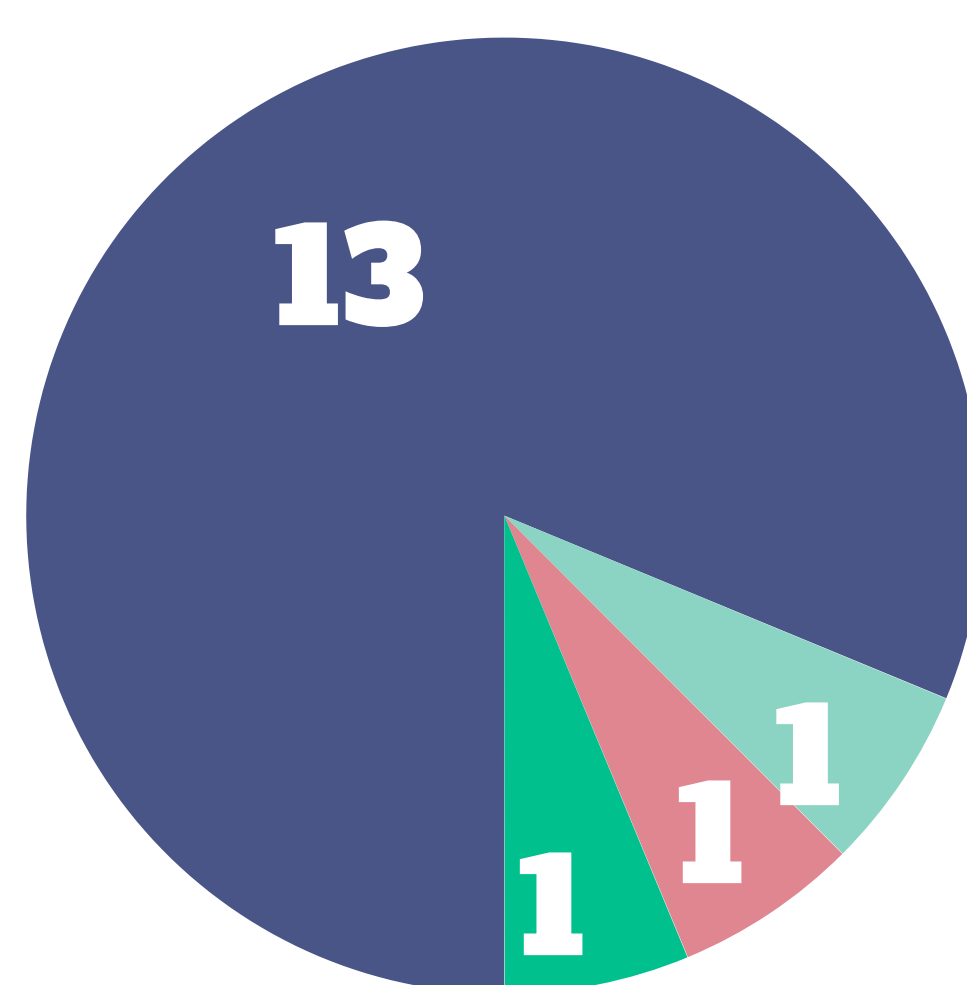
Kalamazoo (n=21)



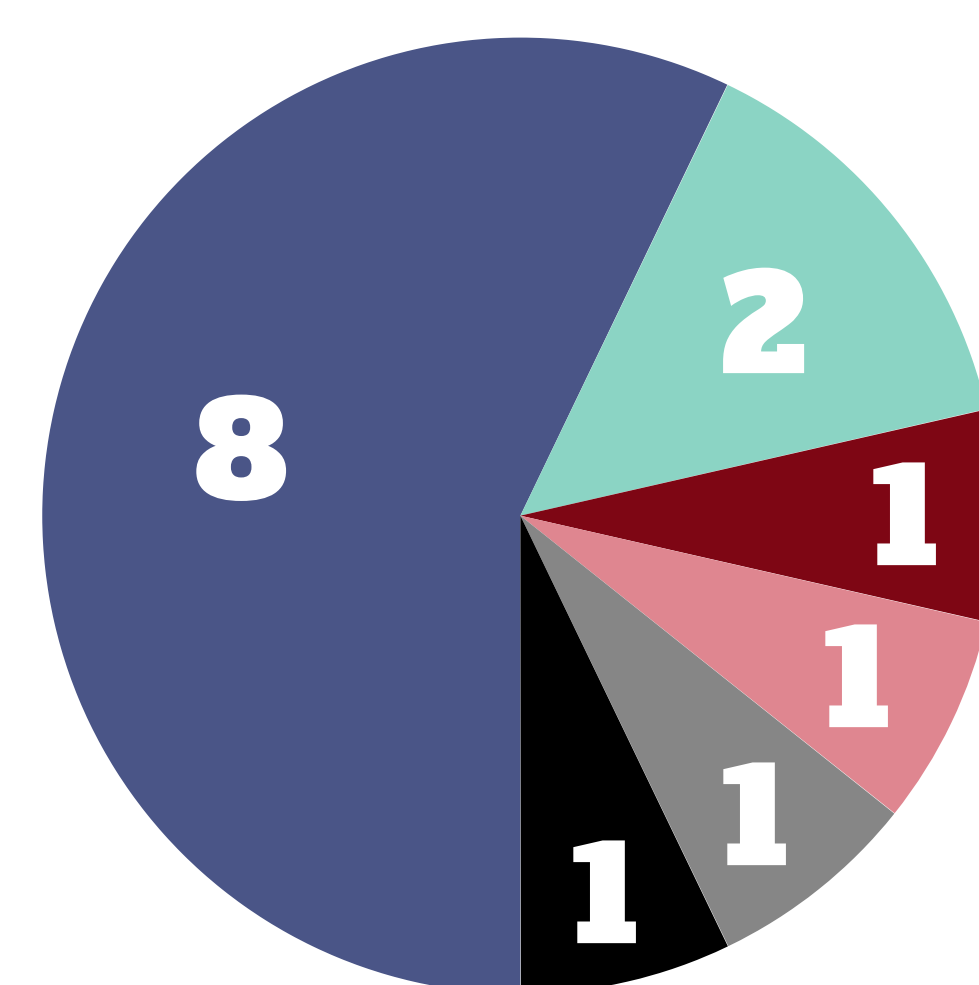
Calhoun (n=16)



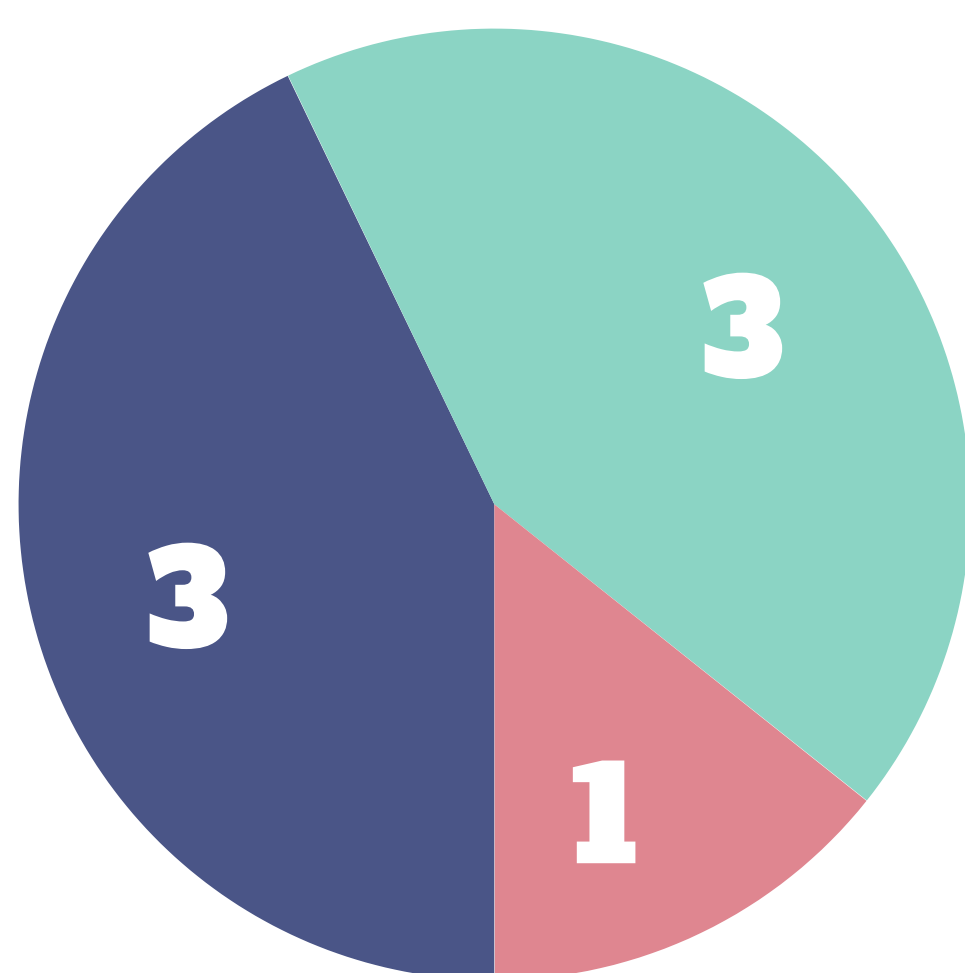
Muskegon (n=16)



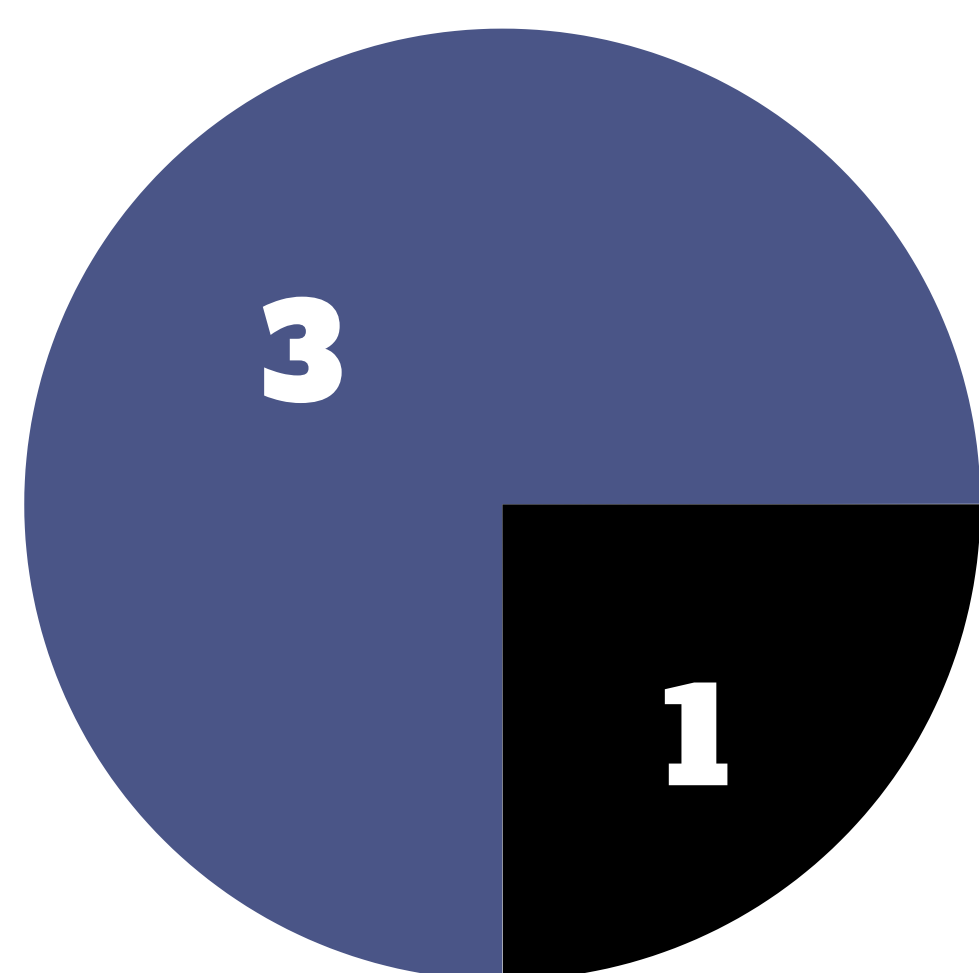
Berrien (n=14)



