

Deaths related to opioids and other drugs

Annual Report 2021

Van Buren County

This report is in memory of those who lost their life or a loved one to substance use. These losses must motivate us all to prevent future deaths.

Purpose: This data was collected by the Office of the Medical Examiner (MEO) in the Department of Pathology at Western Michigan University Homer Stryker M.D. School of Medicine (WMed). Unless otherwise noted, data is from 2021 and 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.

Sections with the following headings are approximations and frequencies may be higher than what is reported: Health Factors, Mental Health Factors, Social Factors, Children and Substance Use History.

Sources: All data was extracted from a Medical Examiner database, law enforcement (LE) reports, EMS runsheets, death certificates, obituaries, medical records, toxicology reports, and autopsy reports.

Note: W/AI: White/American Indian; W=White; E=Female; M=Male

Please email questions to pathology@med.wmich.edu

Office of the Medical Examiner
Department of Pathology
Homer Stryker M.D. School of Medicine

Deaths Related to Opioids and Other Drugs

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All drug-related deaths

| Age | Race | Sex | Death certificate: Substances contributing to death | Injury Zip code |
|-----|------|-----|--|-----------------|
| 26 | W | M | ethanol, fentanyl | 49064 |
| 27 | W | F | methamphetamine | 49057 |
| 32 | W | M | amphetamine, ethanol, fentanyl | 49047 |
| 32 | W | F | 7-amino clonazepam, alprazolam, cocaine, fentanyl, hydrocodone, morphine | 49090 |
| 33 | W | M | methamphetamine | 49079 |
| 35 | W | M | fentanyl, gabapentin, mitragynine | 49079 |
| 38 | W | M | acetyl fentanyl, fentanyl, methamphetamine, para-flourofentanyl | 49045 |
| 39 | W | F | amitriptyline, methamphetamine, tramadol | 49079 |
| 40 | W/AI | M | ethanol, fentanyl, heroin, methamphetamine | 49026 |
| 41 | W | M | fentanyl, para-fluorofentanyl | 49079 |
| 42 | W | M | clonazepam/7-amino clonazepam, fentanyl, oxycodone | 49071 |
| 45 | W | F | cyclobenzaprine, ethanol, lorazepam, morphine | 49026 |
| 48 | W | M | fentanyl, methadone, morphine, para-fluorofentanyl | 49013 |
| 49 | W | M | acetyl-fentanyl, alprazolam, clonazepam, fentanyl, methamphetamine | 49043 |
| 51 | W | M | hydroxyzine, mirtazapine, sodium nitrite | 49027 |
| 51 | W | M | Pt. 1: inferior right temporal lobe hemorrhage with subarachnoid hemorrhage; Pt. II: methamphetamine* | 49056 |
| 54 | W | F | fentanyl | 49090 |
| 55 | W | M | methamphetamine | 49045 |
| 58 | W | M | Pt. I: hypertensive cardiovascular disease; Pt. II: methamphetamine* | 49026 |

*Not included in report

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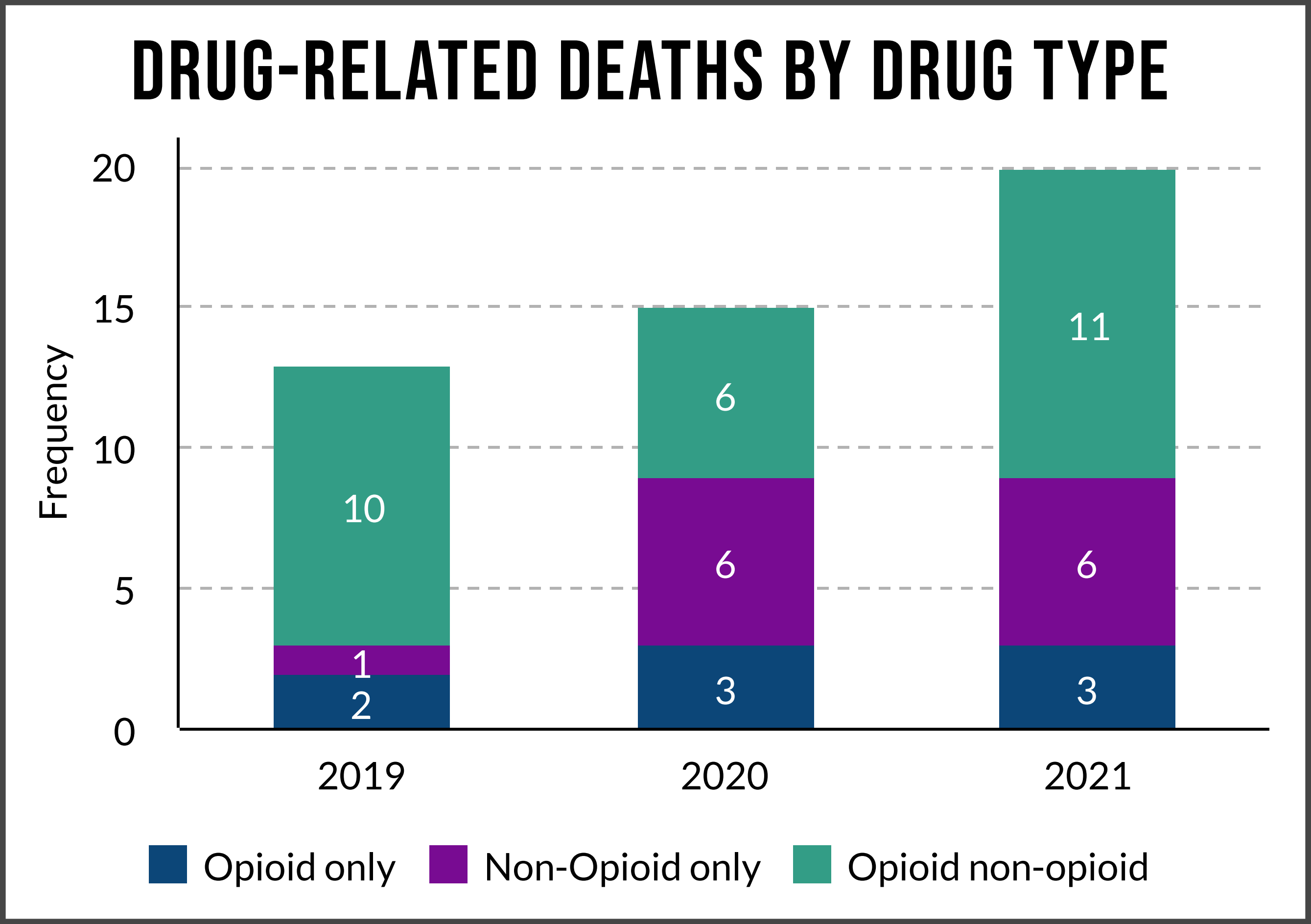
All drug-related deaths

| Age | Race | Sex | Death certificate: Substances contributing to death | Injury Zip code |
|-----|------|-----|--|-----------------|
| 59 | W | M | methamphetamine | 49064 |
| 63 | W | F | alprazolam, hydromorphone, morphine, methamphetamine | 49079 |
| 75 | W | M | phentermine | 49038 |

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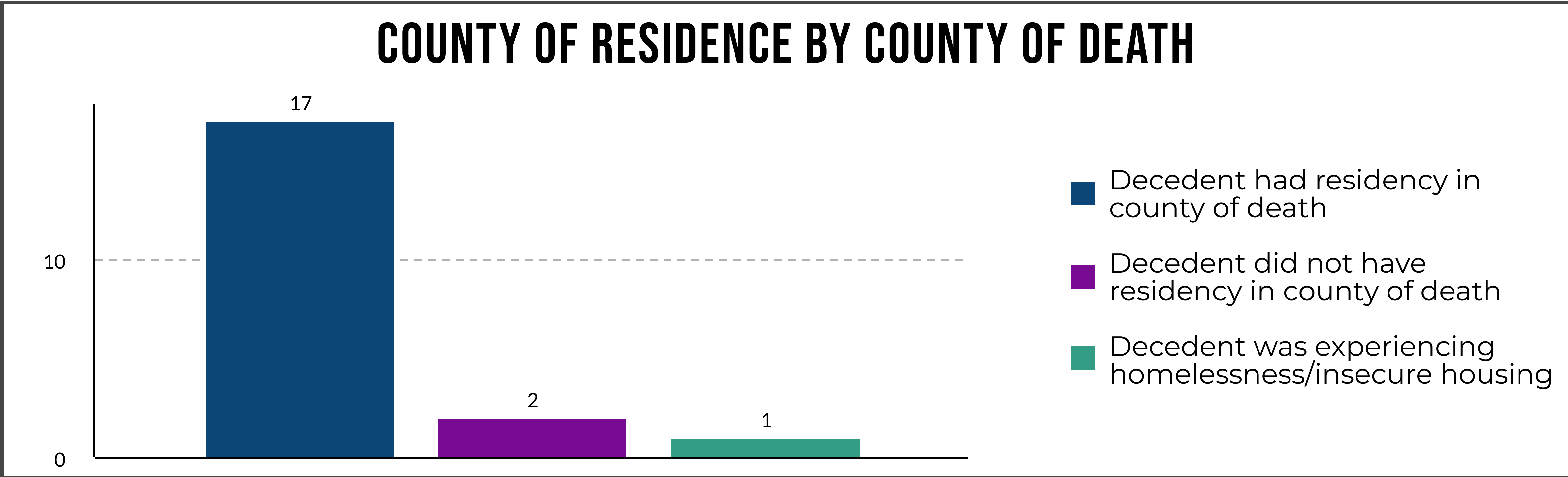
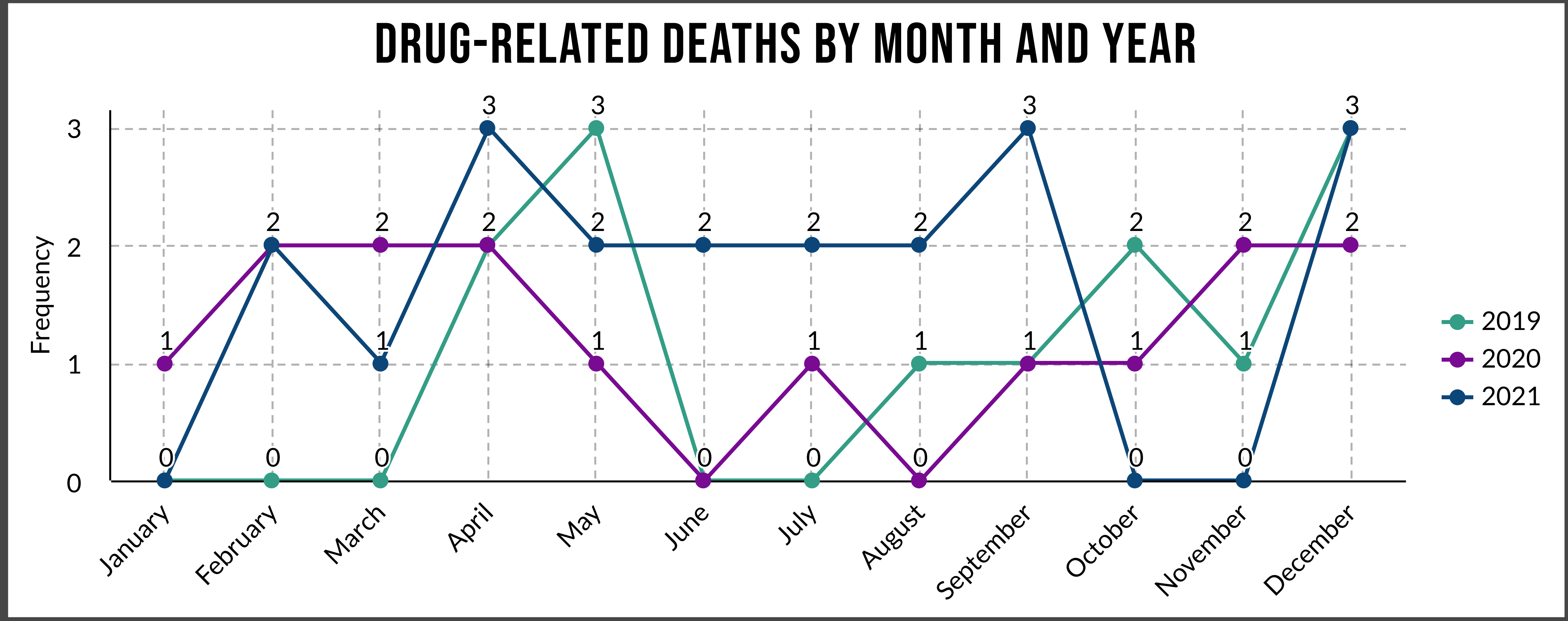
Total Drug-Related Deaths



| Year | Total deaths | Deaths per 10,000 |
|------|--------------|-------------------|
| 2019 | 13 | 1.7 |
| 2020 | 15 | 2.0 |
| 2021 | 20 | 2.7 |

