



**Arkansas Infant and Child Death Review Program**

**FY 21 report on deaths occurring in 2019**

**Compiled by:**

**Arkansas Infant and Child Death Review Program**

**Arkansas Children's Hospital Injury Prevention Center**

**Funding provided by:**

**The Family Health Branch of the Arkansas Department of Health (ADH)**





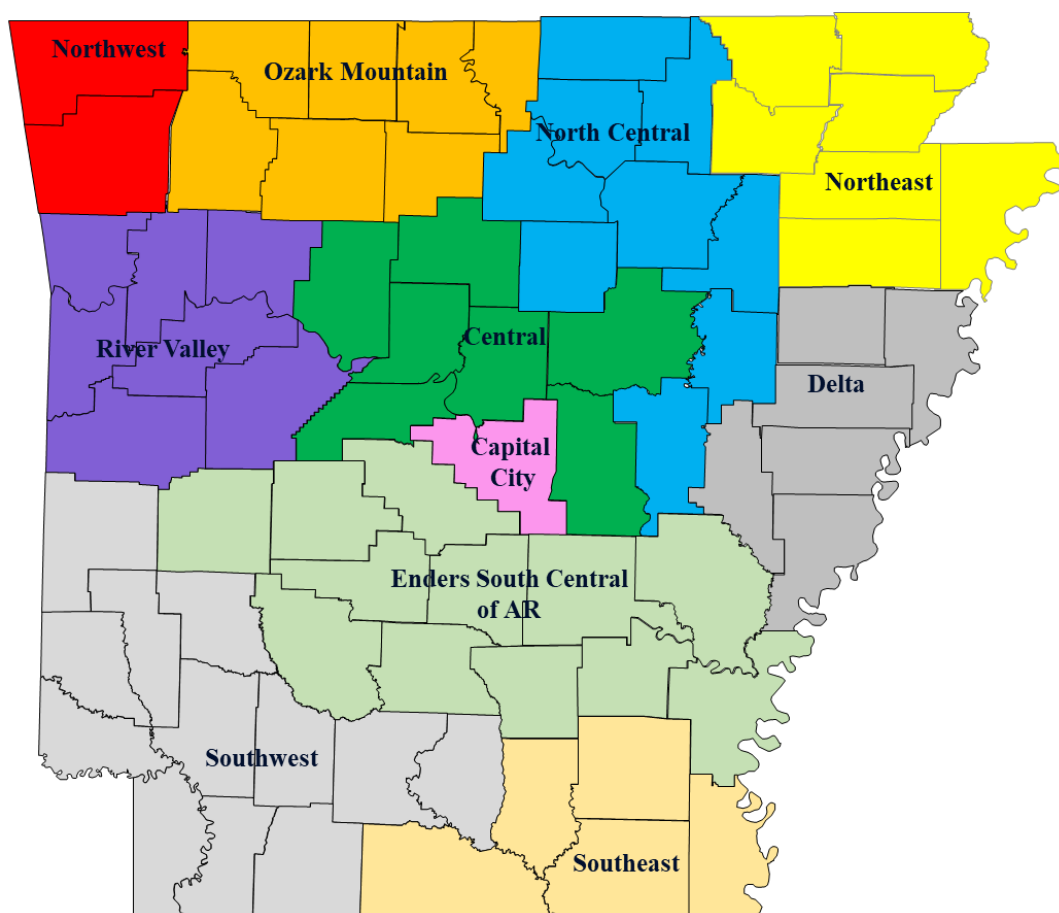
## Key notes about this Report

### Arkansas Infant and Child Death Review Program Vision and Mission Statement

**Vision Statement:** Eliminate all preventable infant and child deaths in Arkansas.

**Mission Statement:** To review all unexpected infant and child deaths in the state of Arkansas. These reviews result in the development of interventions and recommendations through multidisciplinary team collaboration, community education and policy.

- Although coding guides (ICD-10) use the term “accident”, as a manner of death, experts in the field refer to injuries as unintentional. The word accident imparts a sense that nothing can be done when in reality injuries are predictable and preventable. This report will utilize accident as appropriate for this report.





## Introduction

### The Infant and Child Death Review Process: Purpose and Data

#### KEY FINDINGS

- In 2019, there were 421 child deaths between the 0-17 years of age
  - Among the 421 all-cause deaths, 168 (40%) cases were eligible for review by local ICDR teams.
  - In 2018, 84% of eligible cases were reviewed. In 2019, 71% of eligible cases were reviewed.
- #### OF 2019 CASES REVIEWED (N=120)
- Forty-six percent were accidents, with motor-vehicle crashes and drowning being the leading causes of accidental death.
  - Twenty-six percent of all preventable deaths were among children 15-17 years of age, followed by 1-4 years of age at 17%.