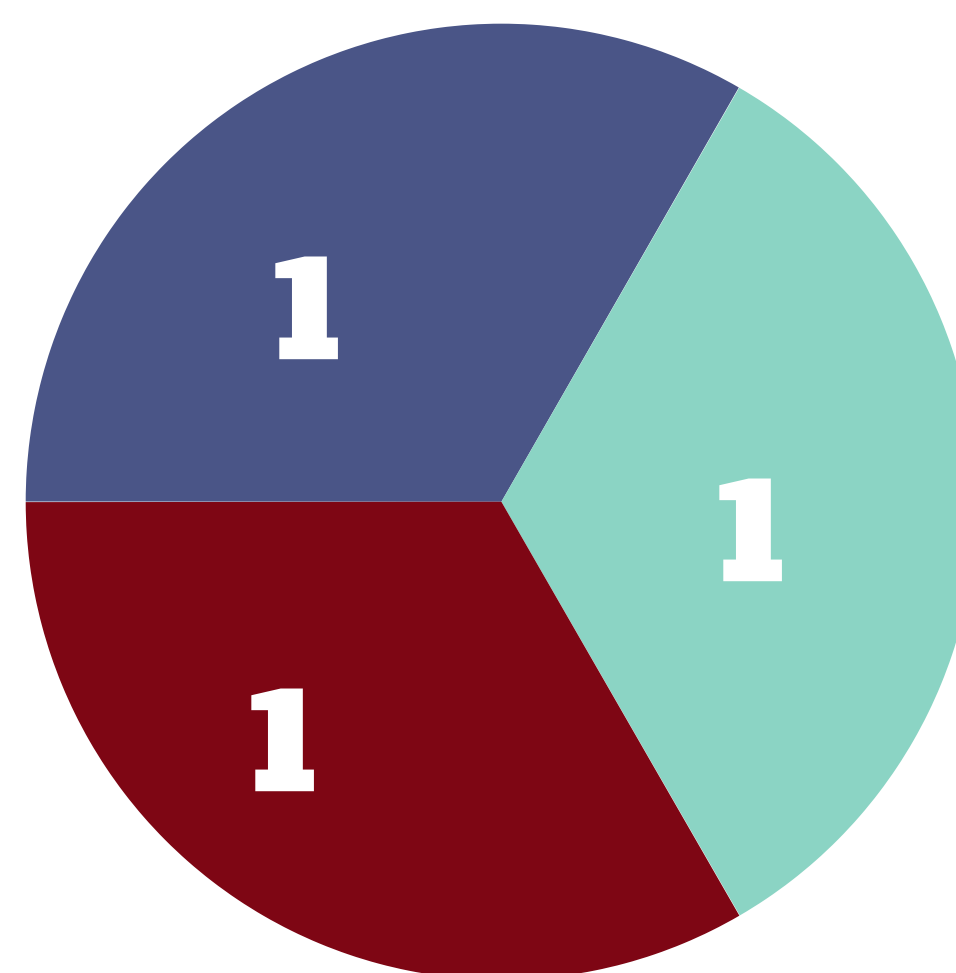
Van Buren (n=7)



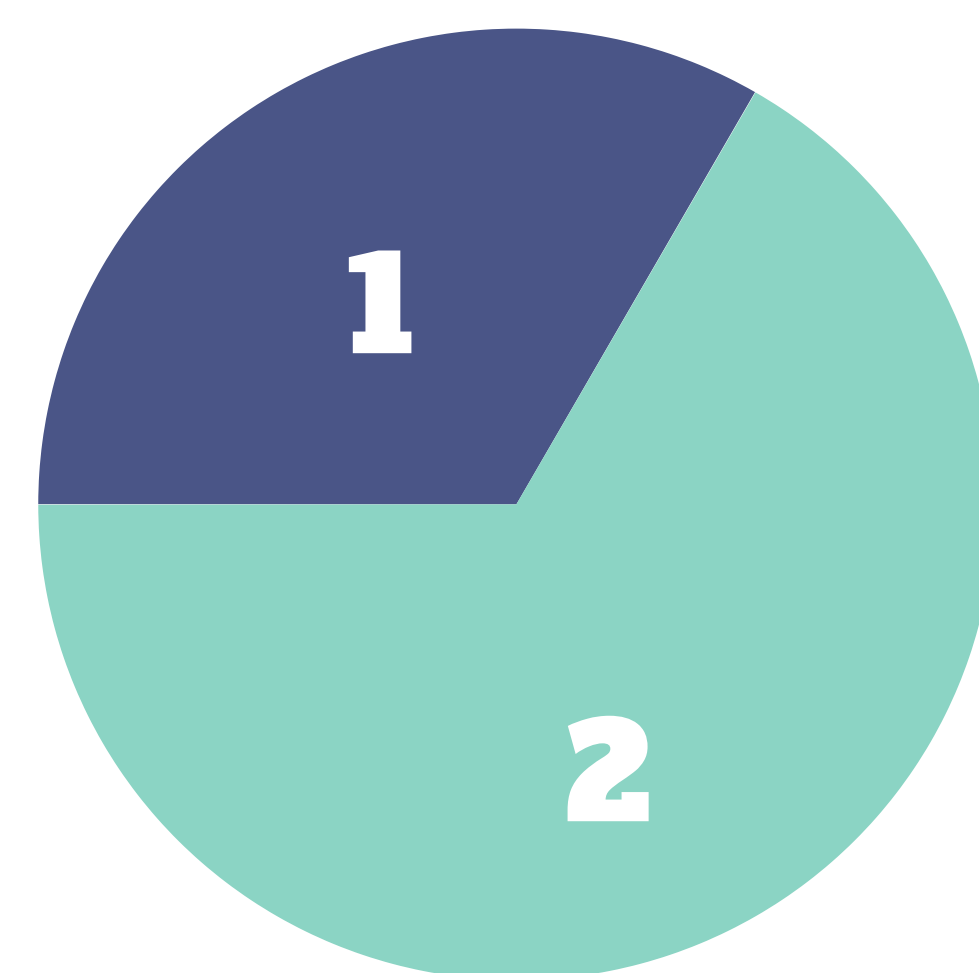
Allegan (n=4)



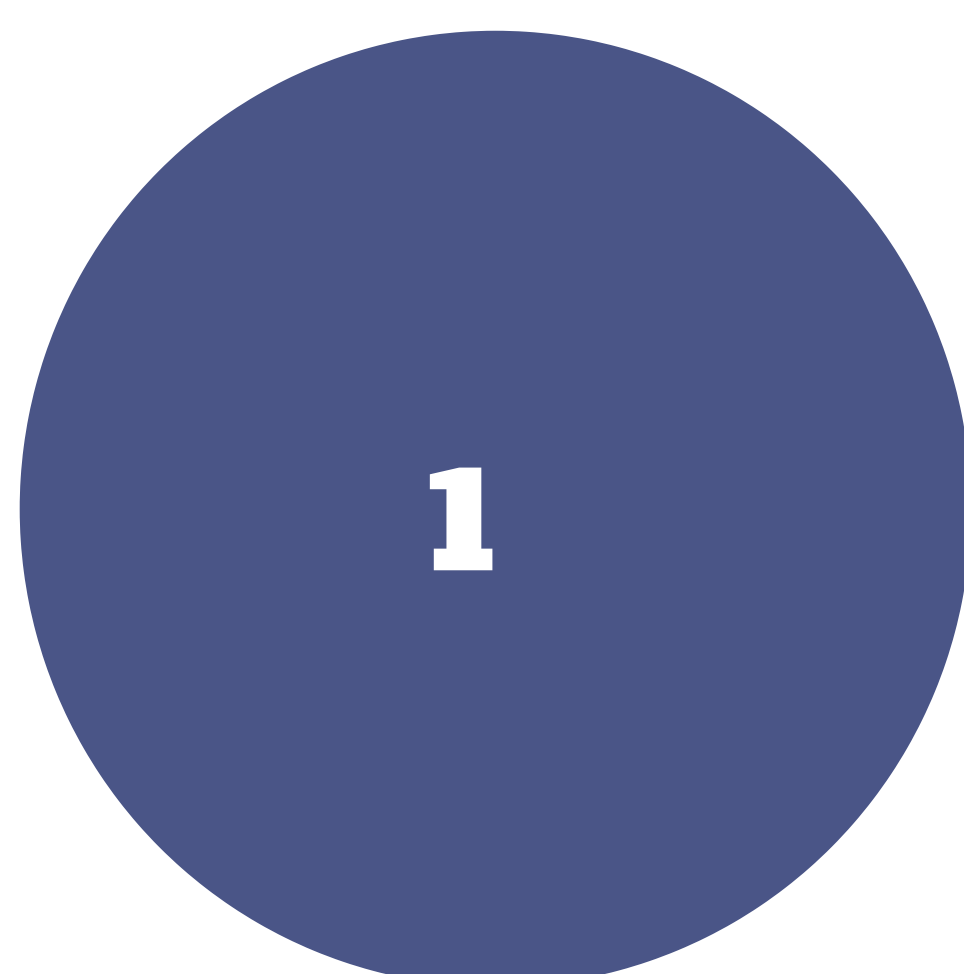
Cass (n=3)



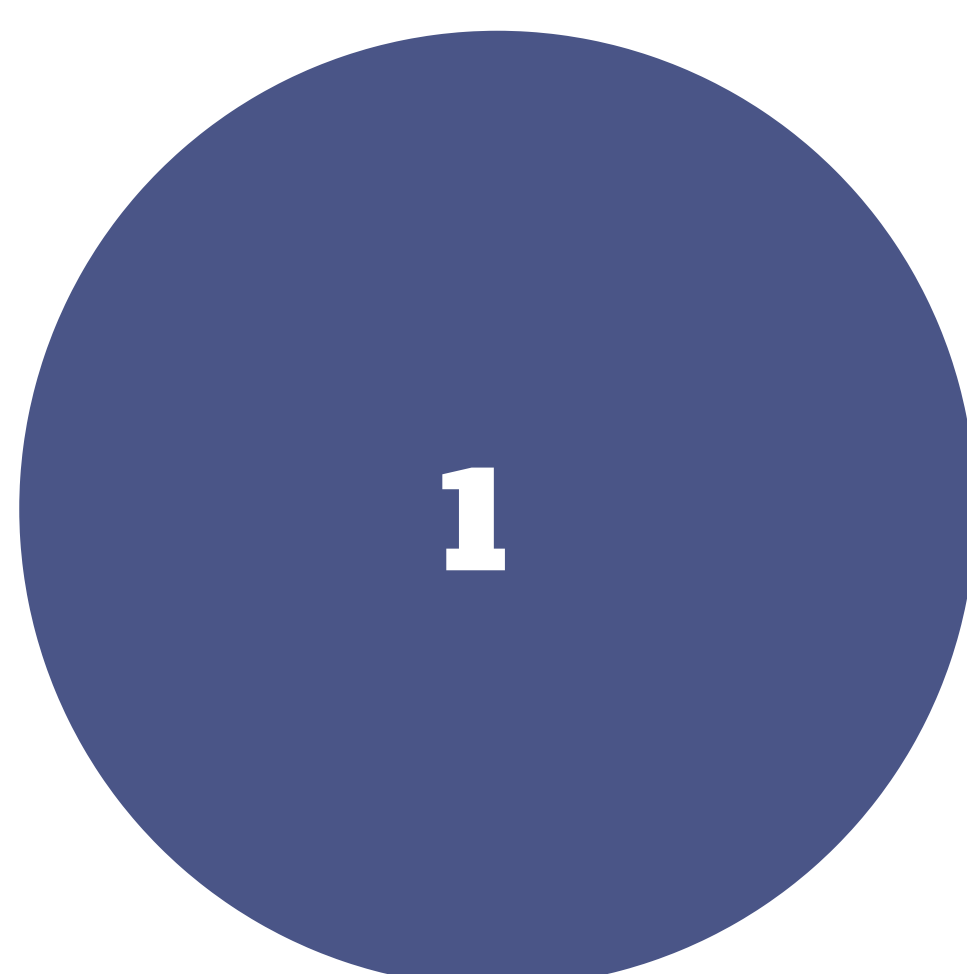
Grand Traverse (n=3)