Percent change

29% from 2020 to 2021

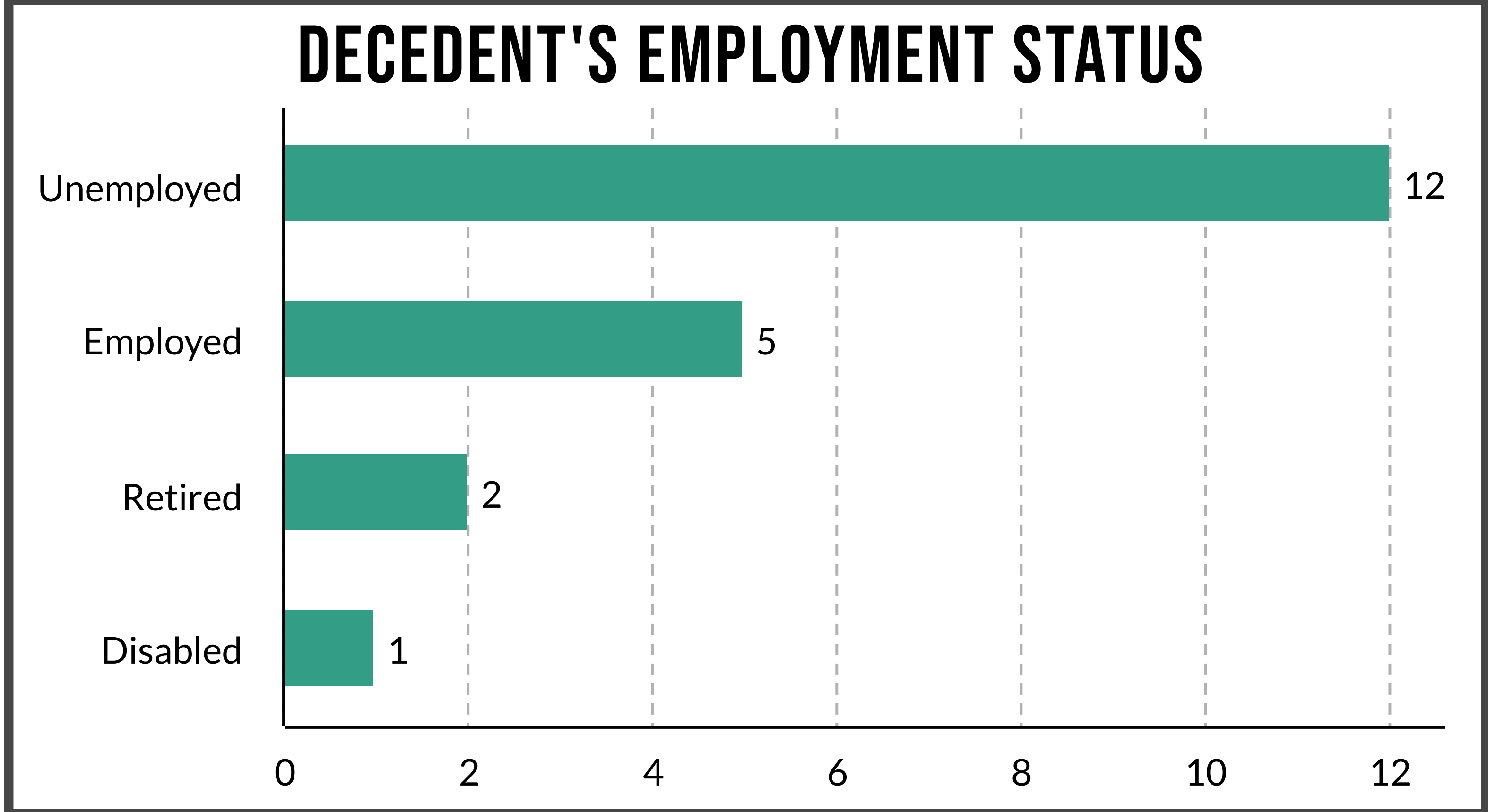


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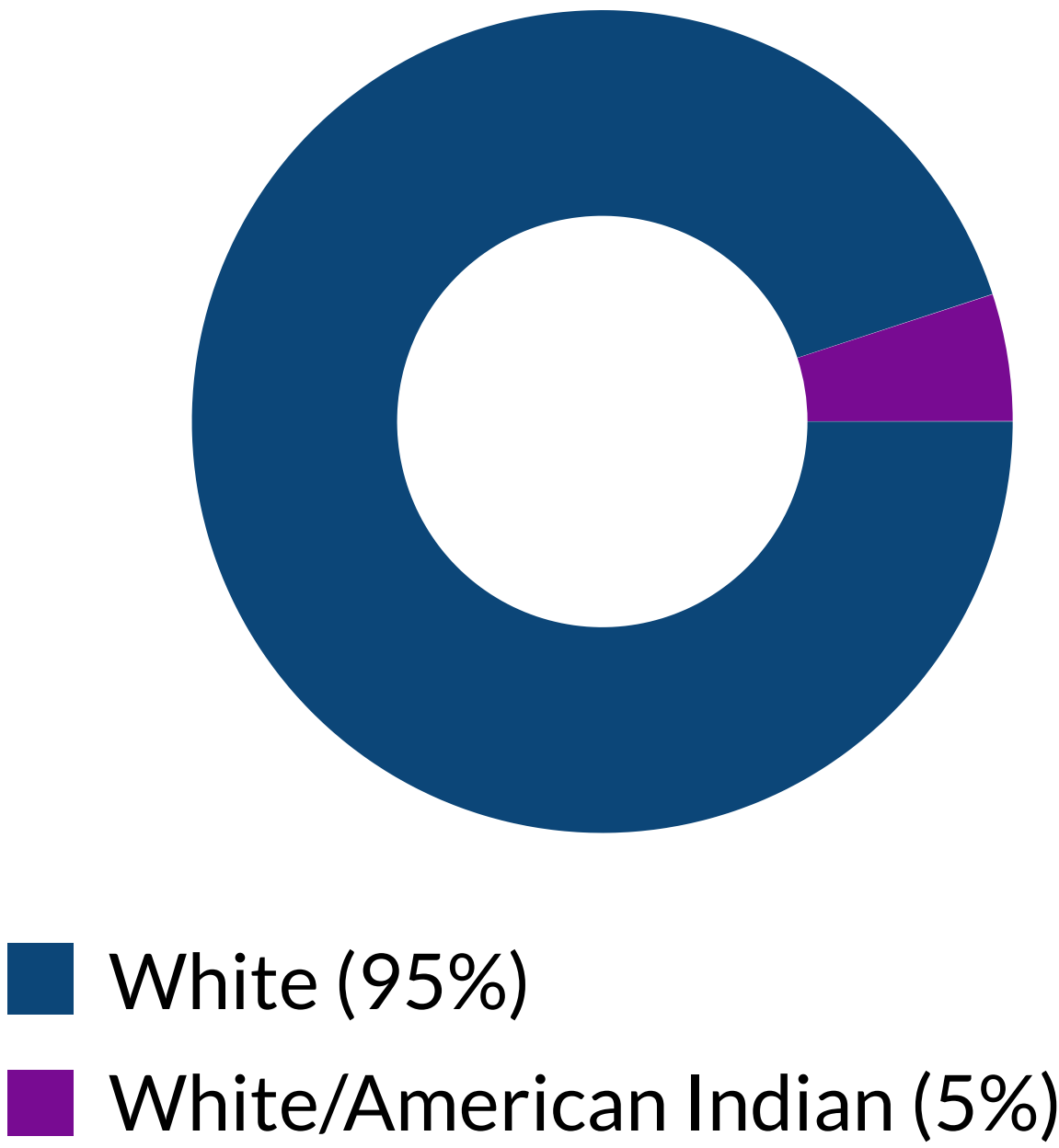
Van Buren County