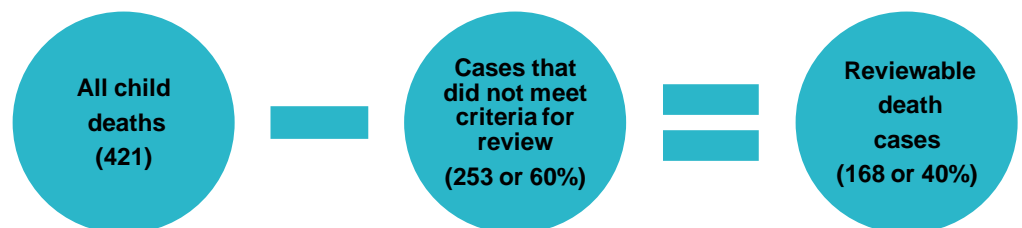
**Overview:** Established in 2010, the Arkansas (AR) Infant and Child Death Review (ICDR) Program has expanded to 11 regional teams that review unexpected deaths of Arkansas children under the age of 18. The teams cover all 75 Arkansas counties, giving the ICDR Program the potential to evaluate 100% of reviewable pediatric deaths, as required by ACT 1818 of 2005. All local team members work and/or reside in the area of the team they serve, which allows firsthand insight into the local environment and needs of the community.

**Case Selection:** Under ACT 1818 of 2005, cases that are reviewable meet the following criteria:

1. Child was not under the care of a licensed physician for treatment of an illness/condition that contributes to the cause of death (IE cancer, prematurity, congenital abnormalities etc.).
2. Death was due to Sudden Infant Death Syndrome (SIDS)
3. Death was due to an unknown cause
4. Death is not under criminal investigation or being prosecuted

**CDR Data:** Information collected from multiple disciplines at a case review are entered into the National Center for Fatality Review and Prevention (NCFRP) data base. The data is analyzed to generate an overview and in-depth annual report on the cases reviewed by the local ICDR teams. Key data entered into the NCFRP database are derived from death/birth certificates, child health records, autopsy reports, coroner's reports, sudden unexplained infant death investigation (SUIDI) forms, toxicology reports, witness interviews, on-scene investigation reports and any other documentation that teams identify as helpful in a review in order to make effective prevention recommendations.

The total infant and child deaths (ages 0-17) in Arkansas for 2019 was 421 deaths, of those 168 (40%) were eligible for review and 120 (71%) of the eligible cases were reviewed. The 48 cases not reviewed were because of the inability to obtain reports and/or the case was still under criminal investigation or being prosecuted.

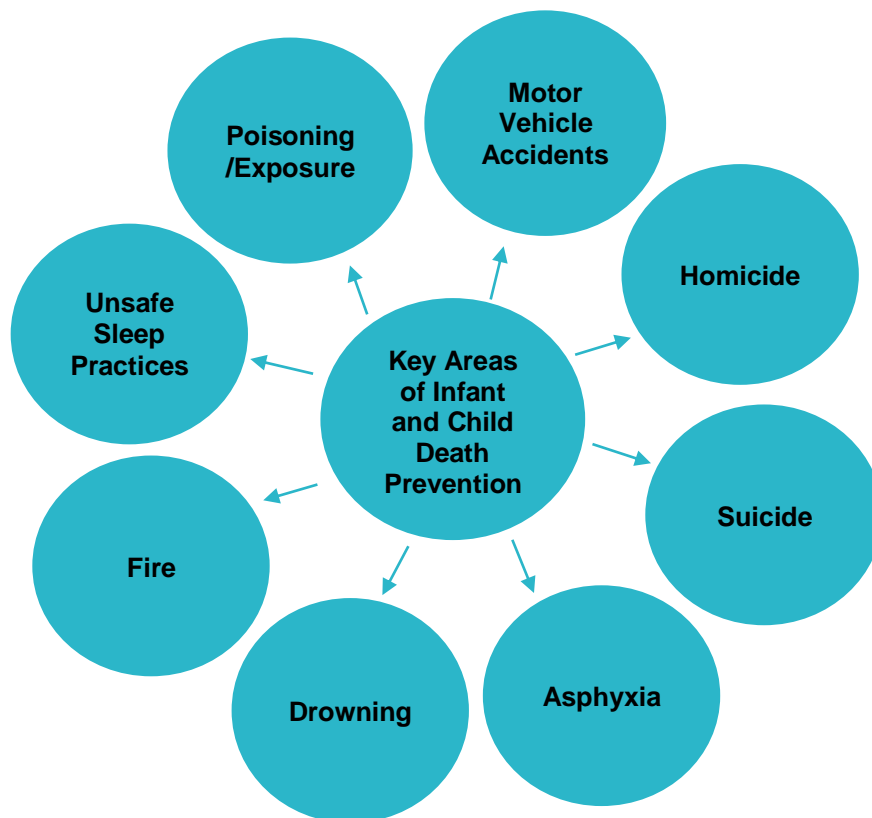




## Goal of the Infant and Child Death Review Program

The ICDR Program remains committed to the goal of reducing preventable child death in Arkansas. This effort requires the steadfast commitment of all local team members, ICDR Program staff staying abreast of best practices regarding child death reviews, and the assistance of partner organizations for expertise in prevention strategies. Specific goals for the ICDR Program include:

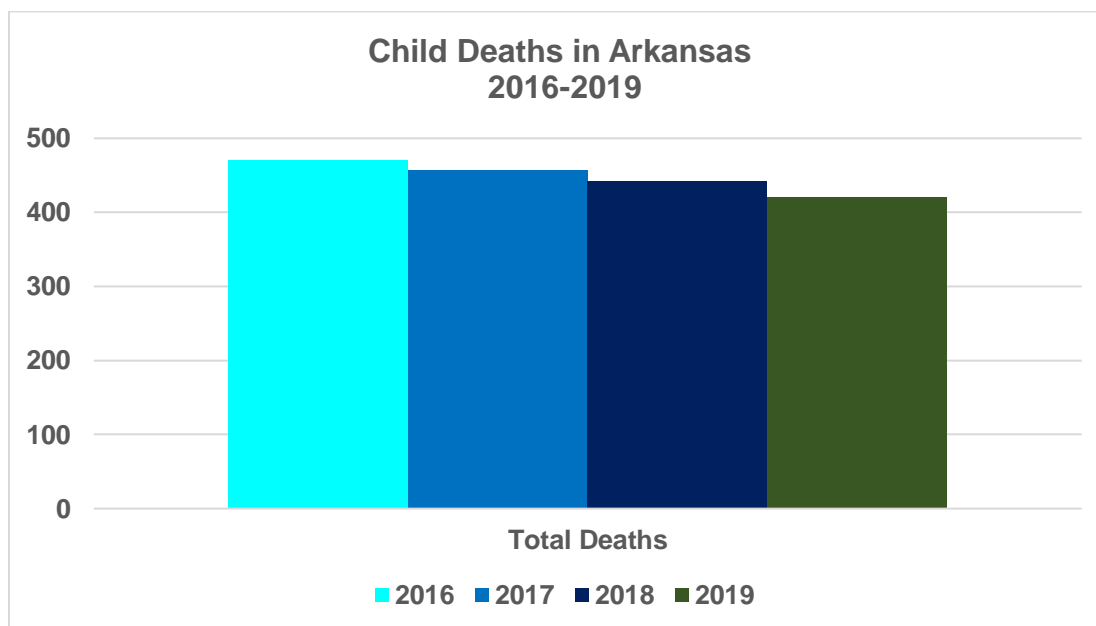
- Monitor and train all local teams and members.
- Provide resources for specific team recommendations and monitoring of teams carrying out recommendations.
- Identify and implement additional targeted prevention campaigns with local team support.





The total infant and child deaths (ages 0-17) in Arkansas for 2019 was 421 deaths, of those 168 (40%) were eligible for review and 120 (71%) of the eligible cases were reviewed. The 48 cases not reviewed were because of the inability to obtain reports and/or the case was still under criminal investigation or being prosecuted.

Over the last four years, the 11 CDR teams have reviewed a total of 544 eligible cases and 154 of those cases were not reviewed for a review completed average of 72%. As reflected by the chart below, the total number of child deaths in Arkansas have steadily declined between the years of 2016-2019.



General statistics for 2019 deaths:

- Accidental deaths decreased while undetermined death increased: The increase in undetermined deaths is due to lack of thorough SUID investigations with doll re-enactments.
- Between 2016-2019, there is a decrease trend in deaths among children <1 years of age and an increase trend in deaths among children 15-17 years old.

Death statistics by manner of death for 2019:

### 1) Accidental Deaths (N=55):

- **Motor Vehicle Accidents (N=30):**
  - Increased by 33% compared to 2018.
  - 15% increase in motor vehicle deaths where a teen was a passenger.
  - 28% decrease in motor vehicle deaths where a teen was the driver.
- **Asphyxia (N=6)**
  - Suffocation was the leading event in infant deaths.
  - 83% asphyxia related deaths were sleep related.
  - 17% increase in asphyxia deaths among children <1 year of age.
  - 30% increase in asphyxia deaths among females.
  - The rate of African American children who died of asphyxia was significantly lower than among Caucasian children.



- **Drowning (N=7):**

- 18% increase of drowning deaths among 1-4 year olds compared to 2018.
- 57% of drownings were in a pool.

**2) Undetermined Deaths (N=51):**

- Undetermined deaths predominately occurred in adult beds.
- 85% of undetermined deaths were sleep related and among children <1 year of age.
- Caucasian children had a higher rate of undetermined deaths than African American children and children of all other races.