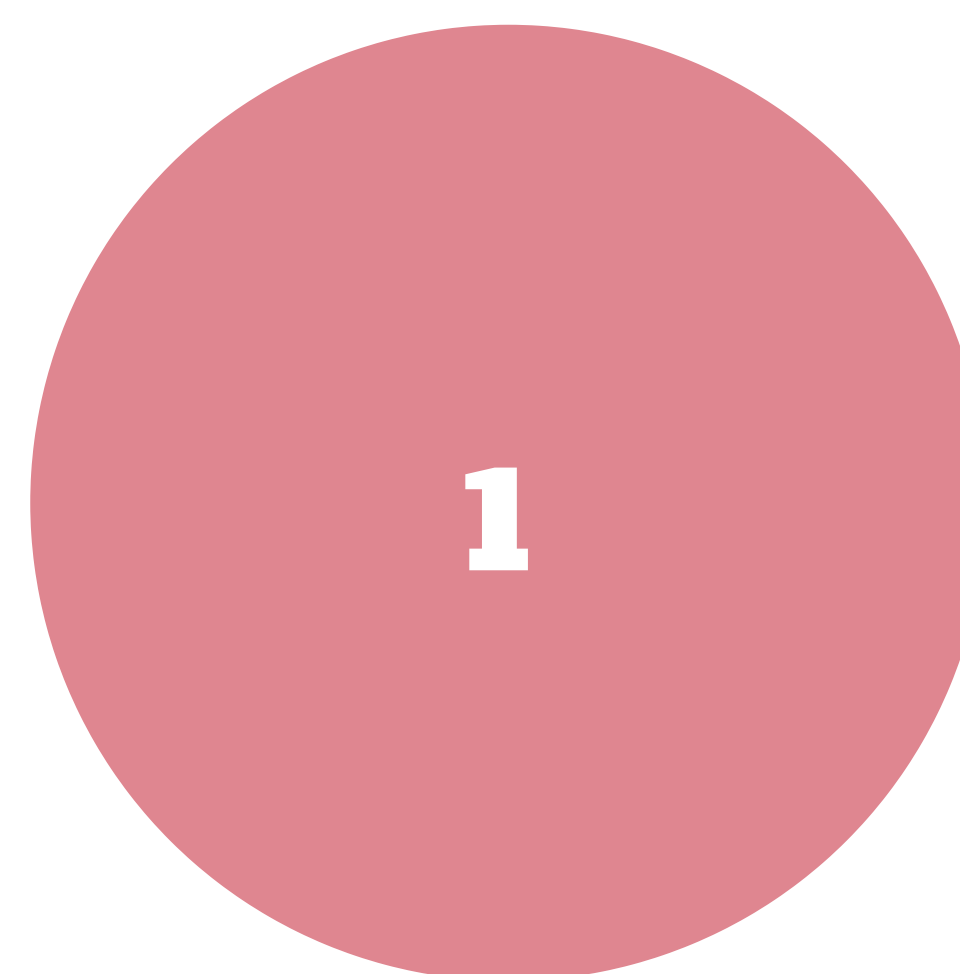
Leelanau (n=1)



Mason (n=1)



Osceola (n=1)



# Deaths Related to Opioids and Other Drugs

Allegan, Barry, Berrien, Calhoun, Cass, Grand Traverse, Kalamazoo, Leelanau, Mason, Muskegon, Osceola, St. Joseph, Van Buren