Demographics

DECEDENT'S EMPLOYMENT STATUS



RACE



SEX

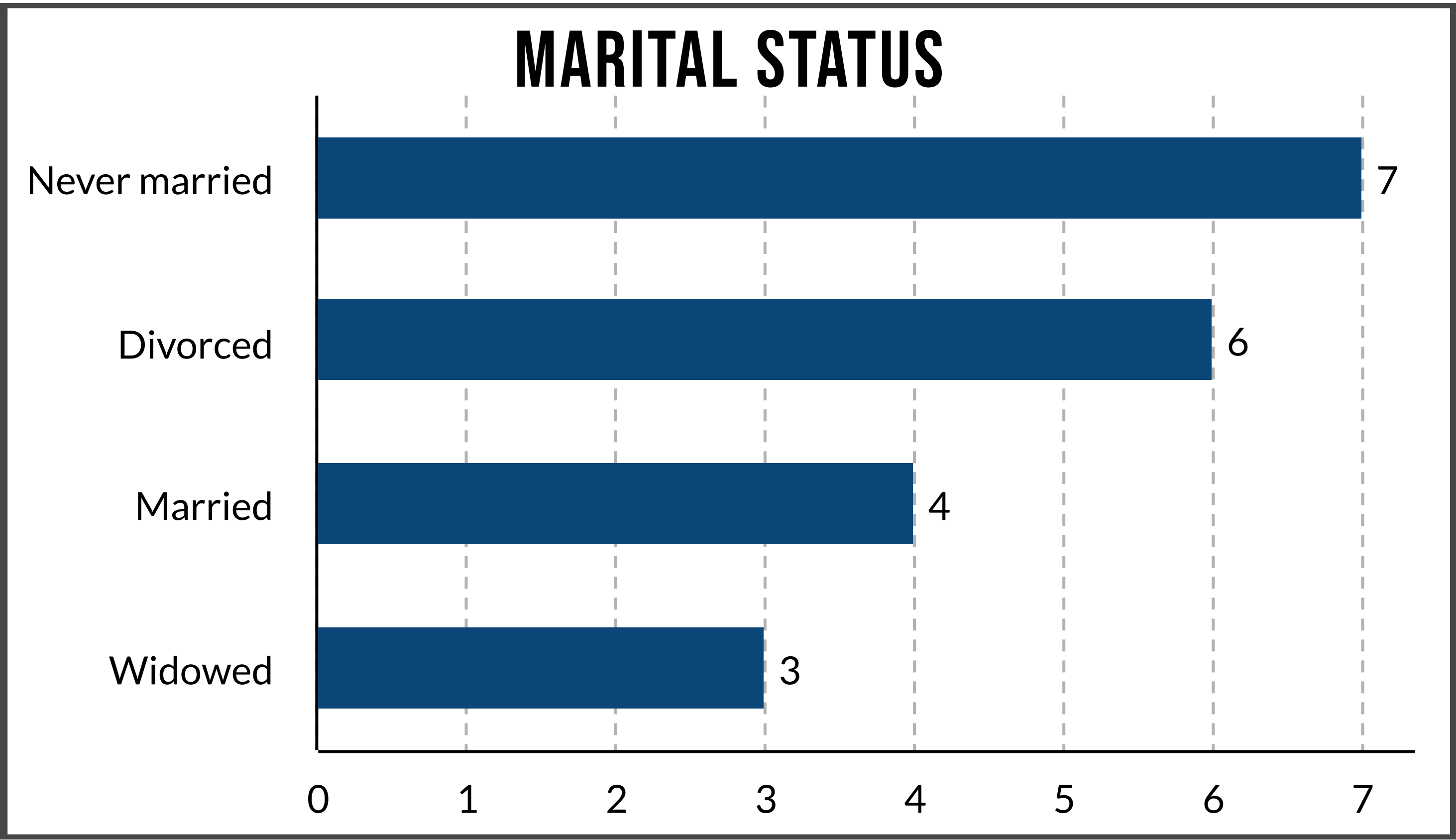


30%



70%

MARITAL STATUS



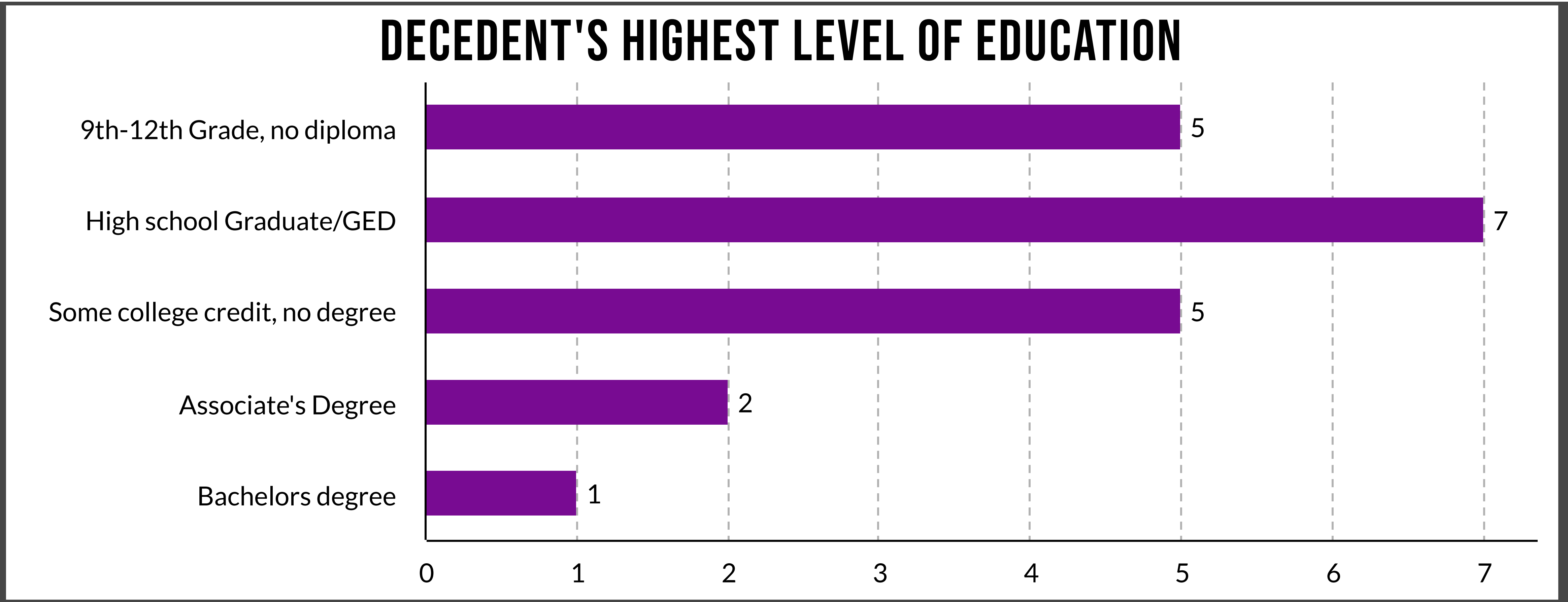
AGE

Minimum Age
26 years

Maximum Age
75 years

Average Age
44 years

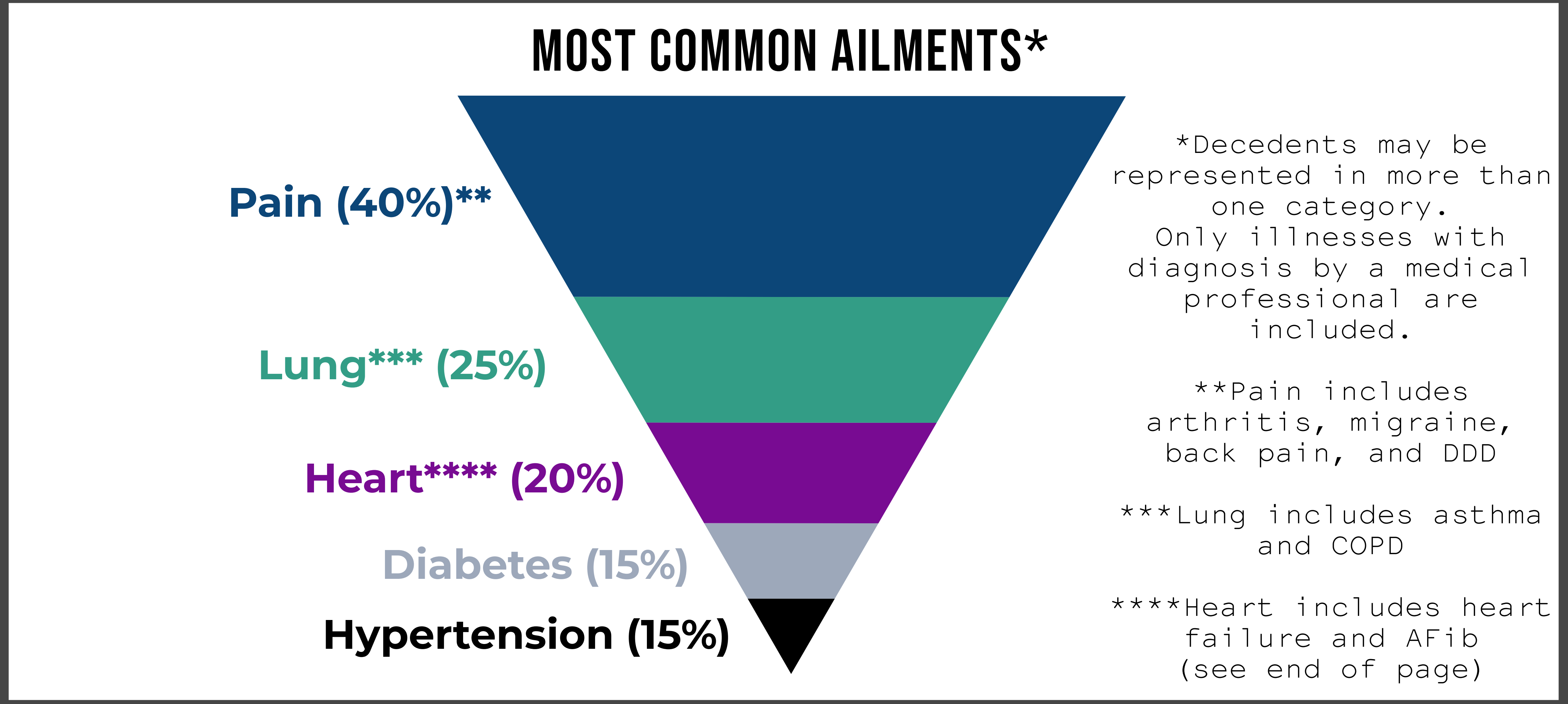
DECEDENT'S HIGHEST LEVEL OF EDUCATION



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Health Factors



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Mental Health Factors

MOST COMMON MENTAL ILLNESSES

Depression (55%)

Anxiety (45%)

Bipolar (20%)

ADD/ADHD (15%)

*Decedents may be represented in more than one category. Only mental illnesses with official documented diagnosis are included.