**3) Suicide (N=12):**

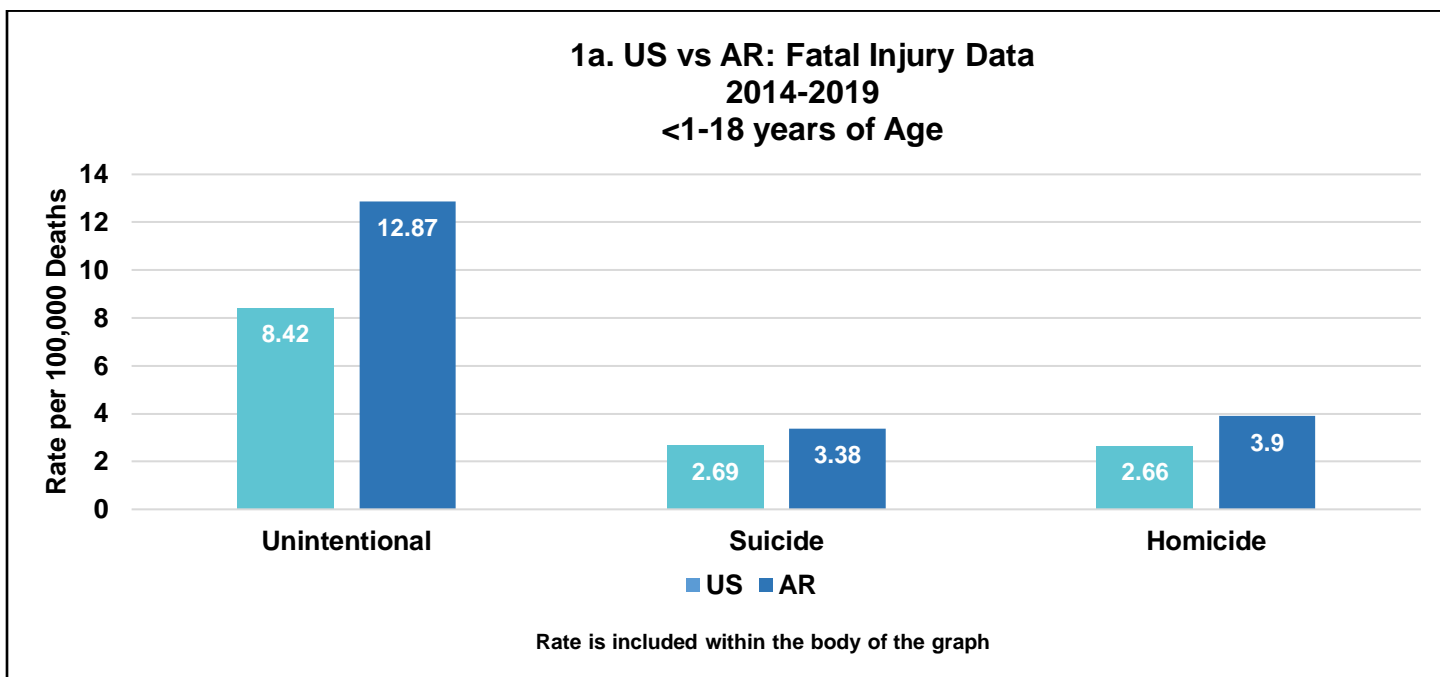
- 83% of suicide were firearm related
- Death of a friend and/or relative were the leading contributing factors in suicide deaths.
- Suicide deaths increased by 17% among children 15-17 years old.
- Suicide deaths by firearms increased by 39% among children 15-17 years old.

**\*Weapon (firearm) Deaths:**

- 9% increase in weapon deaths compared to 2018.
- Weapon deaths increased by 27% among children 10-14 years old.
- Weapon deaths among females increased by 7% compared to 2018.



## 1. US vs AR: Fatal Injury Data



Between 2014-2019 for children under 18 years of age Arkansas ranks (WISQARS, 2021):

11<sup>th</sup> in the nation for Unintentional (accidental injuries).

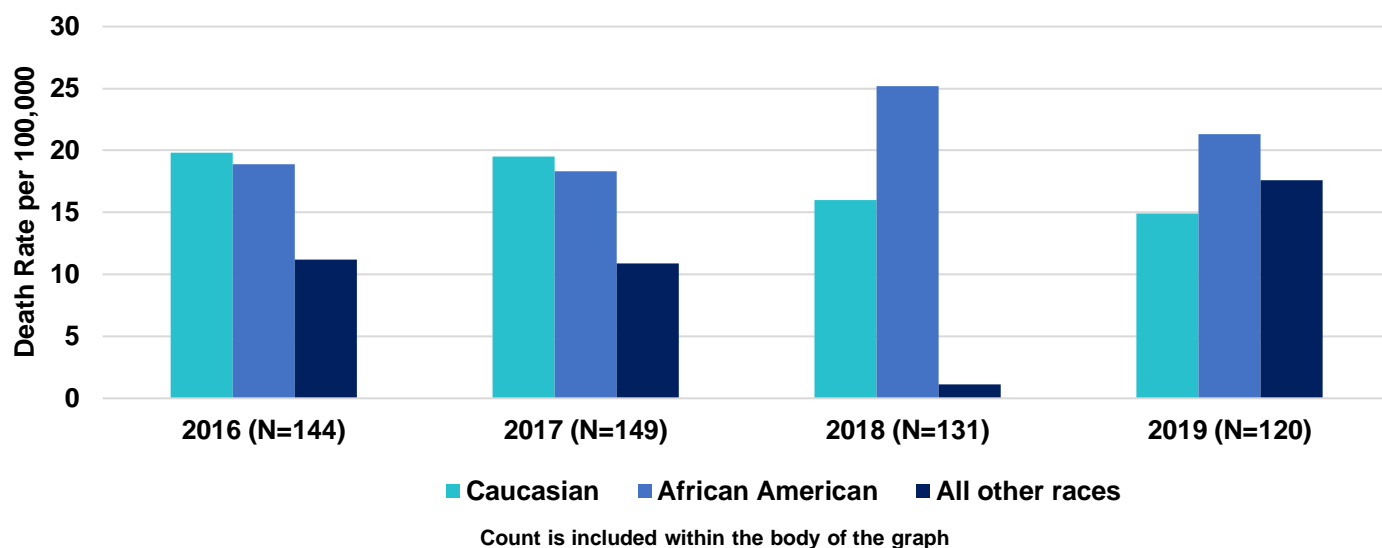
11<sup>th</sup> in the nation for homicide deaths.