## Demographics

### SEX

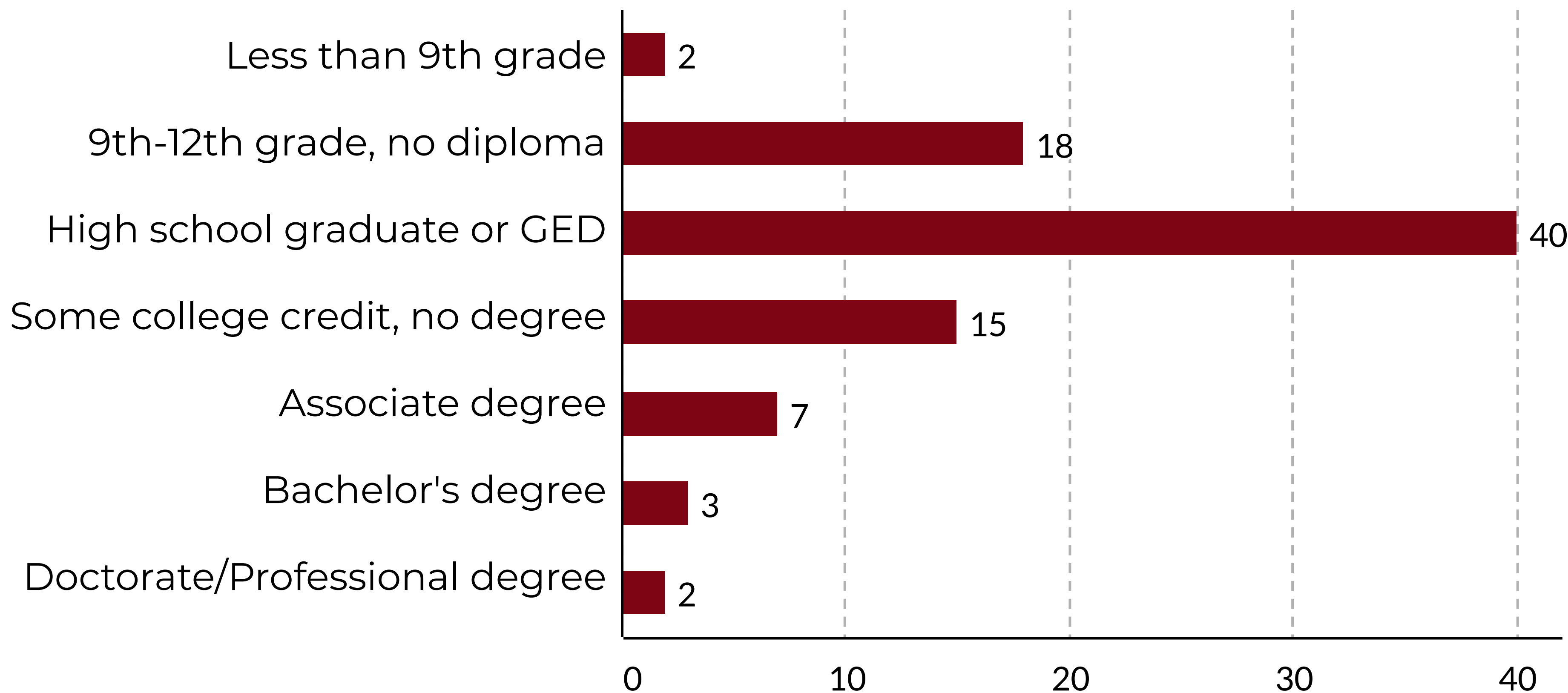


63%

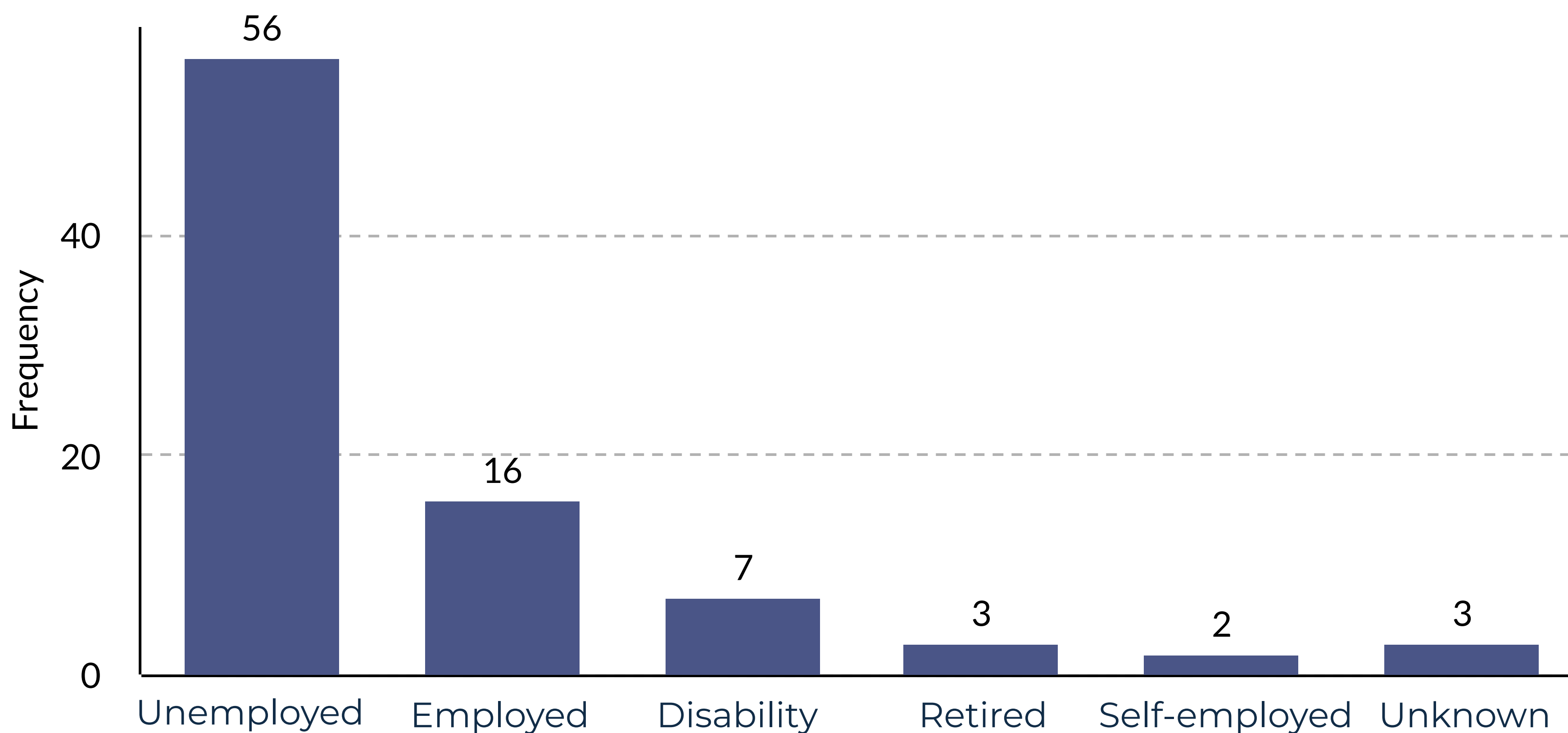


37%

### DECEDENT'S HIGHEST LEVEL OF EDUCATION



### DECEDENT'S EMPLOYMENT STATUS



### AGE

**Minimum Age**

19 years

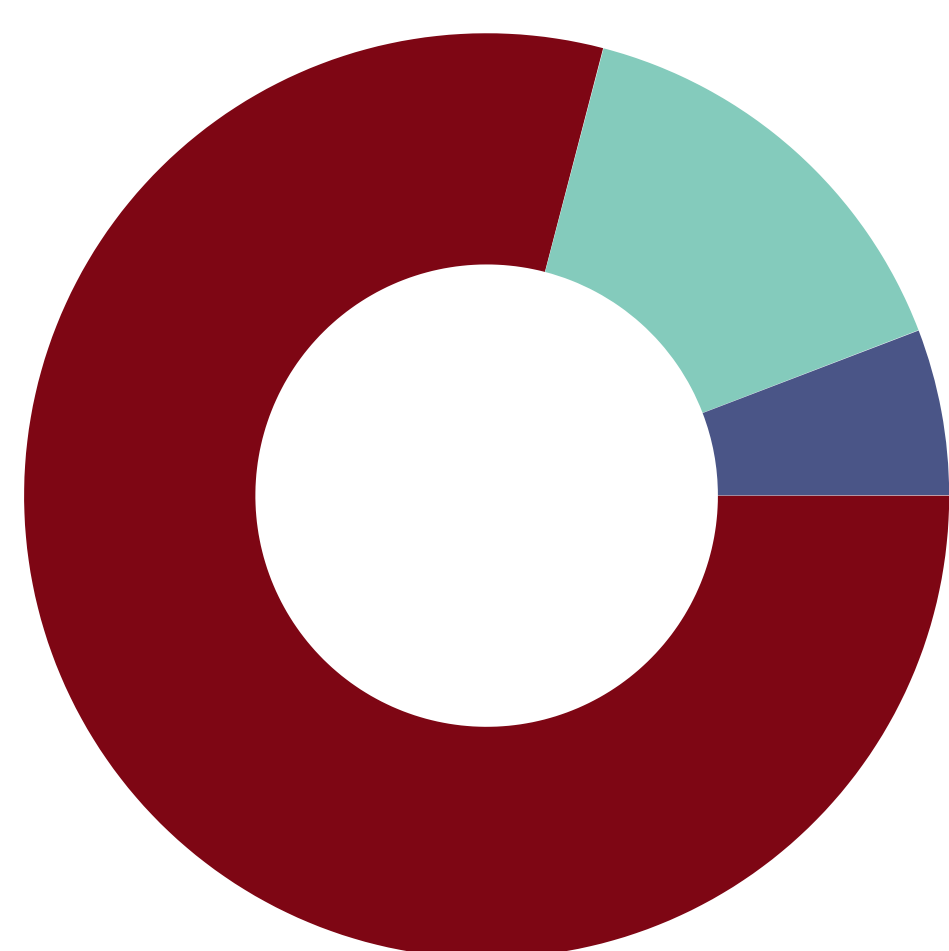
**Maximum Age**

73 years

**Average Age**

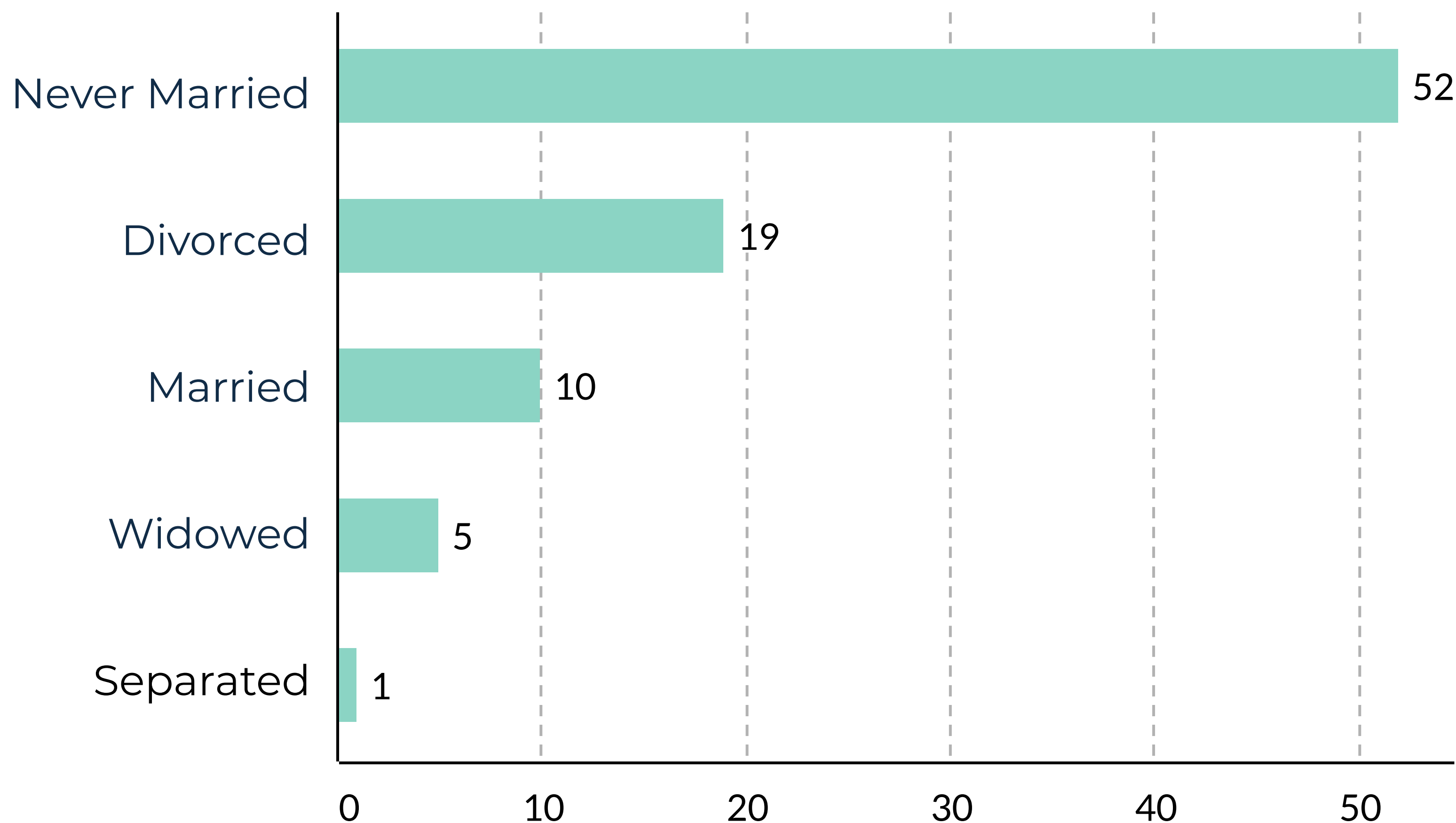
43 years

### RACE



- White (79%)
- Black (15%)
- Other (6%)

### DECEDENT'S MARTITAL STATUS

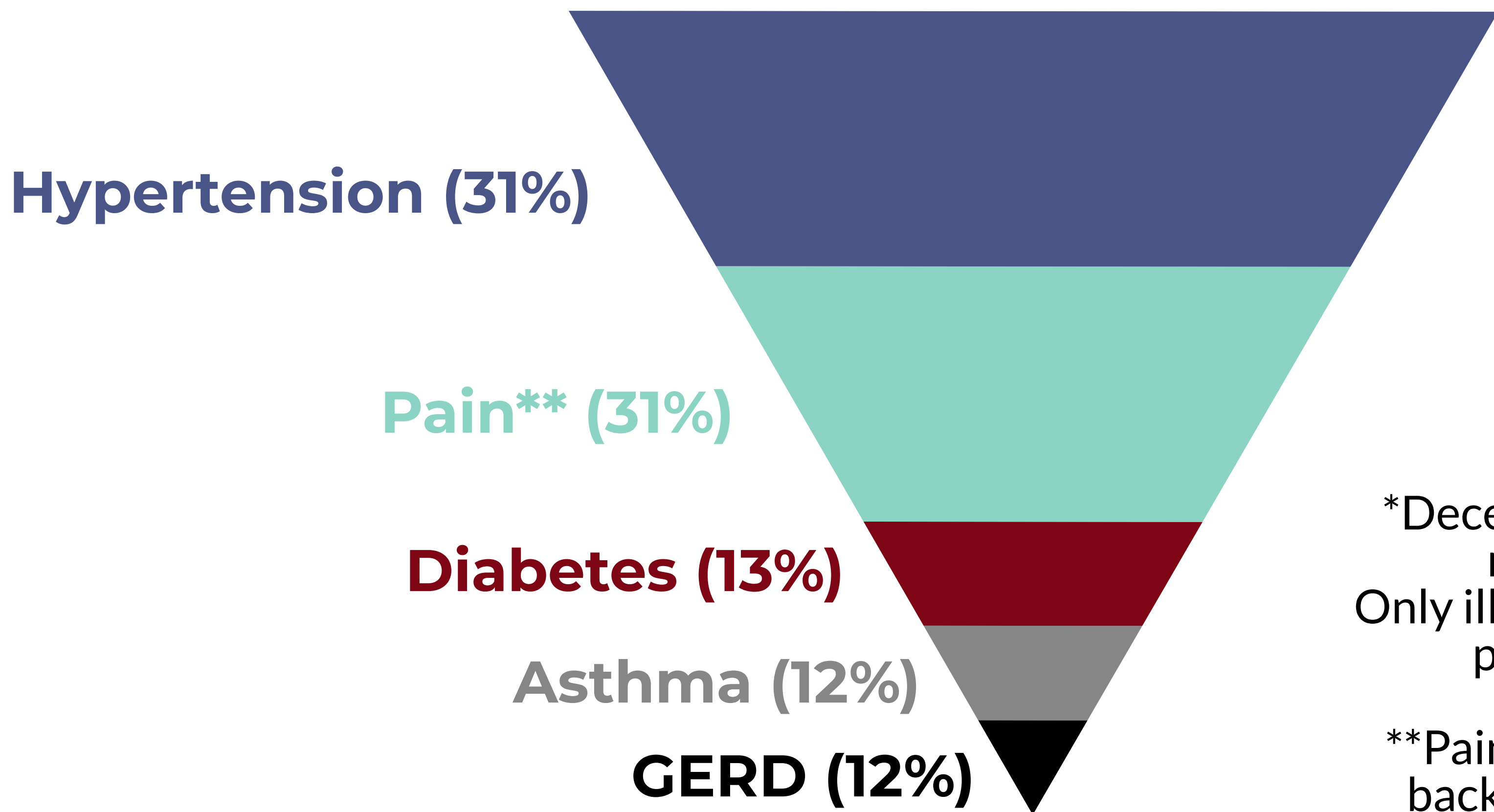


# Deaths Related to Opioids and Other Drugs

Allegan, Barry, Berrien, Calhoun, Cass, Grand Traverse, Kalamazoo, Leelanau, Mason, Muskegon, Osceola, St. Joseph, Van Buren

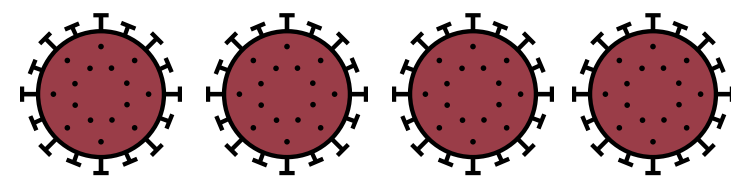
## Health Factors

### MOST PREVALENT AILMENTS\*



\*Decedents may be represented in more than one category. Only illnesses diagnosed by a medical professional are included.

\*\*Pain includes chronic pain (knee, back, etc.), neuropathy, arthritis, fibromyalgia and chronic migraines.

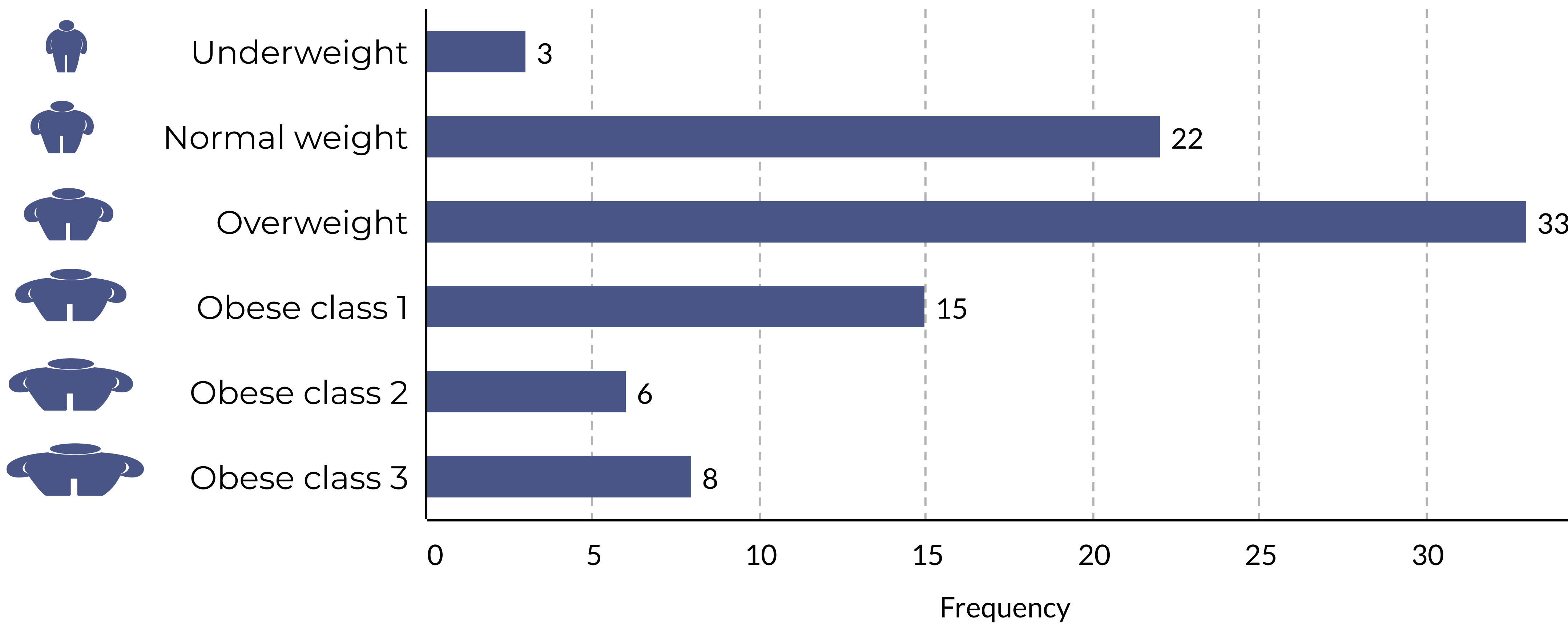


At least **13** decedents were **Hepatitis C** positive

At least **7** of these decedents were known to use **drugs intravenously**

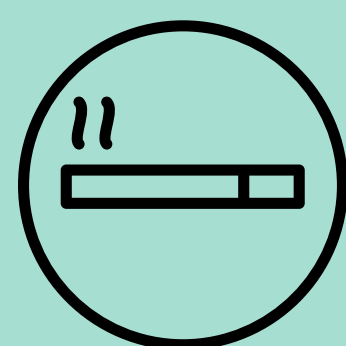


### BODY MASS INDEX (BMI)



Decedent used tobacco\*

**80%+**



Decedent drank alcohol\*

**58%+**



Decedent had a PCP

**50%**



\*Cigarettes, vaping, etc.