PERCENTAGE OF DECEDENTS

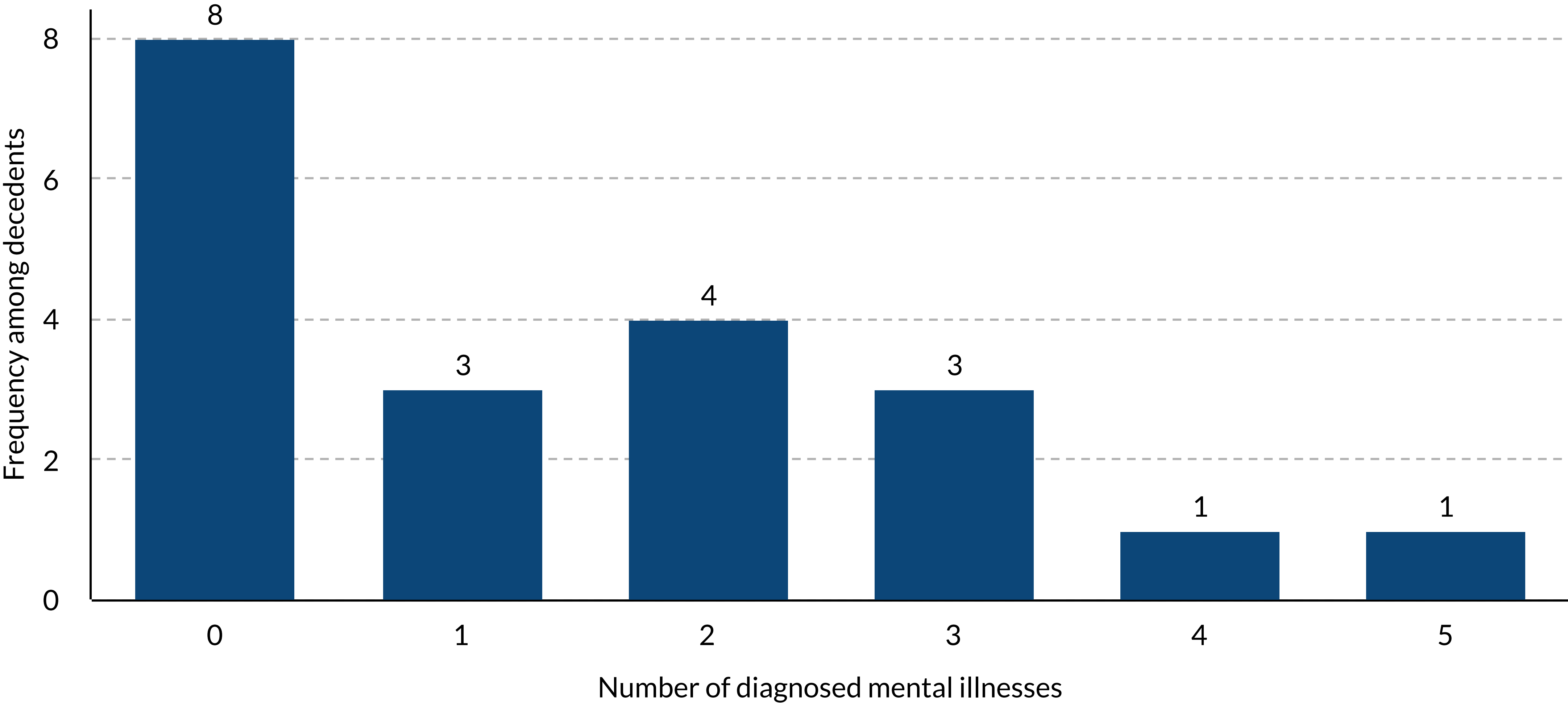
40%

...who have ever had **suicidal ideation**

15%

...with **previous suicide attempts**

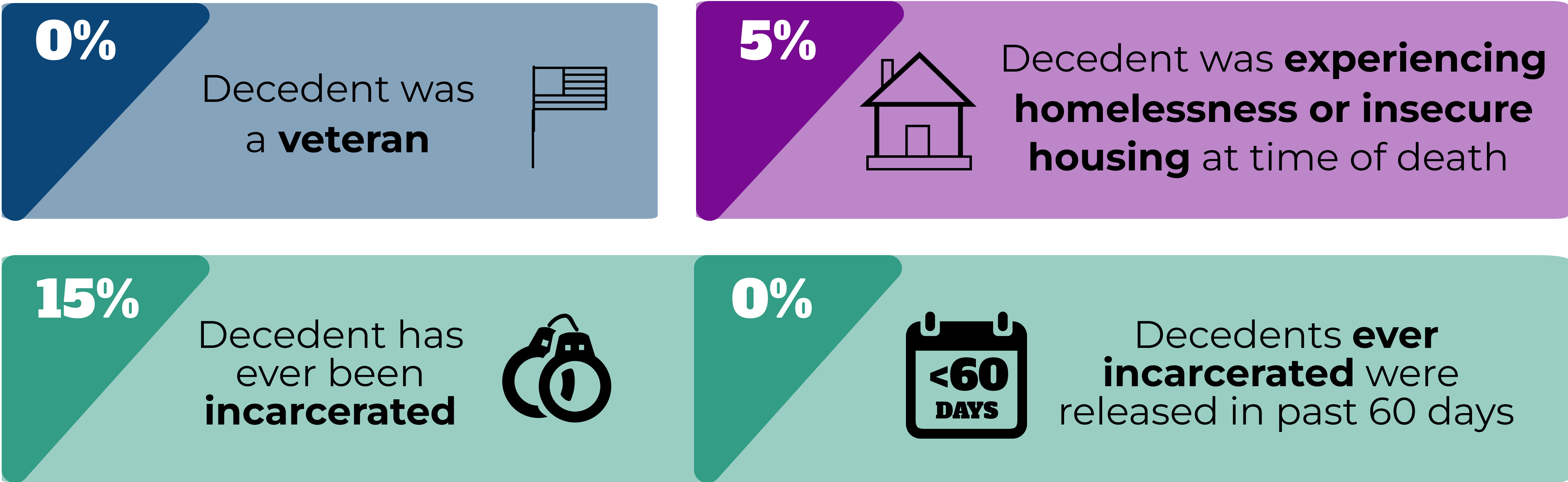
NUMBER OF DIAGNOSED MENTAL ILLNESSES AMONG DECEDENTS



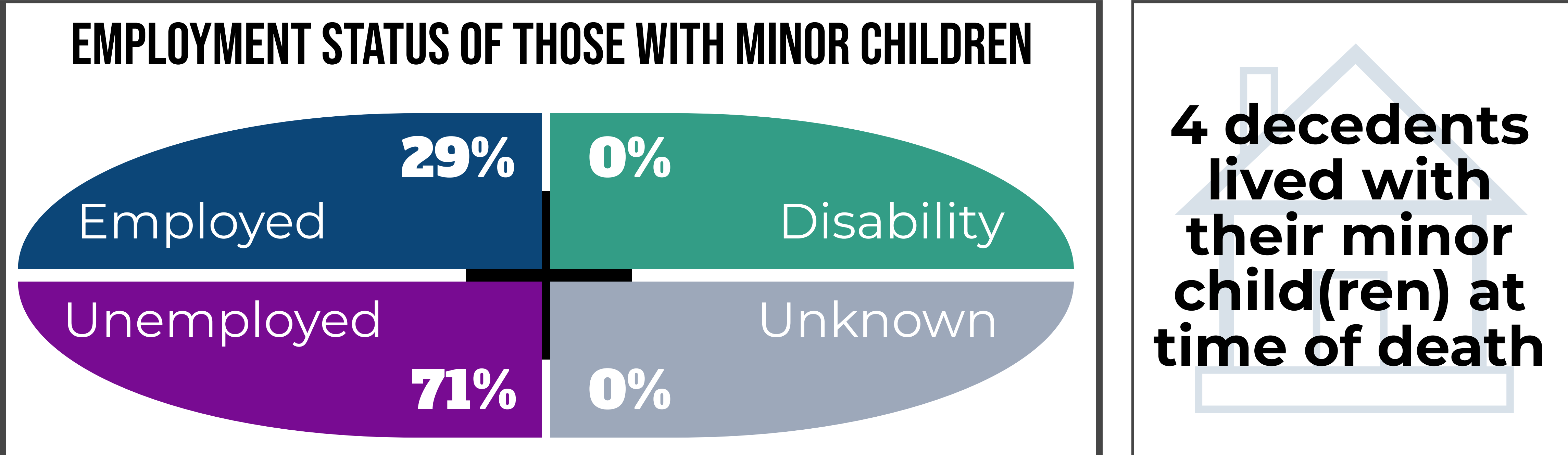
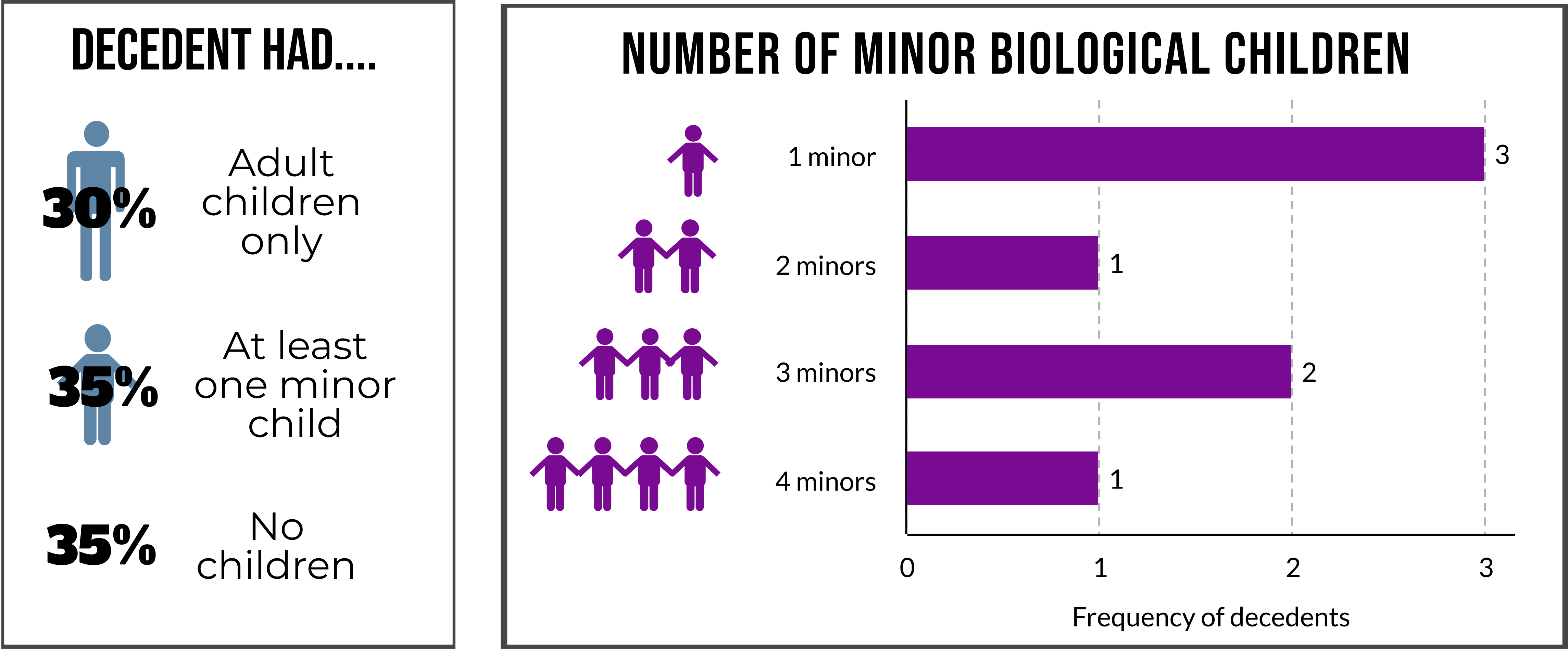
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Social Factors



Children

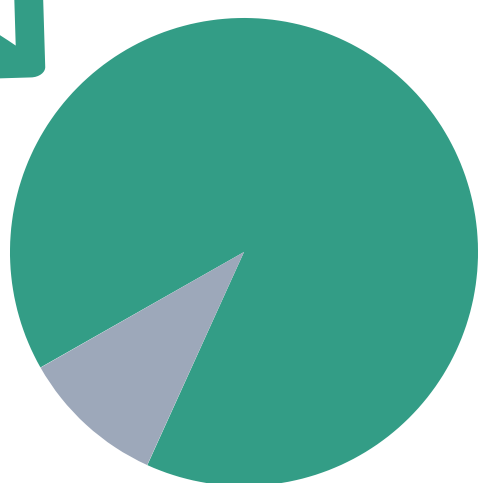


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Substance Use History

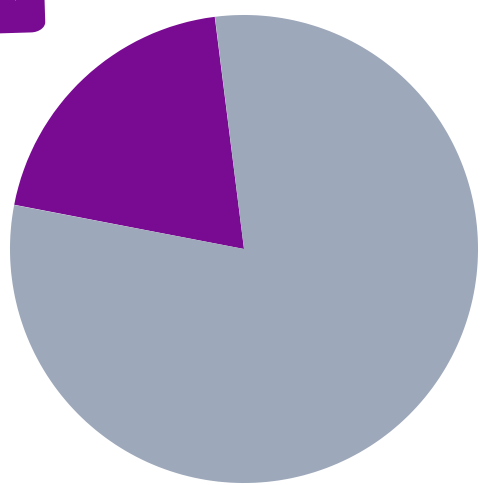
At least 90% of decedents were known to use or abuse substances



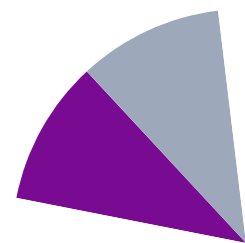
At least 39% of those decedents used substances intravenously



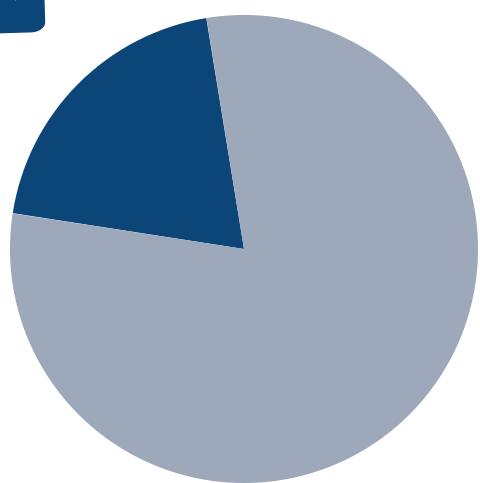
At least 20% of decedents have had at least one prior overdose



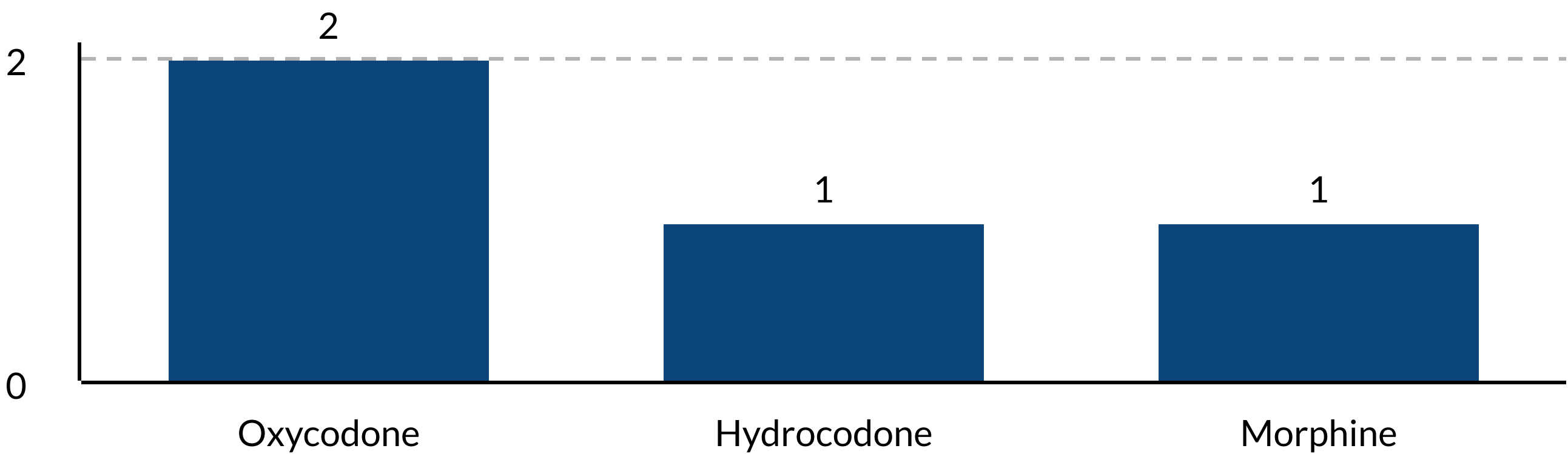
At least 59% of those decedents have had two or more prior overdoses