20<sup>th</sup> in the nation for suicide deaths.

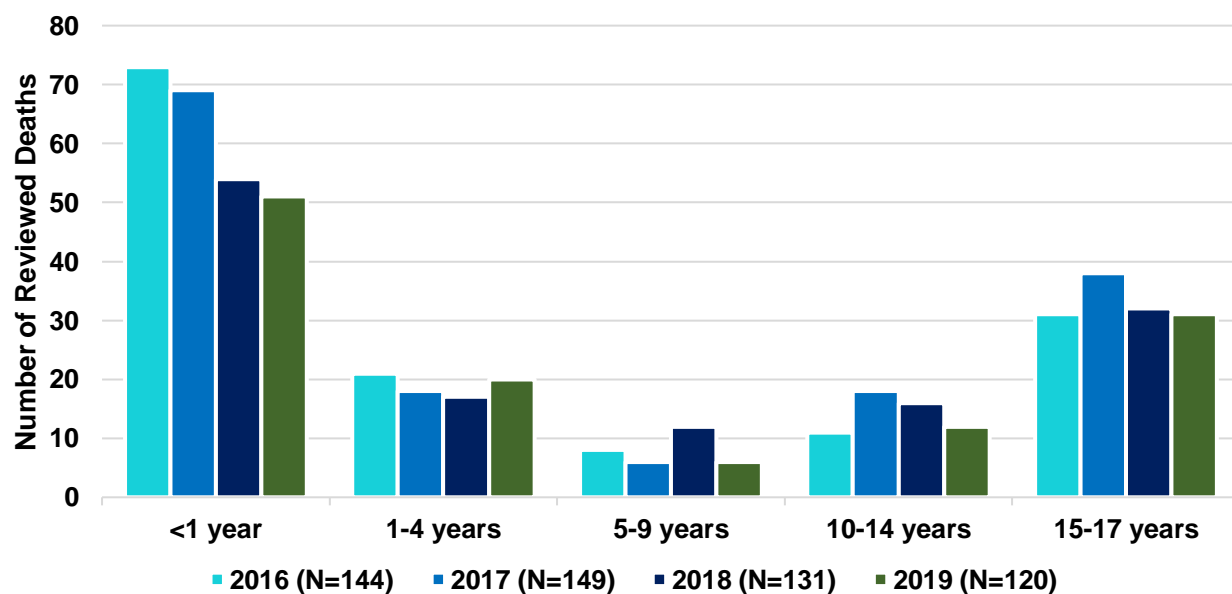


## 2. Reviewed Infant and Child Deaths: Demographic Characteristics

2a. Reviewed Infant and Child Deaths: Racial Distribution, 2016-2019

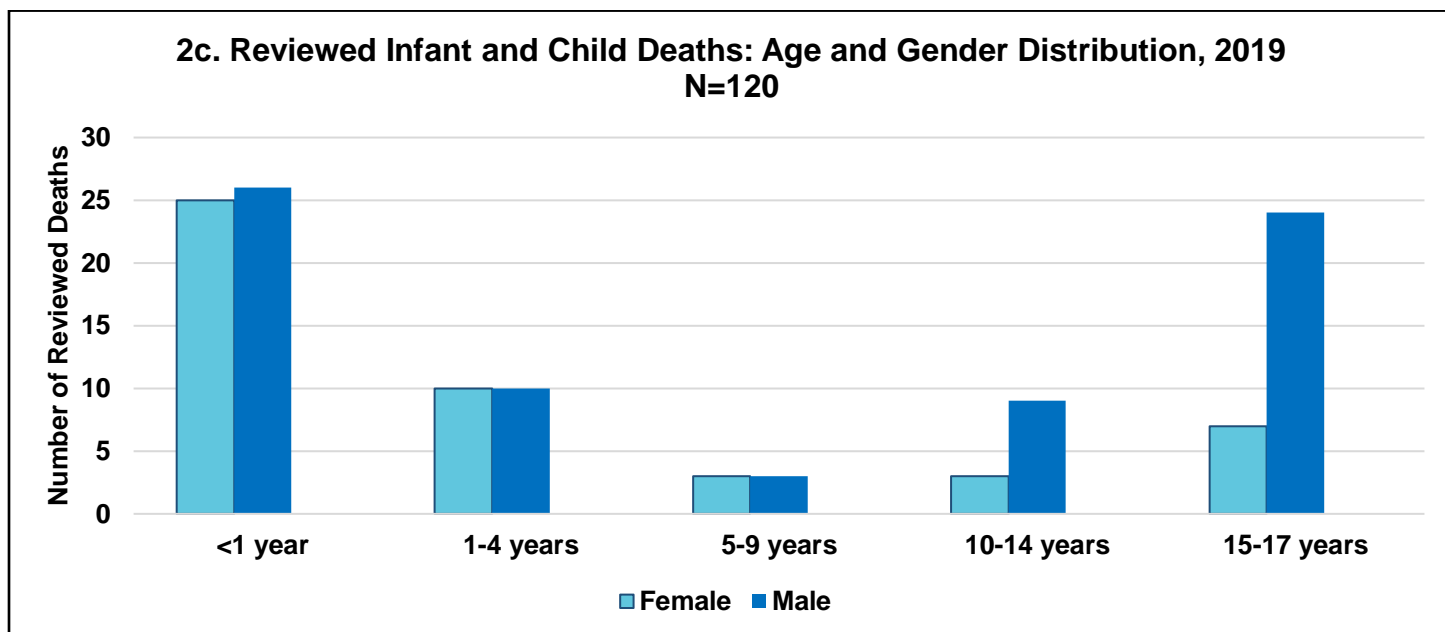


2b. Reviewed Infant and Child Deaths: Age at Time of Death, 2016-2019





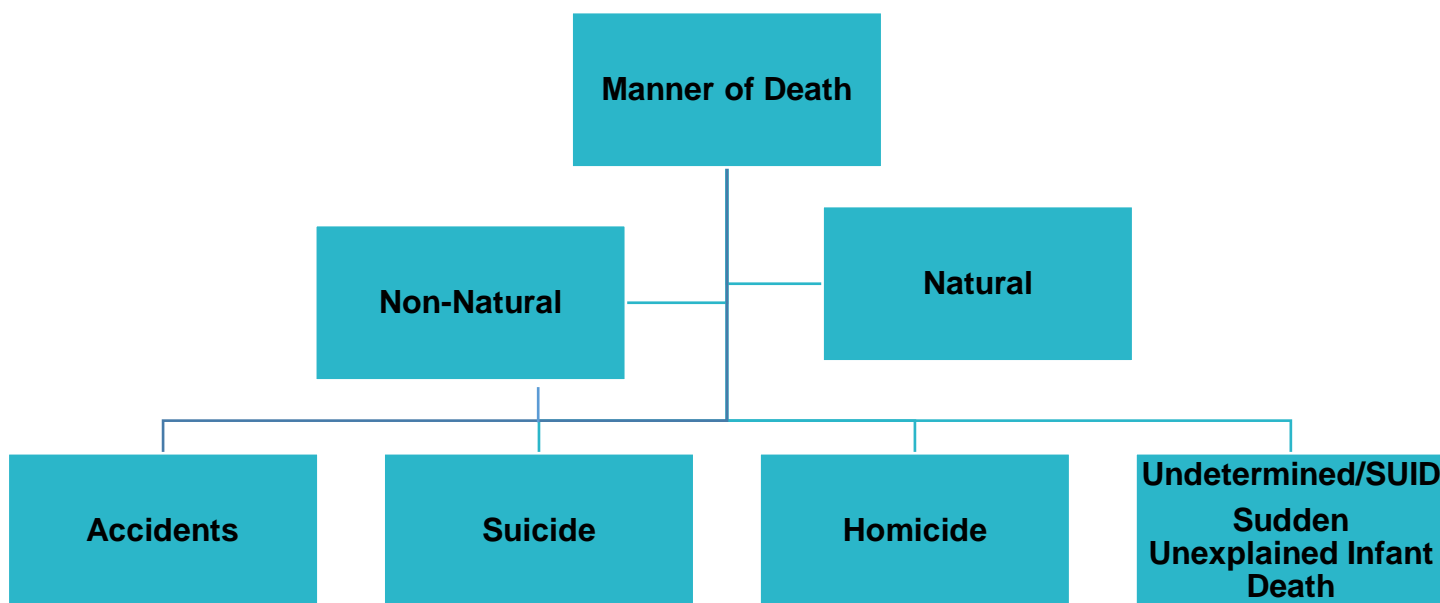
## 2. Reviewed Infant and Child Deaths: Demographic Characteristics



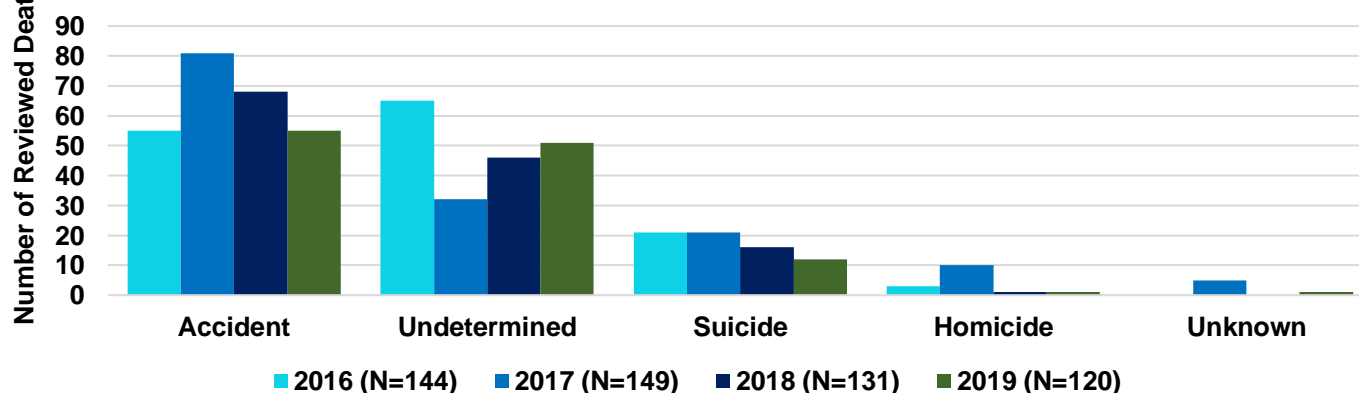


### 3. Reviewed Infant and Child Deaths: Manner of Death

**Manner of Death** describes how the infant or child died and explains the cause of death. Deaths are categorized as natural or non-natural based on the manner of death. Natural deaths result from a disease process and non-natural deaths are generally injury related. Non-natural deaths are further classified into the following groups: accident, homicide, suicide, and undetermined.