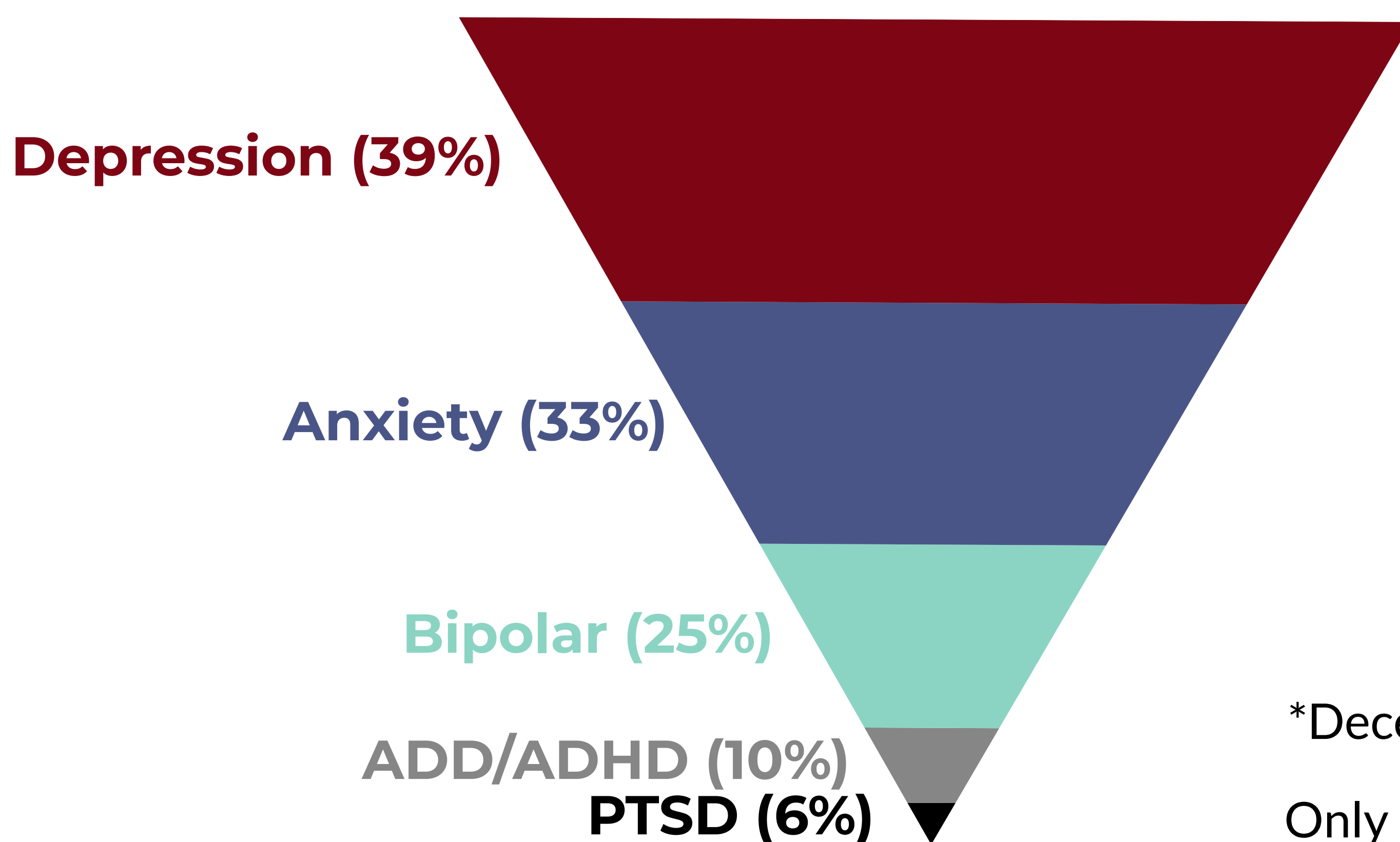
\*Moderate to heavy use

# Deaths Related to Opioids and Other Drugs

Allegan, Barry, Berrien, Calhoun, Cass, Grand Traverse, Kalamazoo, Leelanau, Mason, Muskegon, Osceola, St. Joseph, Van Buren

## Mental Health Factors

### MOST PREVALENT MENTAL ILLNESSES\*

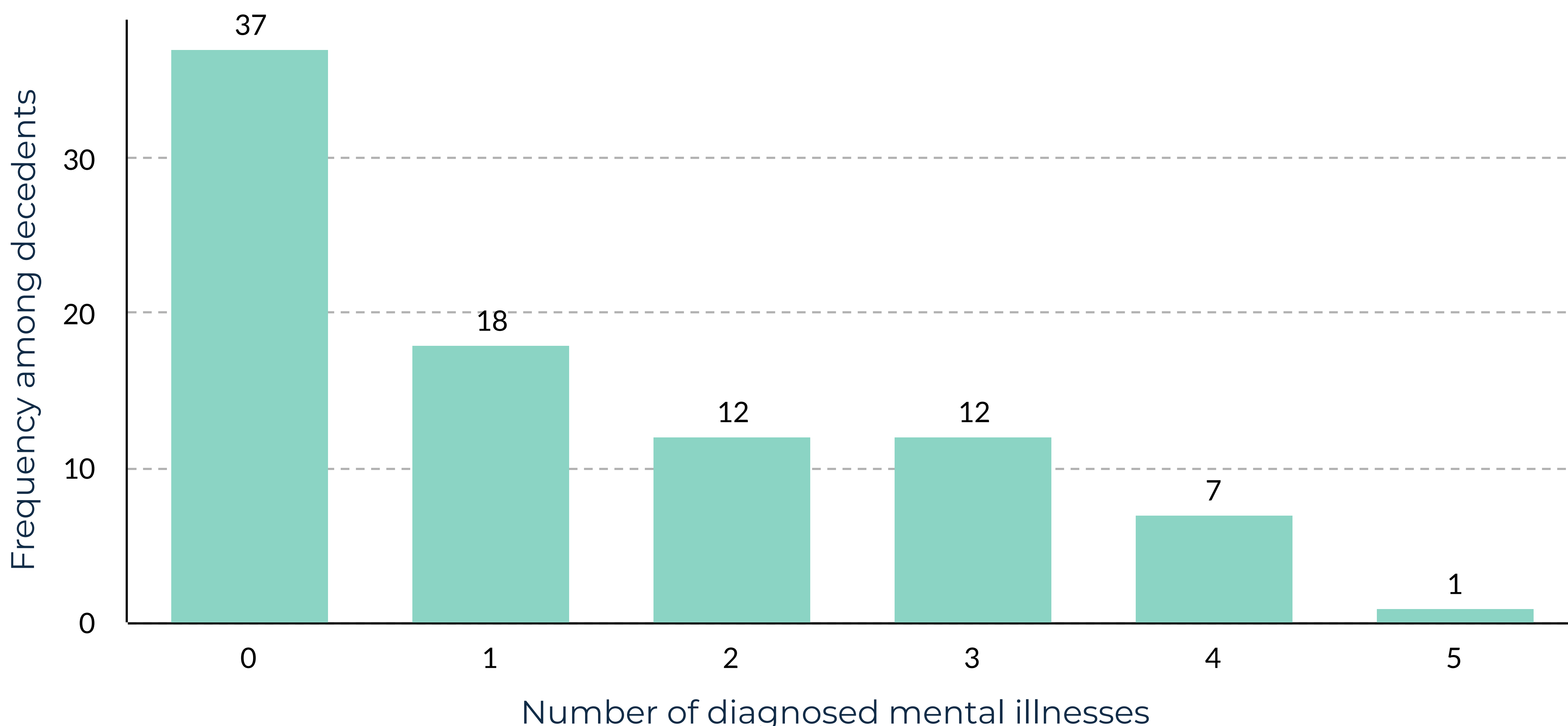


\*Decedents may be represented in more than one category. Only mental illnesses diagnosed by a medical professional are included.

### PERCENTAGE OF DECEDENTS...



### NUMBER OF DIAGNOSED MENTAL ILLNESSES AMONG DECEDENTS



# Deaths Related to Opioids and Other Drugs

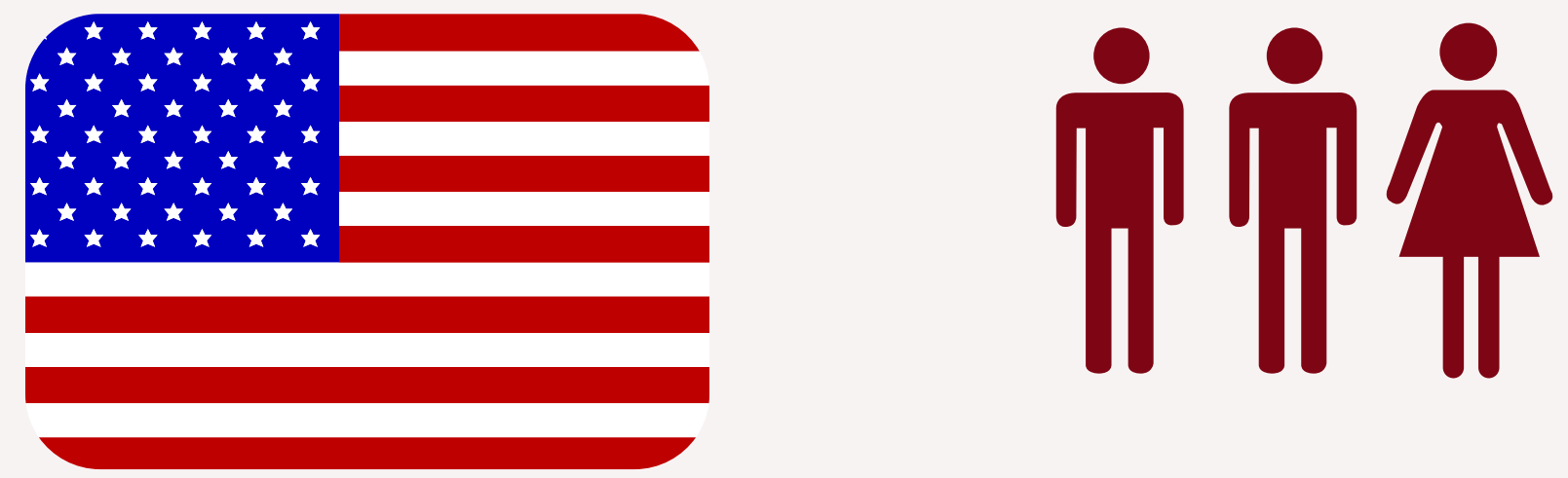
Allegan, Barry, Berrien, Calhoun, Cass, Grand Traverse, Kalamazoo, Leelanau, Mason, Muskegon, Osceola, St. Joseph, Van Buren

## Social Factors

**DECEDENT WAS EXPERIENCING HOMELESSNESS AT TIME OF DEATH (23%)**



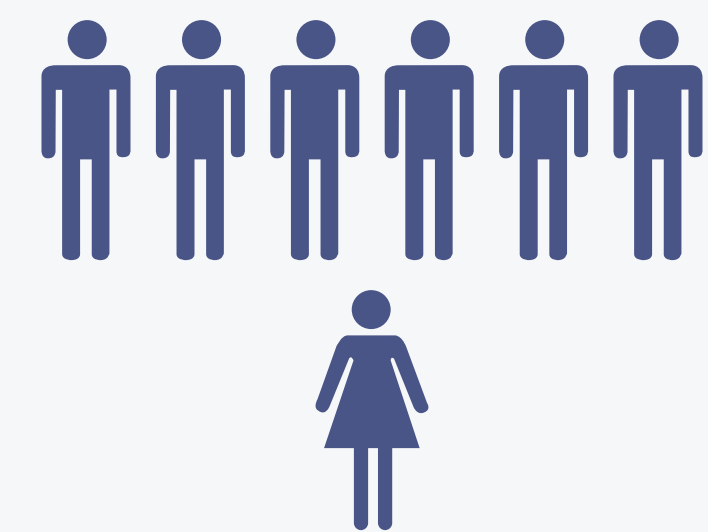
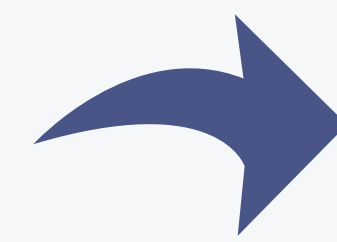
**DECEDENT WAS A VETERAN (3%)**