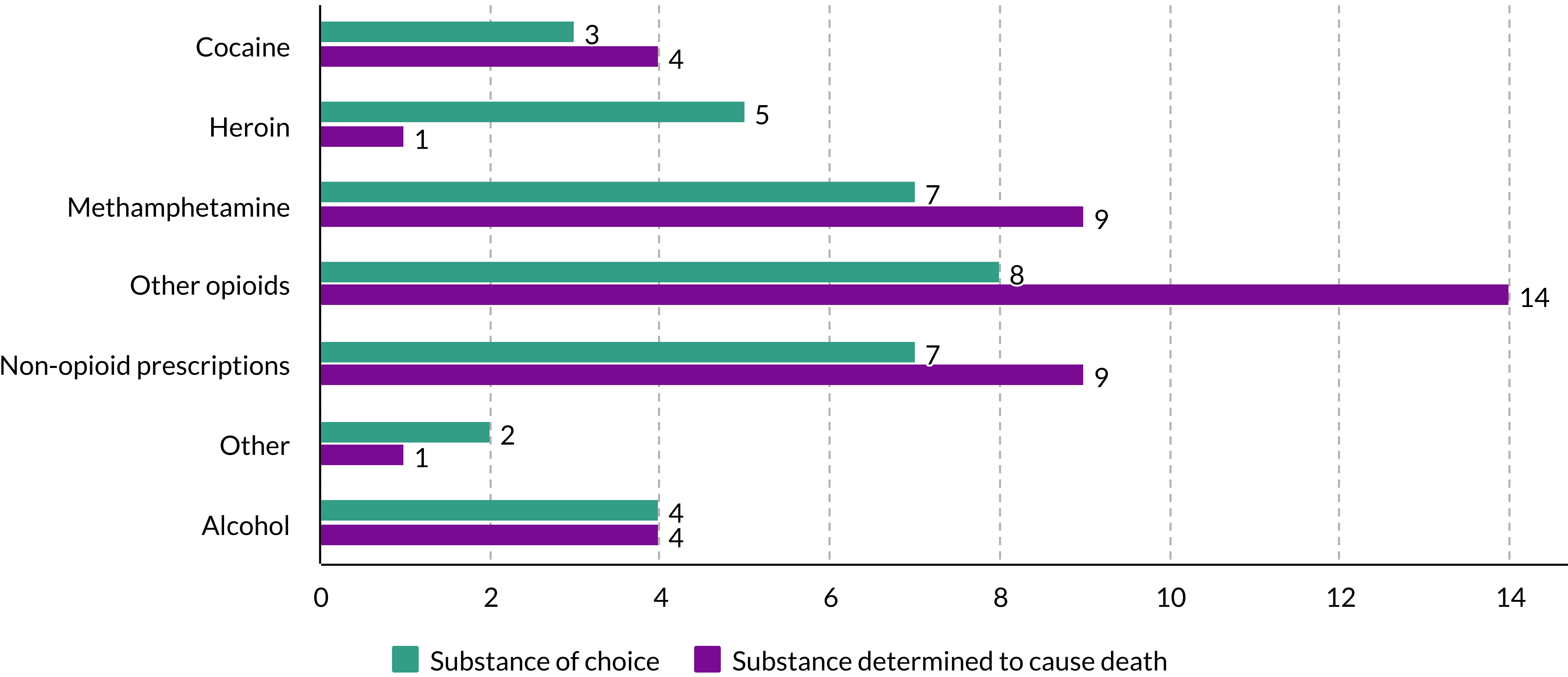
At least 26% of decedent's substance use started from a prescription



TYPE OF PRESCRIPTION



DECEDENT'S SUBSTANCE(S) OF CHOICE VS. SUBSTANCE(S) THAT CAUSED DEATH*



*Decedent may have had more than one substance of choice and in their toxicology.
NOTE: 2 decedents were not known to use substances.
Other substance of choice includes mushrooms and DMT.
Other substance contributing to death includes sodium nitrite.

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Substance Use History, cont.

PREFERRED METHOD OF ADMINISTRATION* (N=17)

| Method | Male (n=11) | Female (n=6) | White (n=17 | Total (n=17)** |
|-------------|-------------|--------------|-------------|----------------|
| Intravenous | 6 | 0 | 6 | 6 |
| Snort | 5 | 0 | 5 | 5 |
| Smoke | 3 | 2 | 5 | 5 |
| Transdermal | 0 | 0 | 0 | 0 |
| Huff | 0 | 0 | 0 | 0 |
| Oral | 4 | 3 | 7 | 7 |
| Unknown | 0 | 2 | 2 | 2 |

*Decedent may have had more than one preferred method of administration. Only includes decedents with a substance use history.
**Decedent of white/American Indian descent is excluded (n=1).

RECOVERY HISTORY (N=18)*

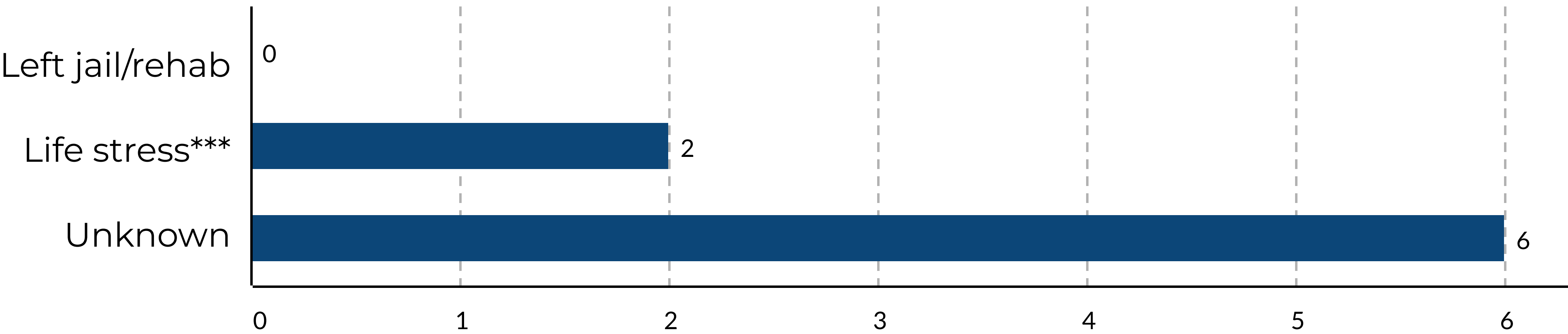
Decedent was recently reportedly **substance free** in the past three weeks

17%
Decedent has been to a **treatment clinic or detox center** at least one time

0%
Decedent was currently receiving or has received **medication for opioid use disorder** in the past two years