3a. Manner of Death:  
Percentage of Deaths among Reviewed Cases  
2016-2019

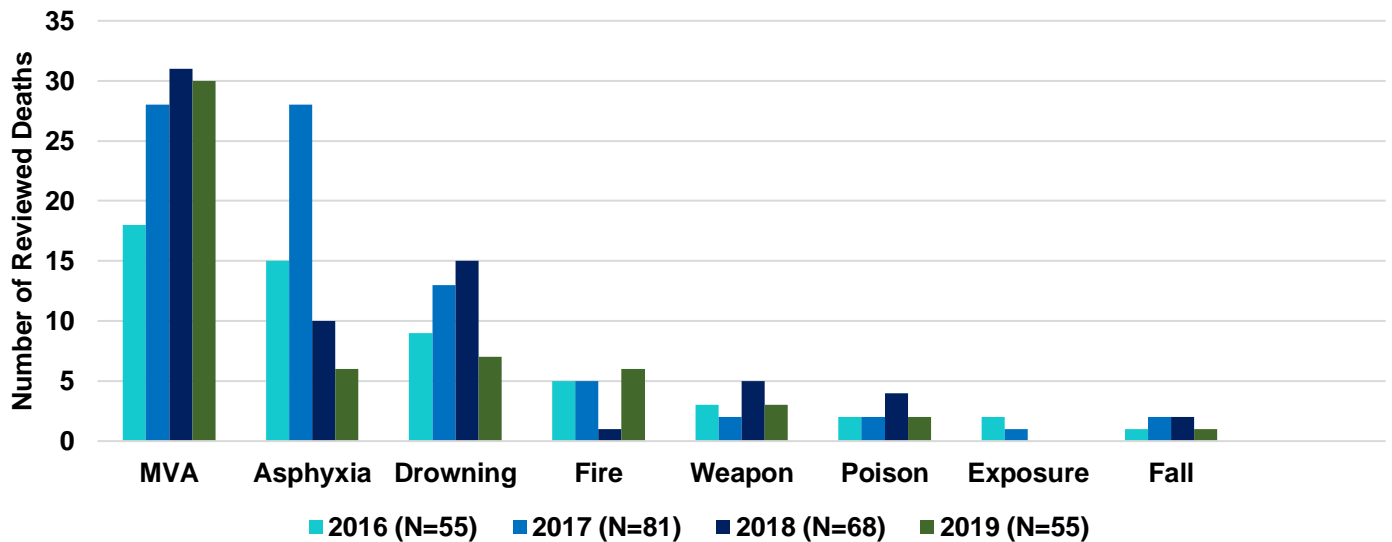




#### 4. Reviewed Infant and Child Accidental Deaths

**Cause of Death** is the reason a child died. A few examples of accidental death include motor vehicle accident, drowning, poisoning, or fire related. The cause of death may be further classified as underlying (injury that initiated the events resulting in death) or immediate (final condition resulting in death).

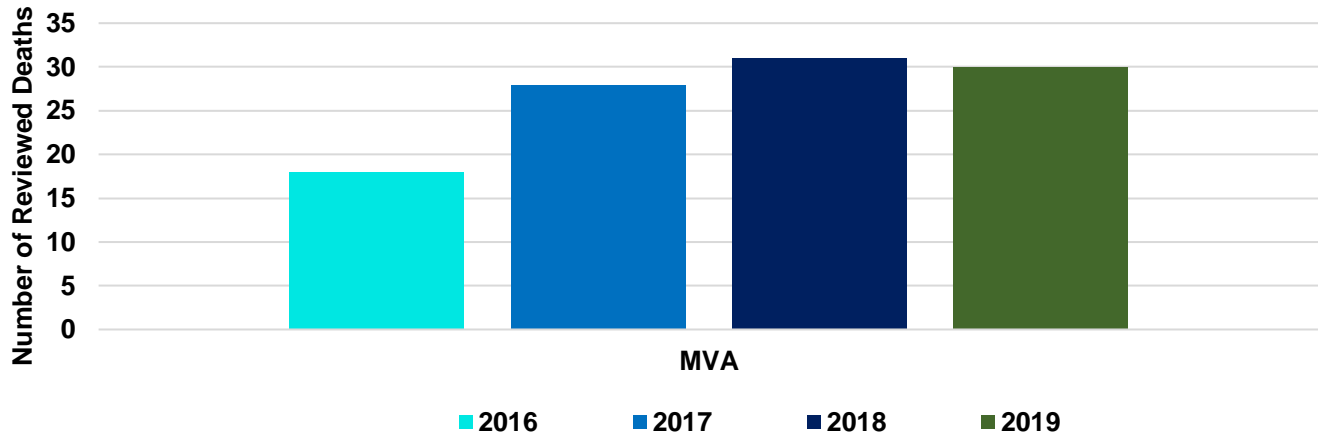
4a. Cause of Death: Percentage of Deaths among Reviewed Cases, 2016-2019