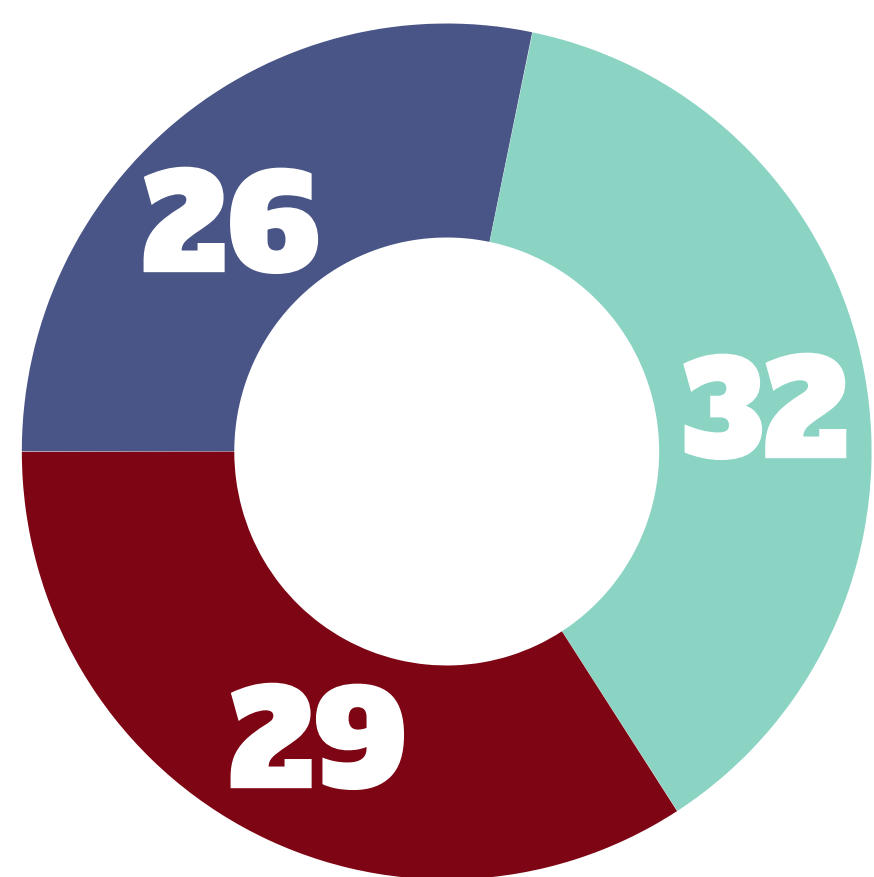
**DECEDENT HAS EVER BEEN INCARCERATED (33%)**



**DECEDENTS EVER INCARCERATED WERE RELEASED IN PAST 2 MONTHS (24%)**

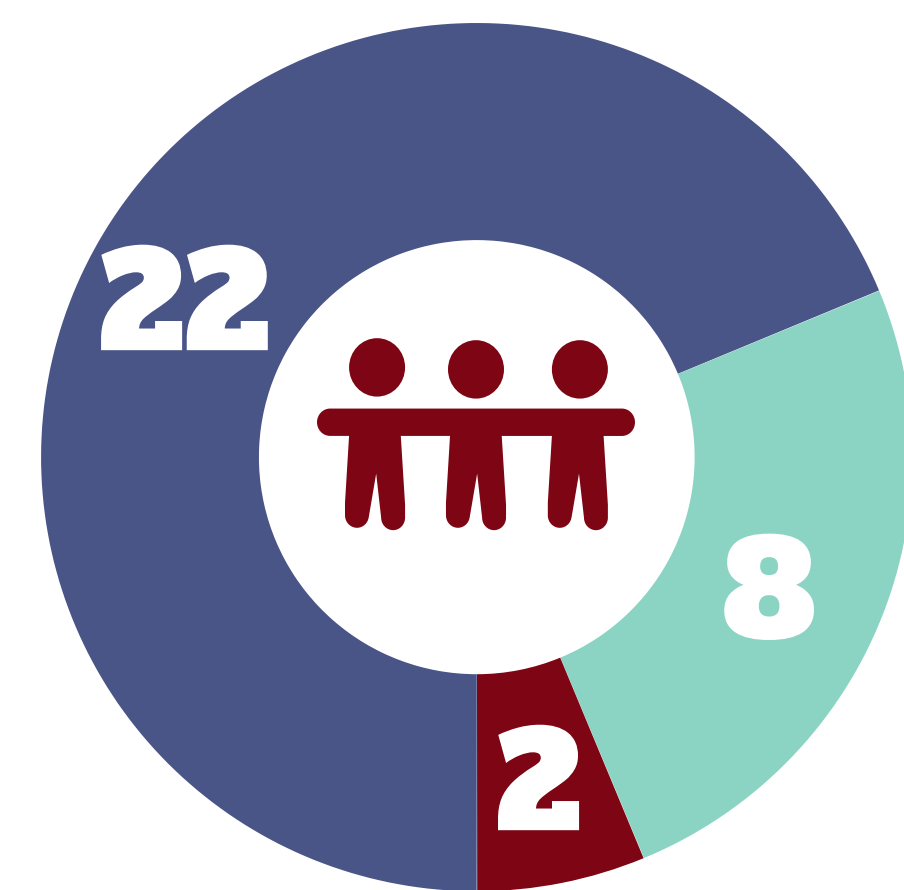


**DECEDENT'S CHILD STATUS**



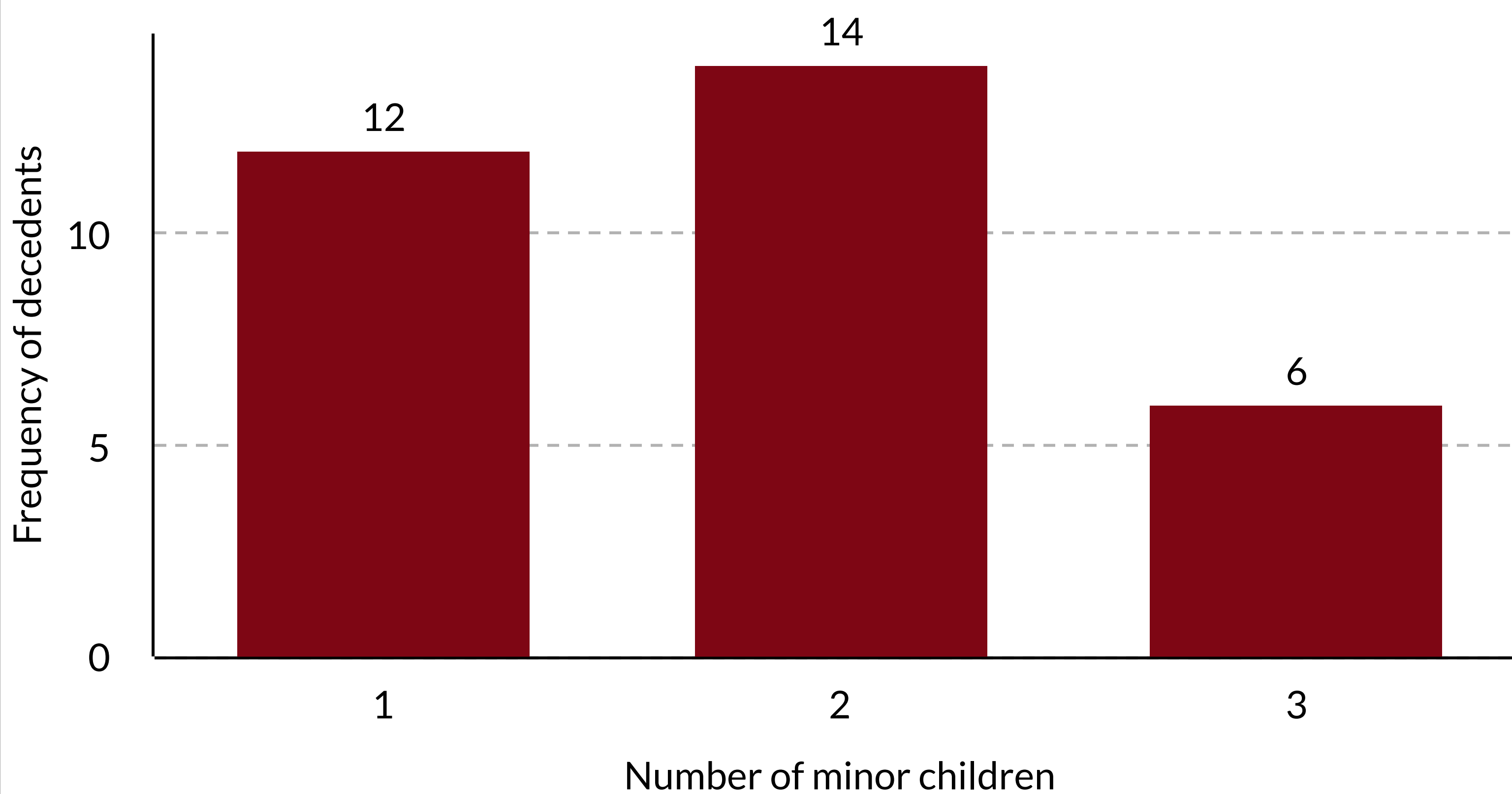
- Only adult children (30%)
- Minor child(ren) (37%)
- No children (33%)

**EMPLOYMENT STATUS OF THOSE WITH MINOR CHILDREN**



- Unemployed (69%)
- Employed (25%)
- Unknown (6%)

**NUMBER OF MINOR CHILDREN**



**5 DECEDENTS LIVED WITH THEIR MINOR CHILD(REN)**

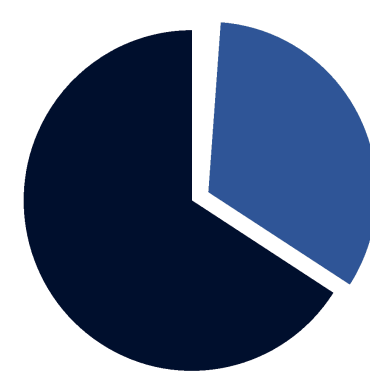
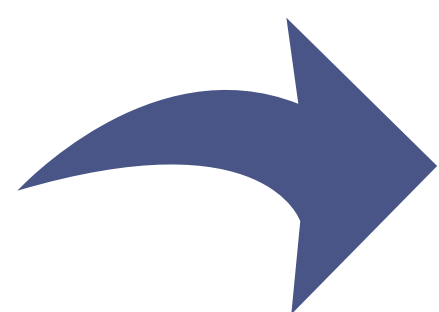
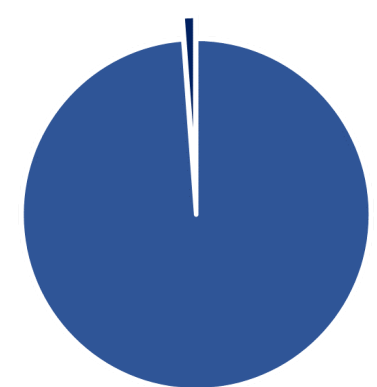


# Deaths Related to Opioids and Other Drugs

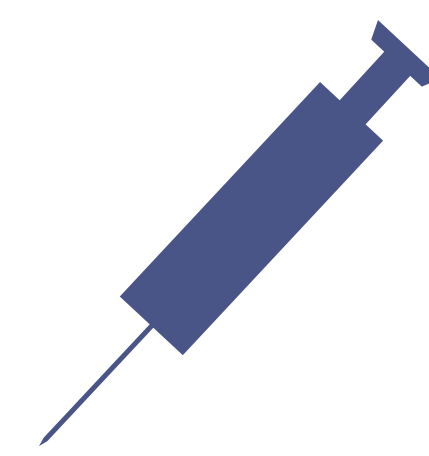
Allegan, Barry, Berrien, Calhoun, Cass, Grand Traverse, Kalamazoo, Leelanau, Mason, Muskegon, Osceola, St. Joseph, Van Buren

## Reported Substance Use History.

At least **99%** of decedents were known to use or abuse substances



At least **33%** of those decedents used substances intravenously



At least **24%** of decedents were prescribed an opioid in the past 2 years



At least **15%** of decedent's substance use started from a prescribed opioid



At least **25%** of decedents have had at least one overdose before their fatal overdose