44%

SUSPECTED REASON FOR RELAPSE**

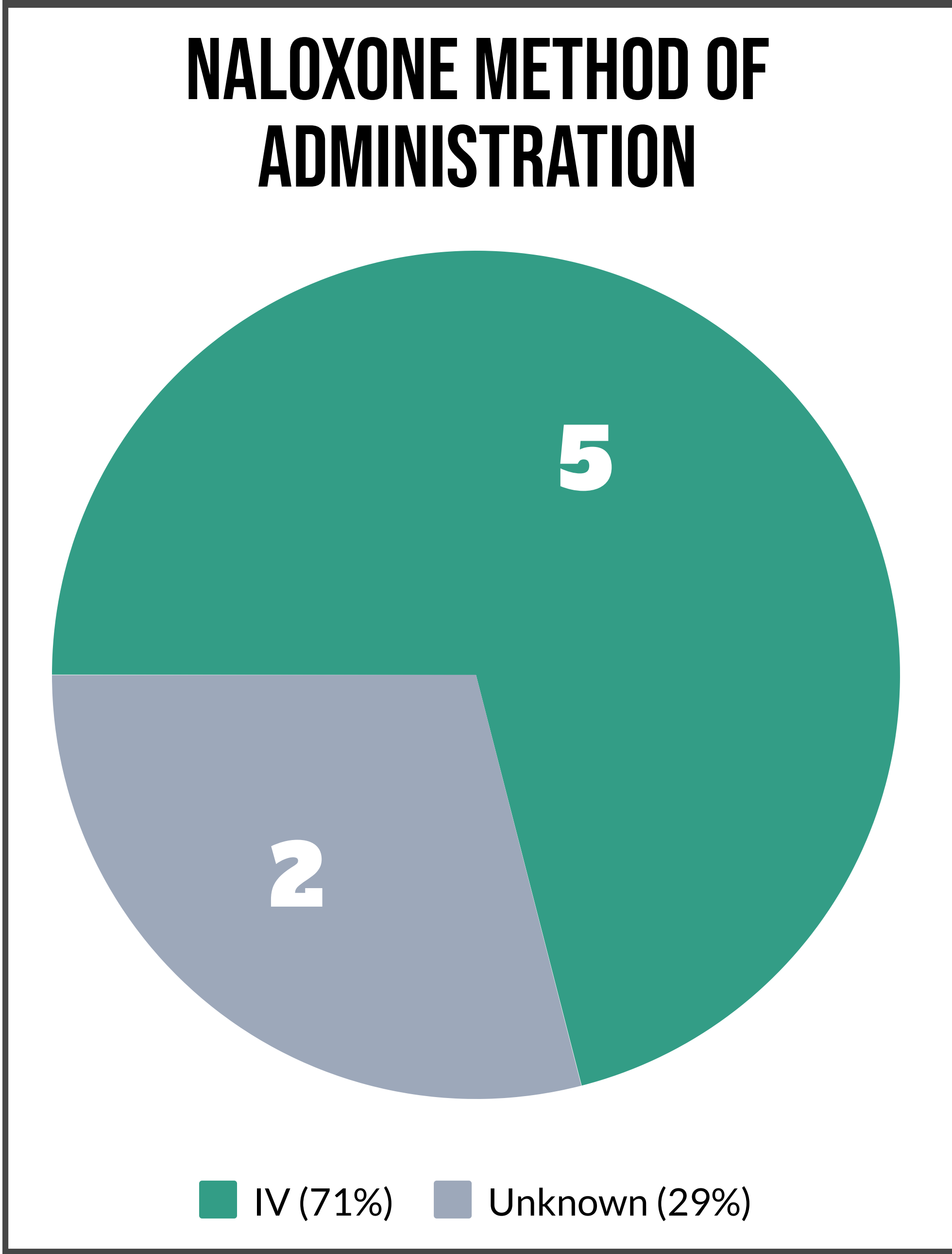
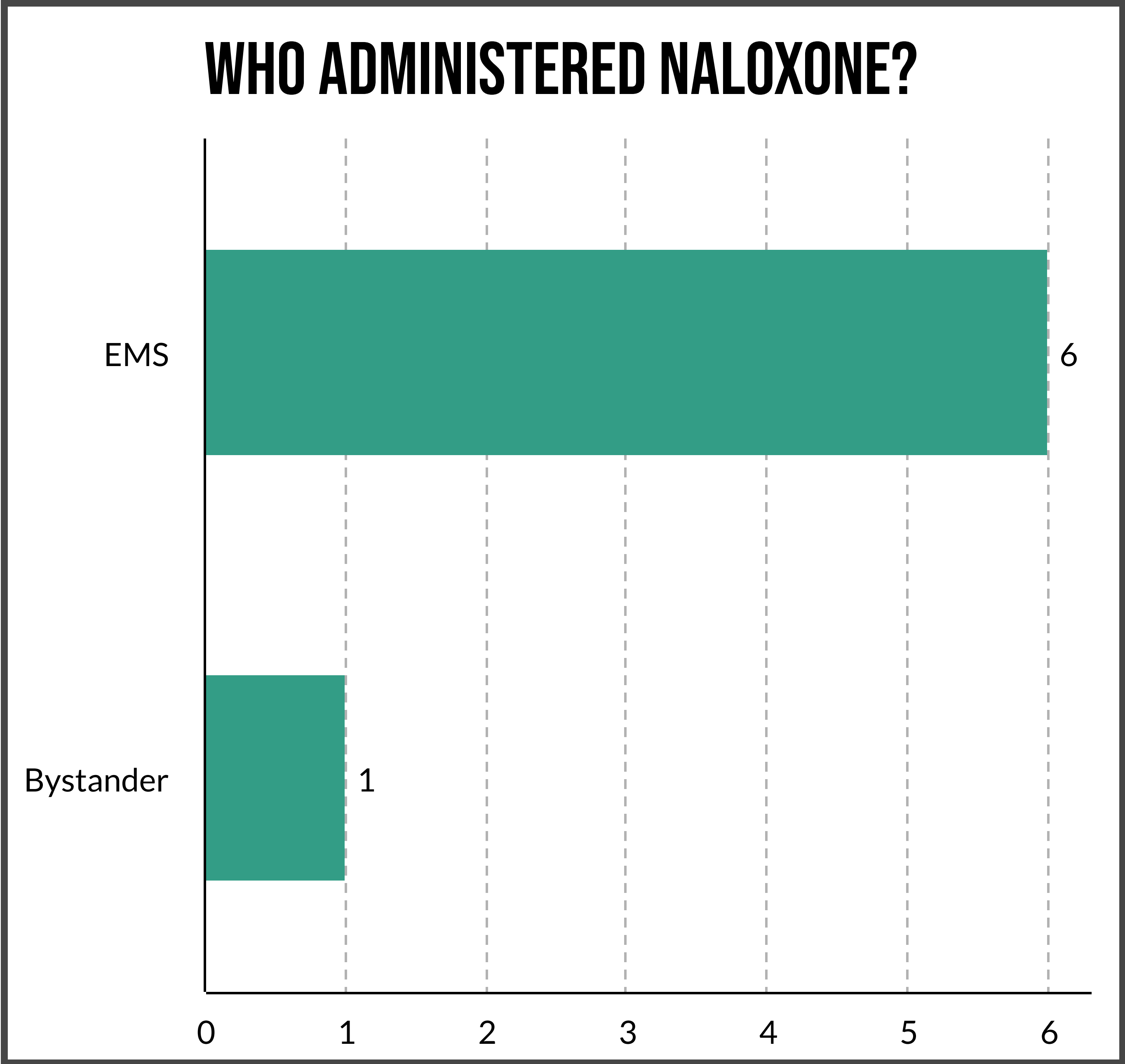
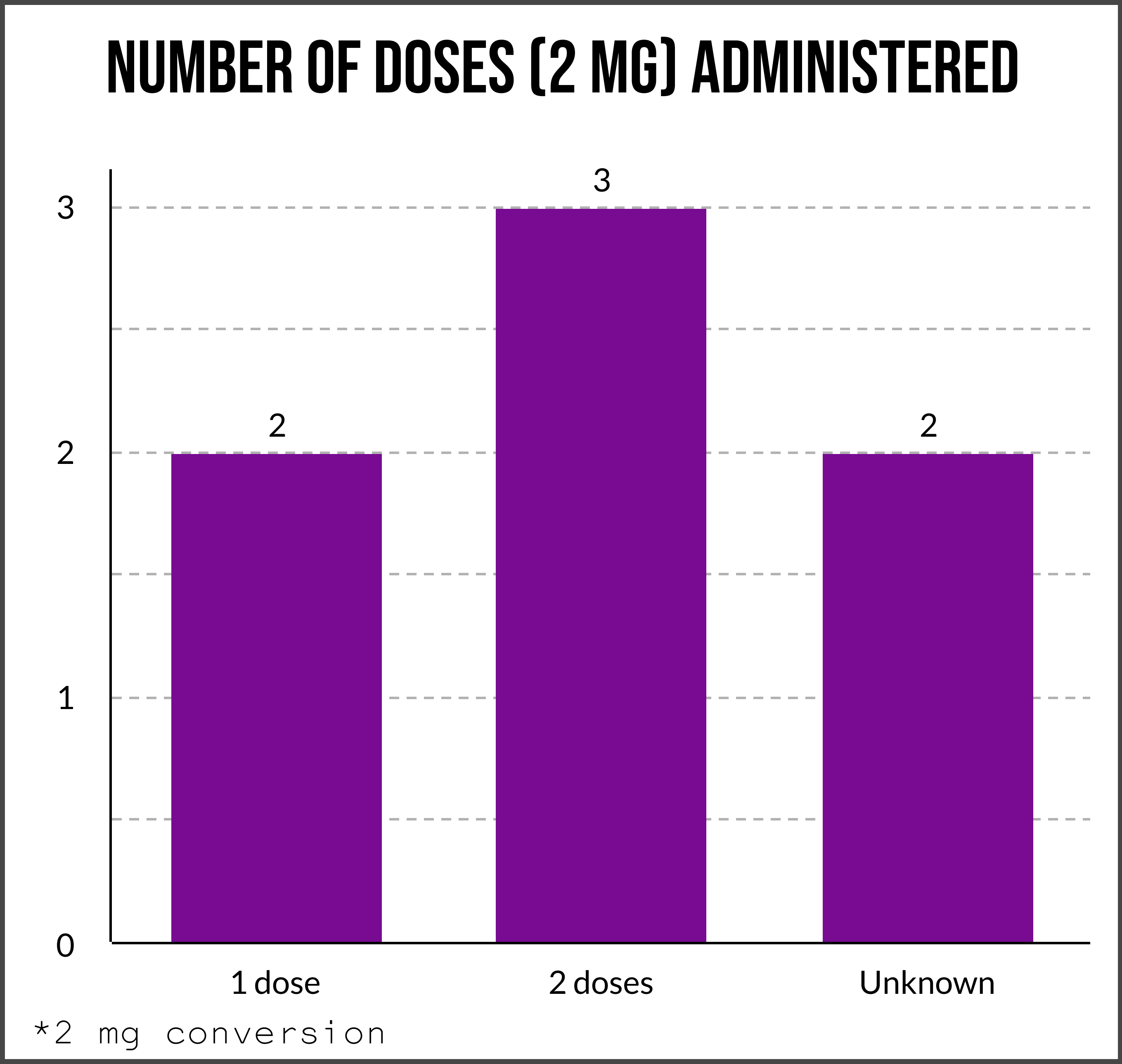
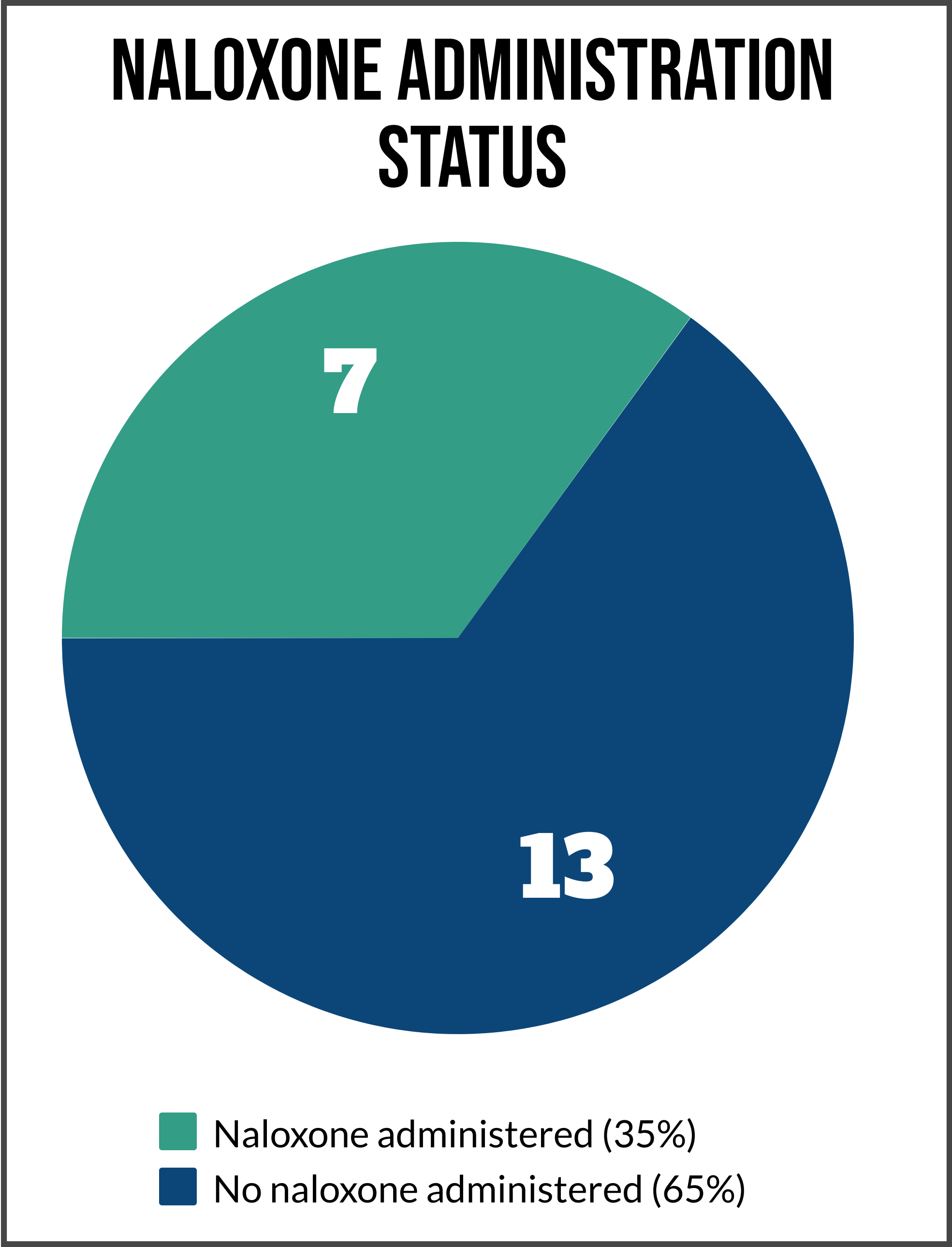


*ONLY Decedents known to use substances are included.
**These factors were mentioned by those close to the decedent for why they may have begun to use substances again after being substances free for at least three weeks.
***Life stress includes social circle influences.