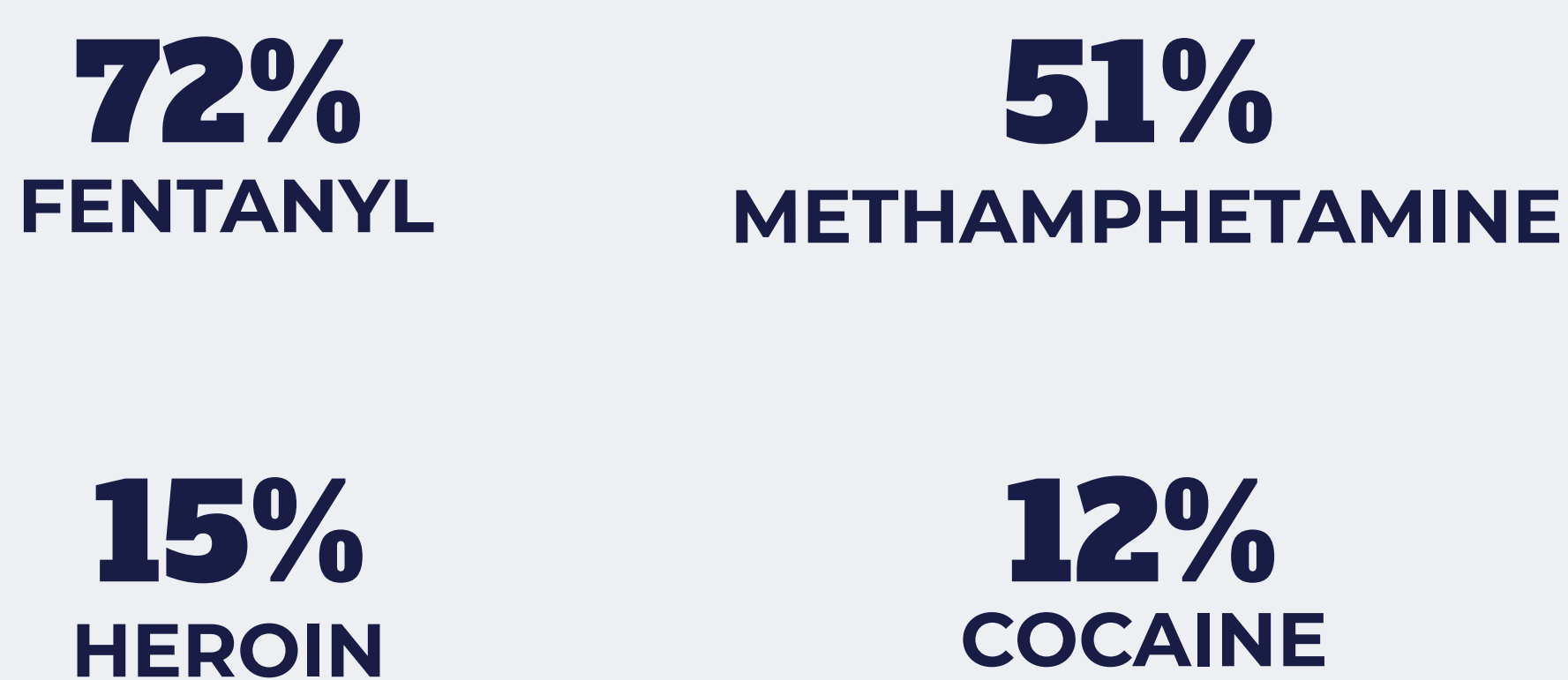


At least **41%** of those decedents have had 2 or more overdoses before their fatal overdose

### DECEDENT'S TYPICAL SUBSTANCE OF CHOICE<sup>†</sup>



### DRUGS FOUND IN TOXICOLOGY RESULTS<sup>†</sup>

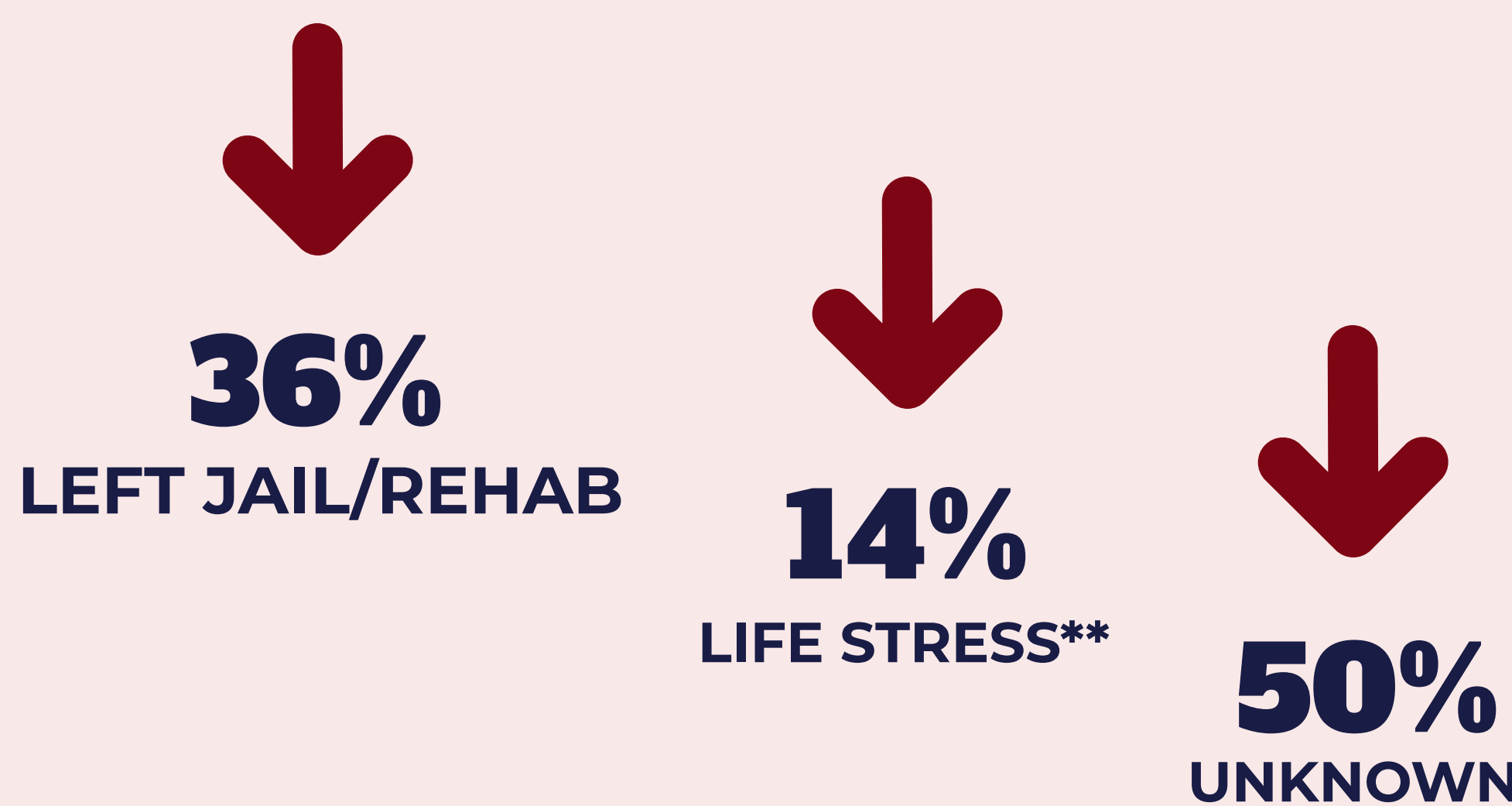


<sup>†</sup> Decedent may have had more than one drug of choice and more than one drug in their toxicology result

### DECEDENT WAS SUBSTANCE FREE IN THE PAST MONTH

**24%**

### SUSPECTED REASONS FOR RELAPSE\*



\*These factors were mentioned by those close to decedent (with substance use history n=84) for why they may have begun to use substances again after a period of being substance free ranging from a few months to years.  
\*\*Life stress includes the death of a loved one, relationship termination, and insecure housing.

Decedent has been to a substance rehabilitation clinic at least one time

**22%**

Decedent was receiving methadone, buprenorphine, naltrexone, or suboxone

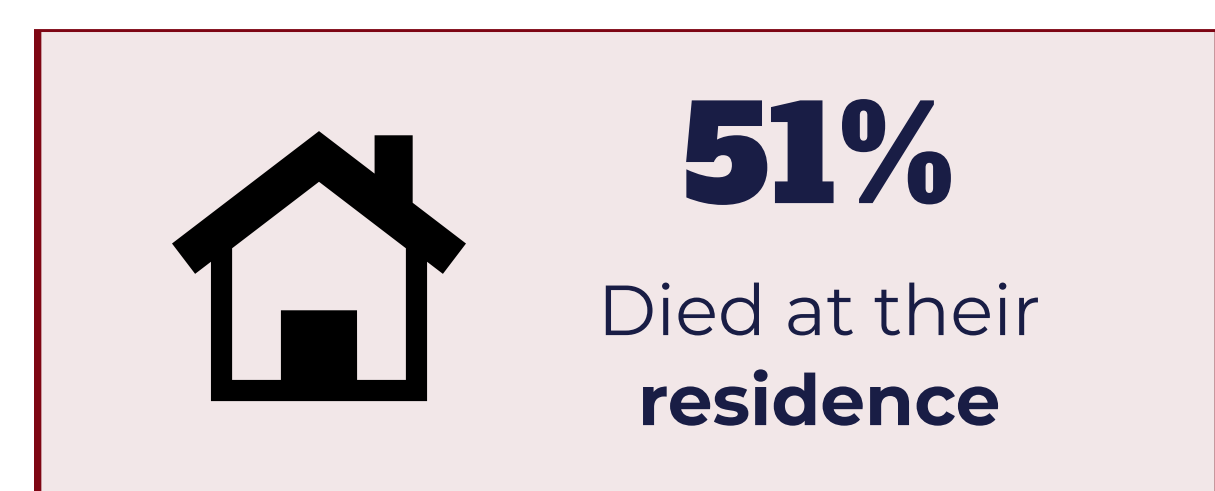
**10%**



# Deaths Related to Opioids and Other Drugs

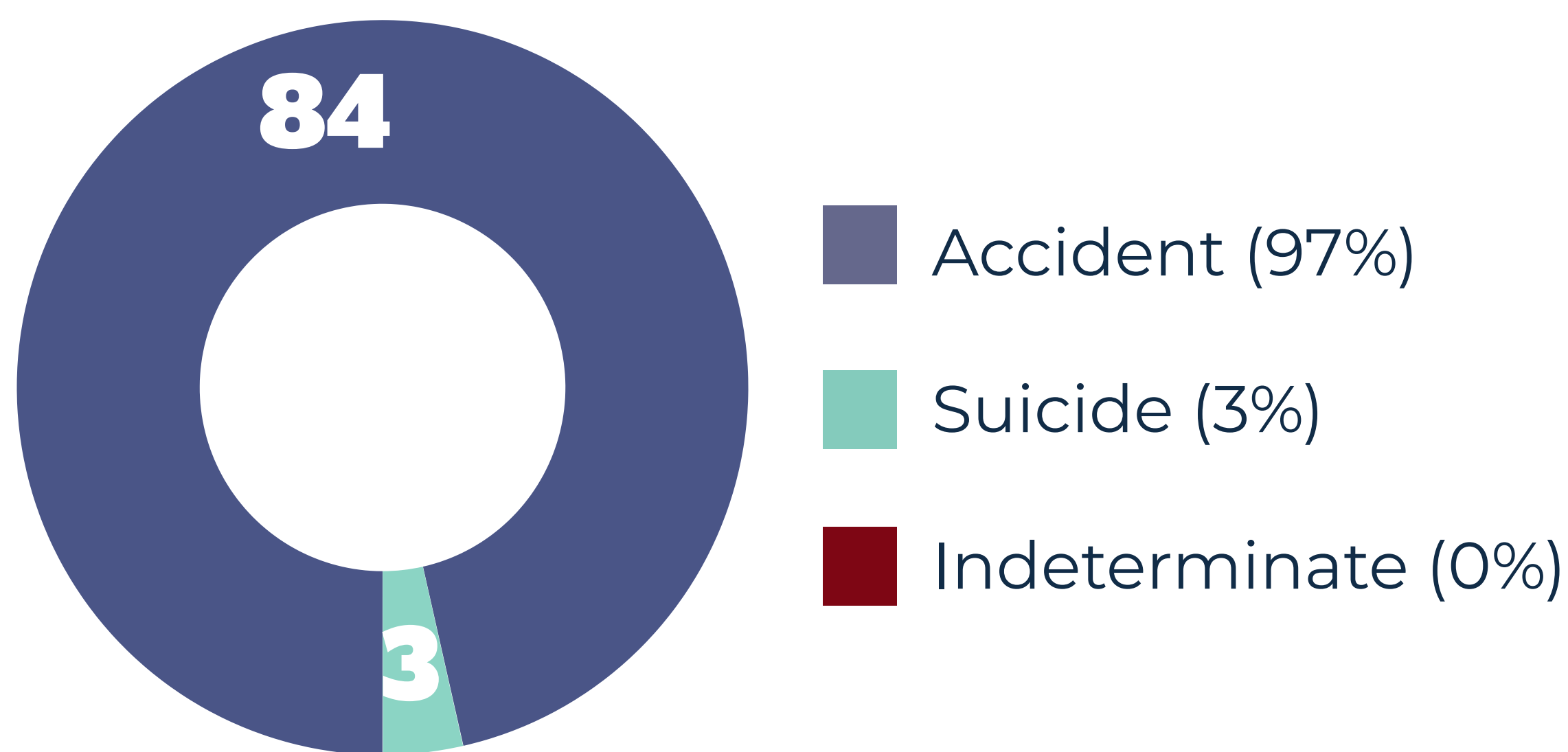
Allegan, Barry, Berrien, Calhoun, Cass, Grand Traverse, Kalamazoo, Leelanau, Mason, Muskegon, Osceola, St. Joseph, Van Buren