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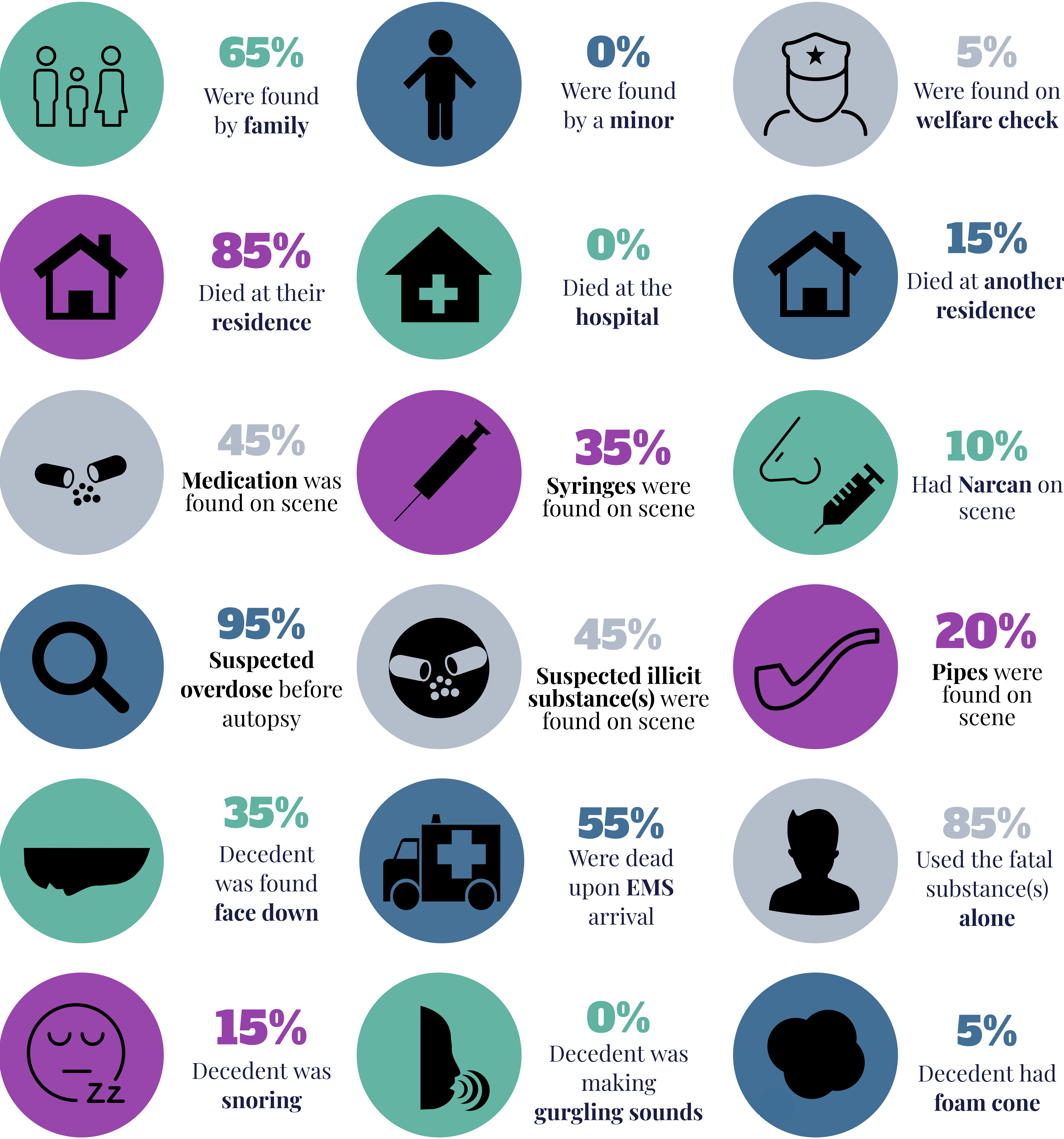
Naloxone Administration



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Death Scene Findings

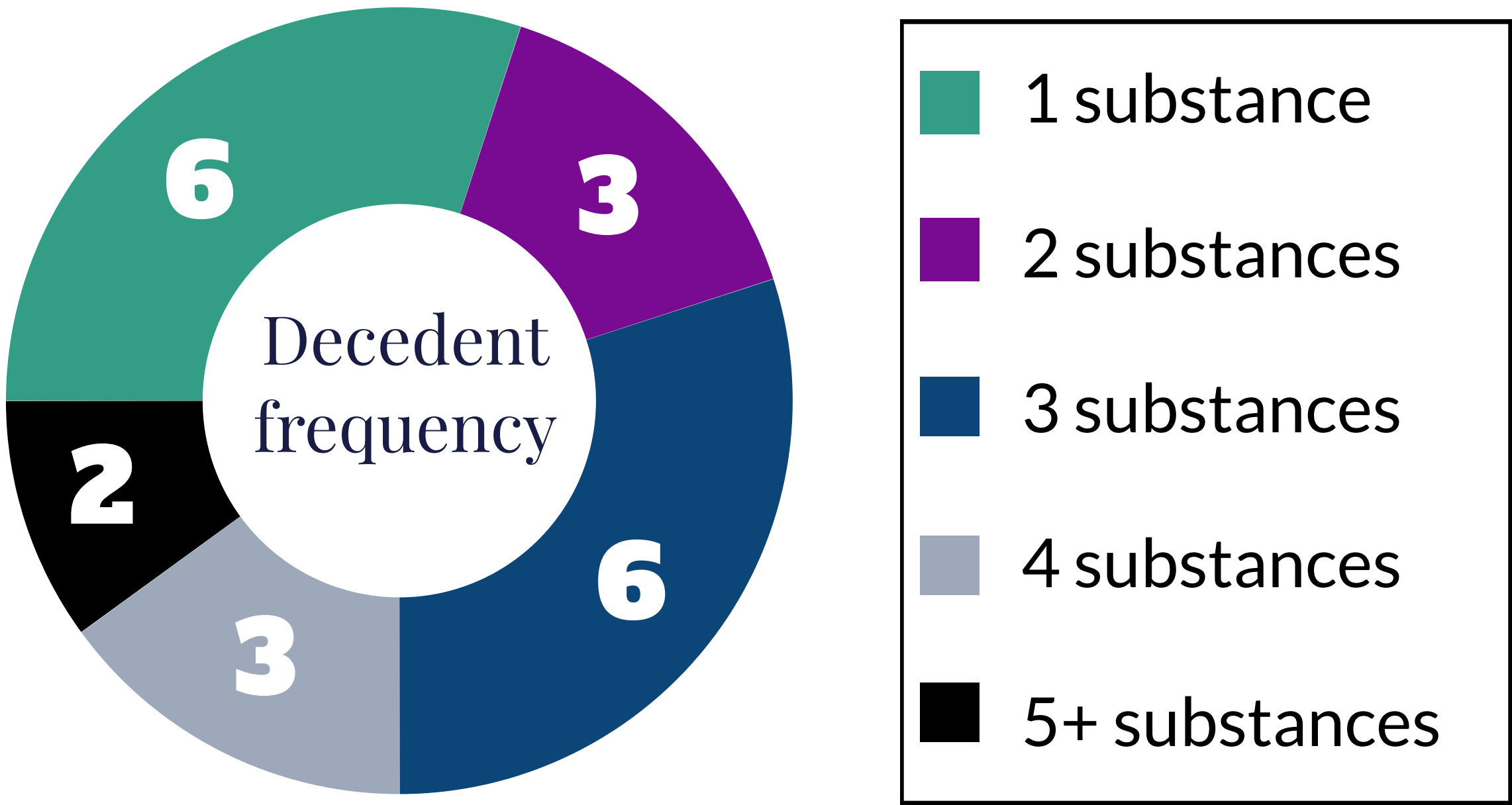


Deaths Related to Opioids and Other Drugs

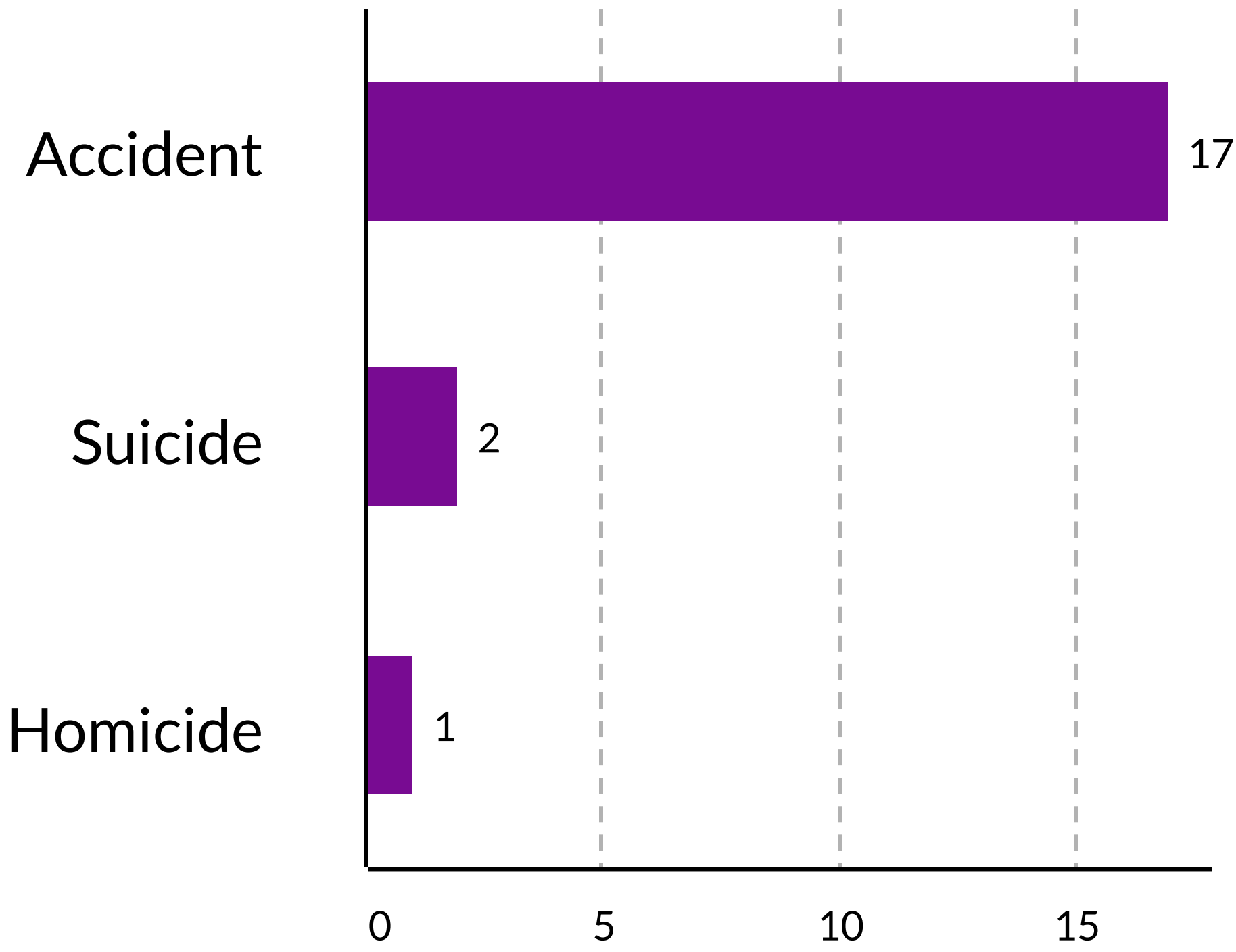
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Autopsy and Toxicology Results