## Death Scene Findings

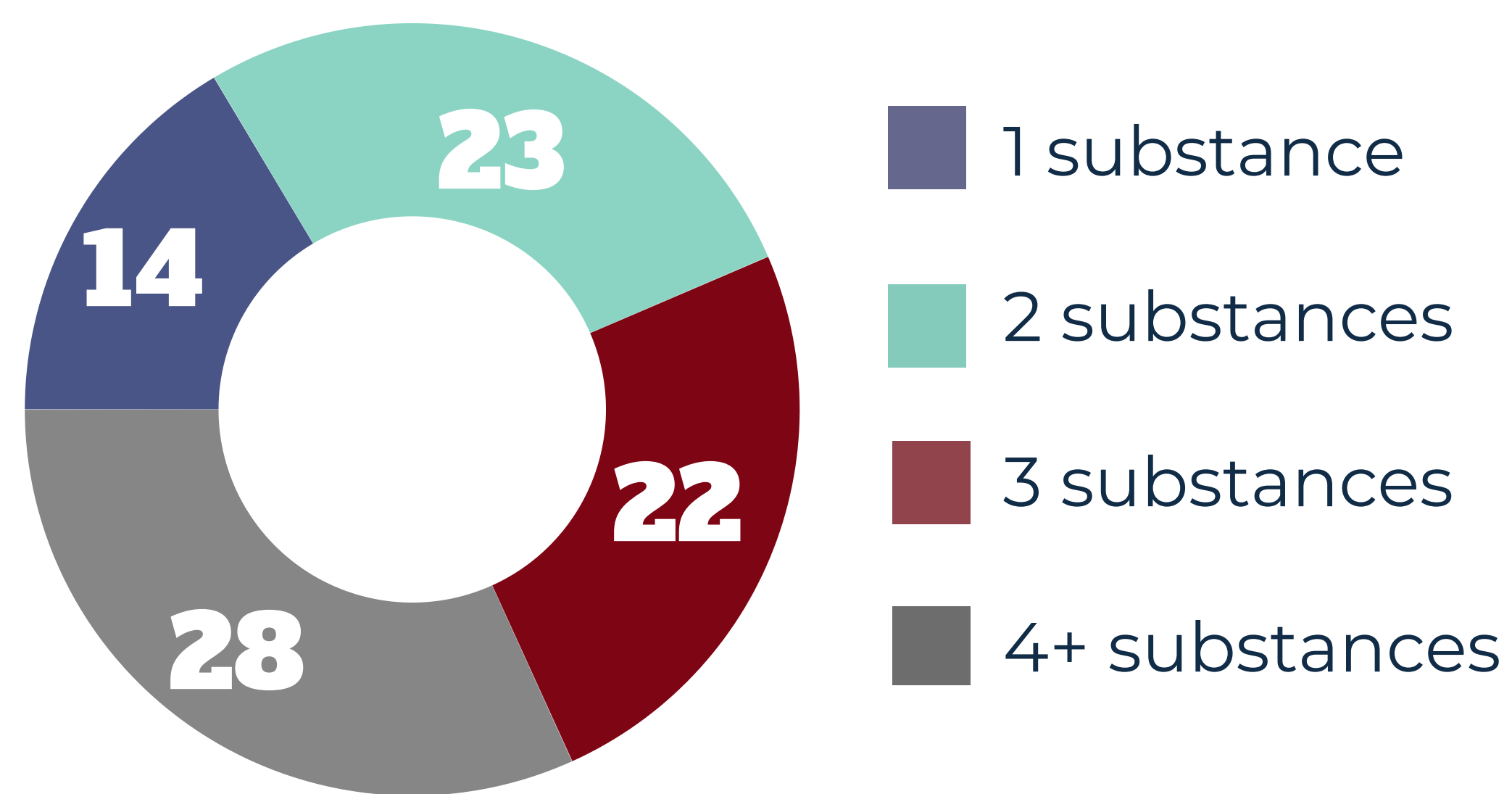


## Autopsy and Toxicology Results

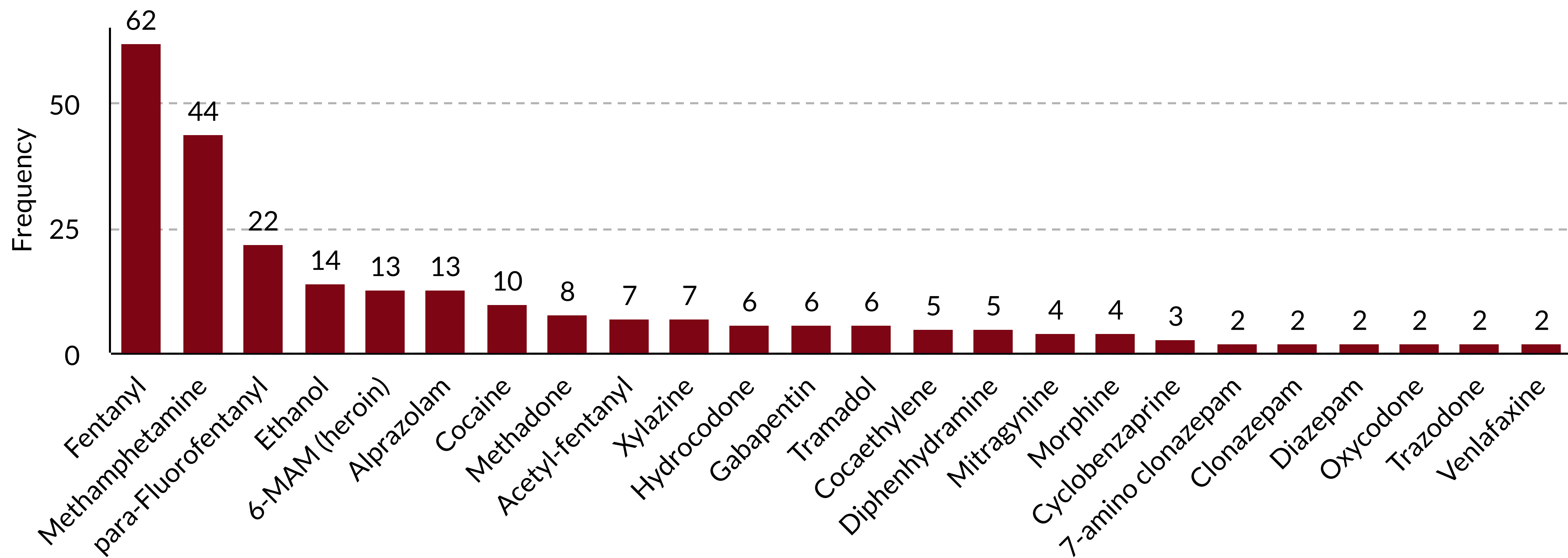
### MANNER OF DEATH



### NUMBER OF SUBSTANCES CONTRIBUTING TO DEATH



### SUBSTANCES PRESENT IN TOXICOLOGY †



† Decedent may have had more than one drug in their toxicology result  
The following substances were found one time: amlodipine, amphetamine, benzoylecgonine, butalbital, chlordiazepoxide, dicyclomine, duloxetine, hydroxyzine, lorazepam, methylphenidate, metoprolol, nordiazepam, olanzapine, paroxetine, and sertraline.

# Deaths Related to Opioids and Other Drugs

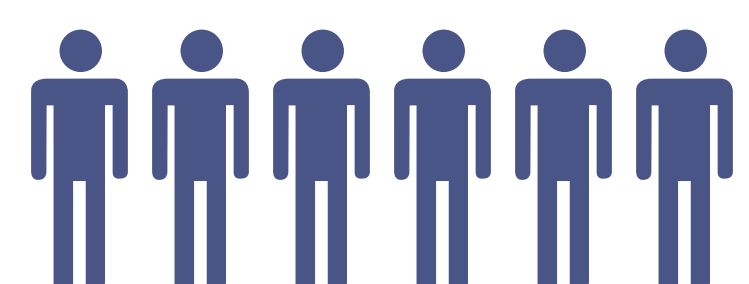
Allegan, Barry, Berrien, Calhoun, Cass, Grand Traverse, Kalamazoo, Leelanau, Mason, Muskegon, Osceola, St. Joseph, Van Buren

## Highlights

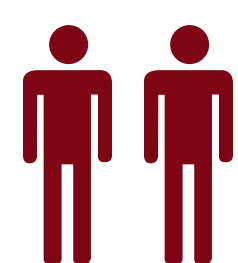
### ADDITIONAL NALOXONE INFORMATION (N=32)



2 mg of Naloxone



4 mg of Naloxone



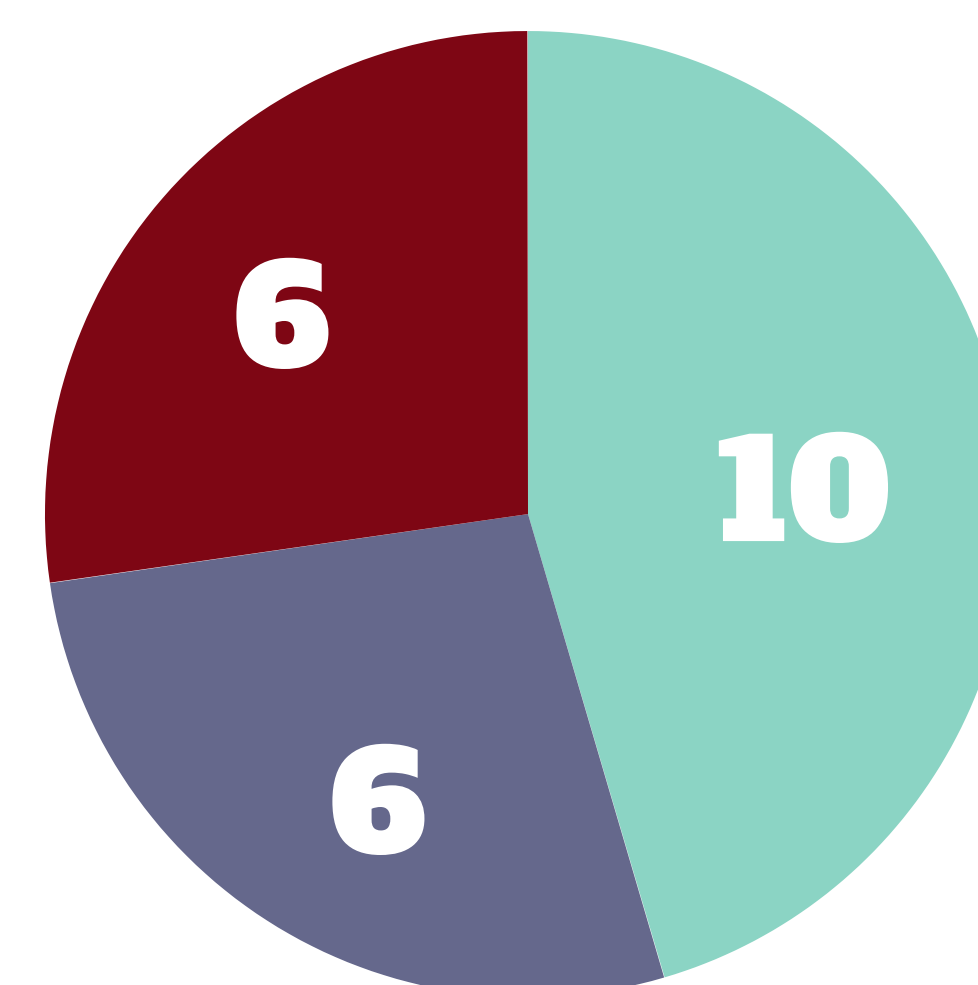
6 mg of Naloxone



8 mg of Naloxone



10 mg+ of Naloxone



- IV Naloxone
- Nasal Naloxone
- IV & Nasal Naloxone

Unknown dosage of Naloxone given to **eleven** decedents;  
Unknown method of Naloxone administration for **ten** decedents.

### POSITIONAL ASPHYXIA:

**28% (20 of 72) of decedents** with an opioid-related death were originally found in a **potentially airway compromising position**

These positions include finding decedent face down on the floor, bed, couch etc.

**7% (1 of 15) of decedents** who died of non-opioid substance(s) were originally found in a **potentially airway compromising position**

### NOVEL DRUG: PARA-FLUOROFENTANYL (PFF)

- Analogue of fentanyl that's reportedly stronger than fentanyl
- Para-fluorofentanyl contributed to 0 deaths in 2018/2019
- Para-fluorofentanyl contributed to 4 deaths in 2020
- 22 instances of para-fluorofentanyl this quarter

### SUBSTANCE COMBINATIONS

#### Benzodiazepines & Opioids

**18** decedents had a benzodiazepine and an opioid in their toxicology report

**3** decedents were prescribed that benzodiazepine and opioid

#### Heroin & Fentanyl

Heroin contributed to **12** deaths, **11** of these deaths also had fentanyl present

#### Xylazine & Fentanyl

Xylazine contributed to **7** deaths, all **7** of these deaths also had fentanyl present

#### Methamphetamine & Opioids

**30** decedents had methamphetamine and fentanyl in their toxicology report

**32** decedents had methamphetamine and any opioid(s) in their toxicology report