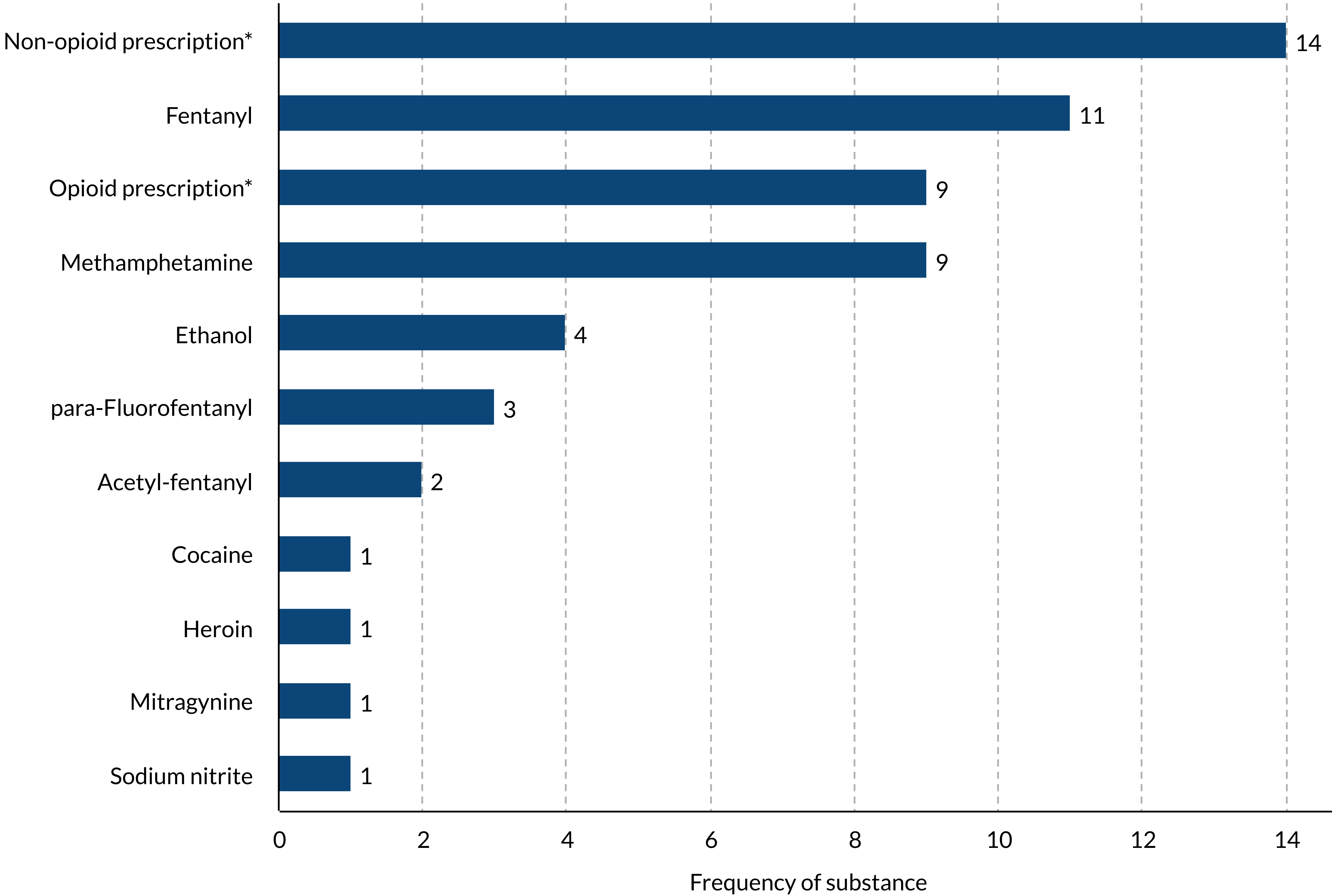
NUMBER OF SUBSTANCES
CONTRIBUTING TO DEATH



MANNER OF DEATH



SUBSTANCES CONTRIBUTING TO DEATH

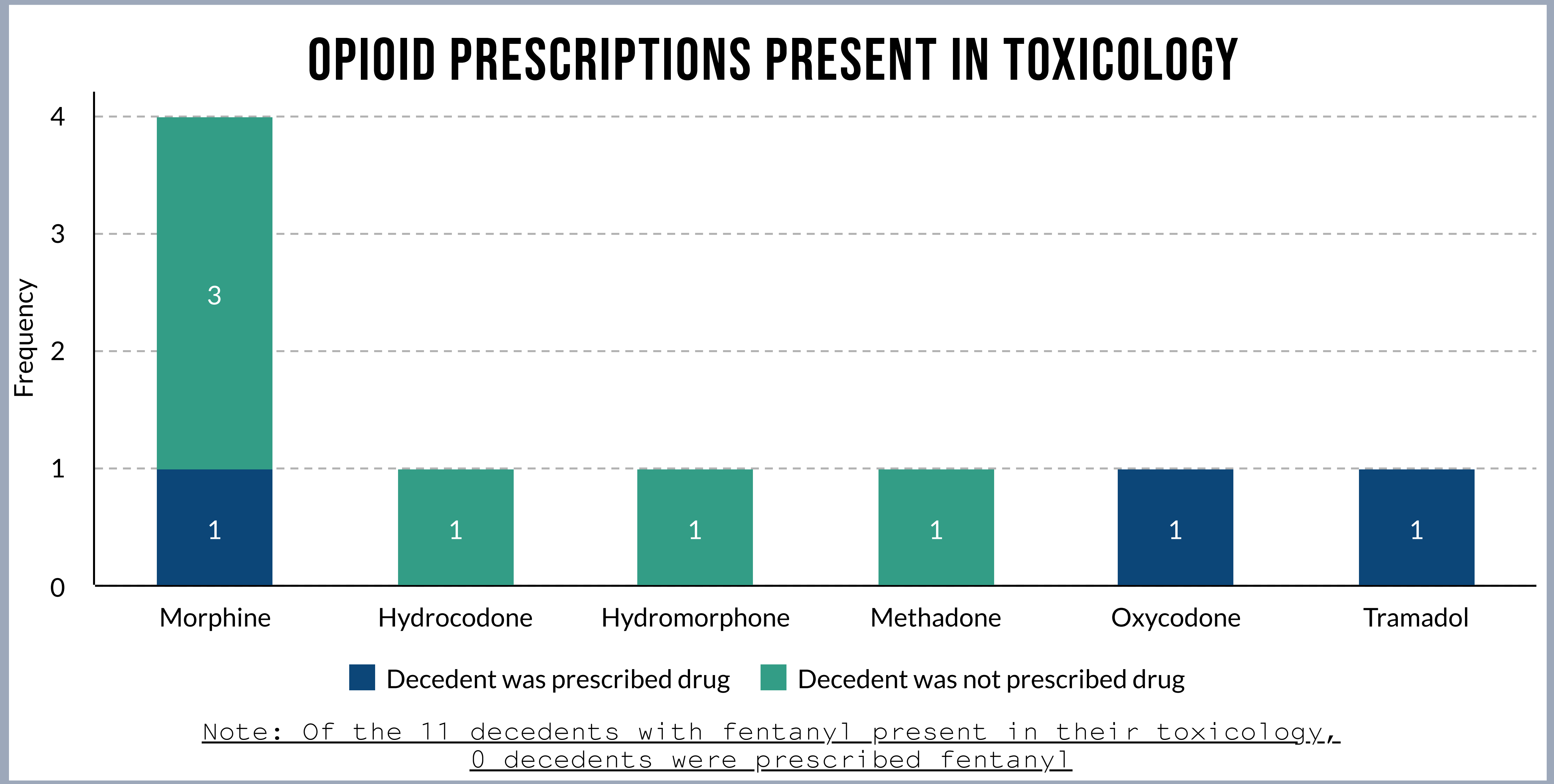
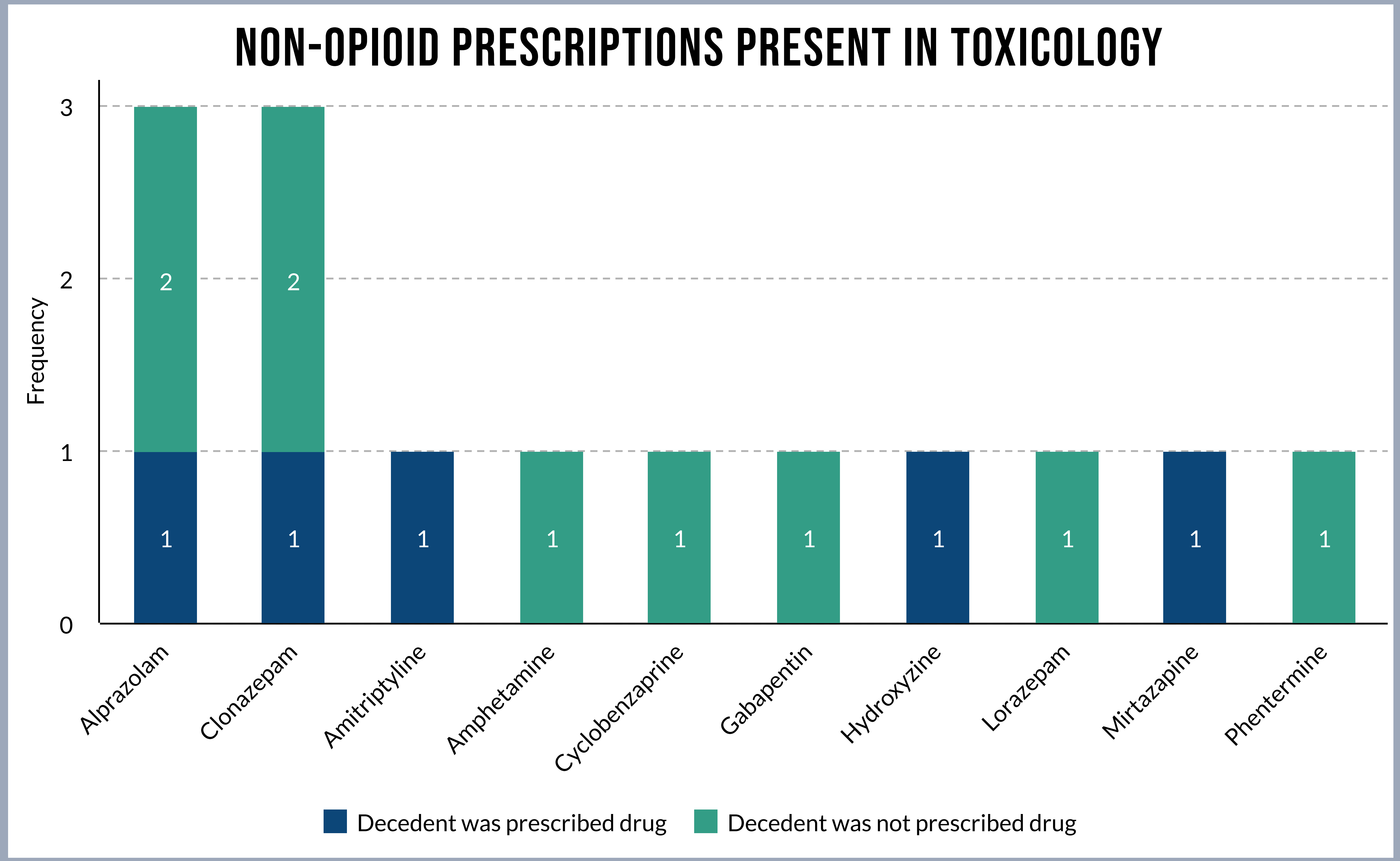


*Please see graphs on the next page for a list of opioid and non-opioid prescriptions.

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Autopsy and Toxicology Results, cont.



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Highlights

OPIOIDS AND POSITIONAL ASPHYXIA

57% (8 of 14) of decedents who died due an opioid were originally found in a potentially airway compromising position

These positions include decedent drowning or decedent found face down on the floor, their bed, or on another surface

20% (1 of 5) of decedents who died due to only non-opioid substance(s) were originally found in a potentially airway compromising position

Opioids depress the respiratory system and when coupled with positional asphyxia, there may be an increase risk of death. This MEO suggests that those who use substances not use alone and to ensure they are not at risk for slumping forward onto their face.

NOVEL SUBSTANCES

Sodium Nitrite

1 death

- Inorganic compound used to cure meats to prevent spoilage
- Over-ingestion causes hypotension and limits oxygen circulation resulting in cyanosis, hypoxia, altered consciousness, dysrhythmias, and death

Para-Fluorofentanyl

3 deaths

- Analogue of fentanyl that causes similar effects to fentanyl
- Reportedly more toxic than fentanyl but provides lower levels of pain mitigation
- No approved medical use in the United States

Acetyl-fentanyl

2 deaths

- Analogue of fentanyl that causes similar effects to fentanyl
- Stronger than morphine but weaker than fentanyl
- No approved medical use in the United States

SUBSTANCE COMBINATIONS

HEROIN & FENTANYL

1 decedent had heroin in their toxicology

This decedent also had fentanyl in their toxicology

XYLAZINE & FENTANYL

0 decedents had xylazine in their toxicology

BENZODIAZEPINES & OPIOIDS

5 decedents had a benzodiazepine and an opioid in their toxicology

2 decedents were prescribed the opioid and benzodiazepine

METHAMPHETAMINE & OPIOIDS

5 decedents had methamphetamine and opioid(s) in their toxicology

3 decedents had methamphetamine and fentanyl in their toxicology