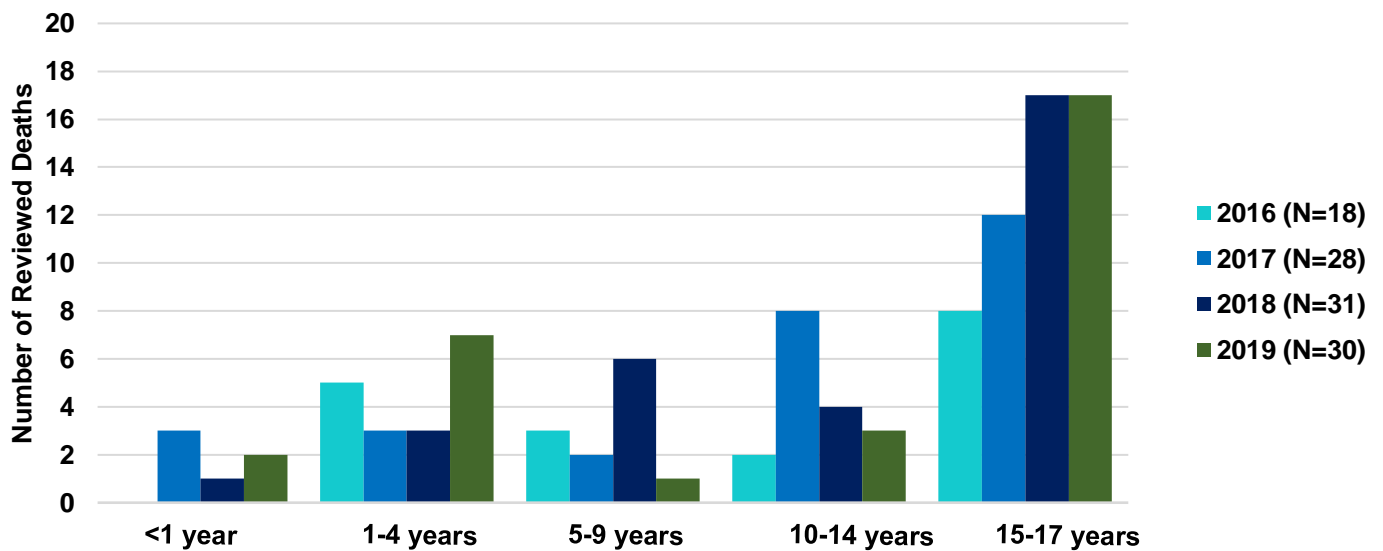


## 4b. Motor Vehicle Deaths

1. Total Number of Motor Vehicle Accident Deaths  
2016-2019



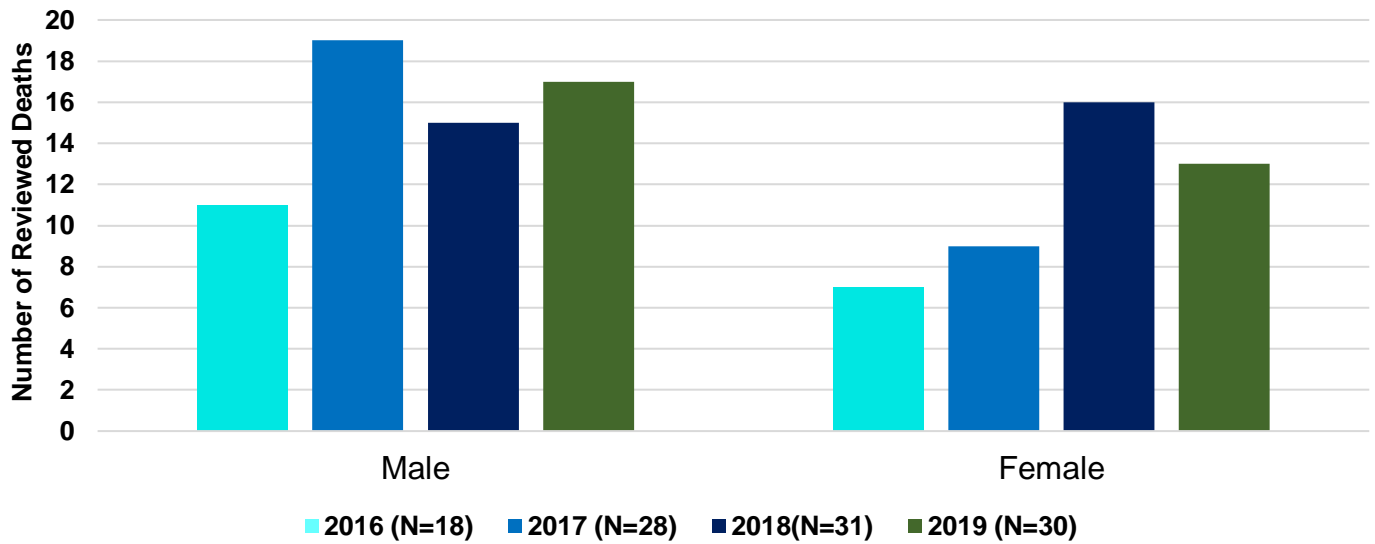
2. Motor Vehicle Accidents: Age Distribution  
2016-2019



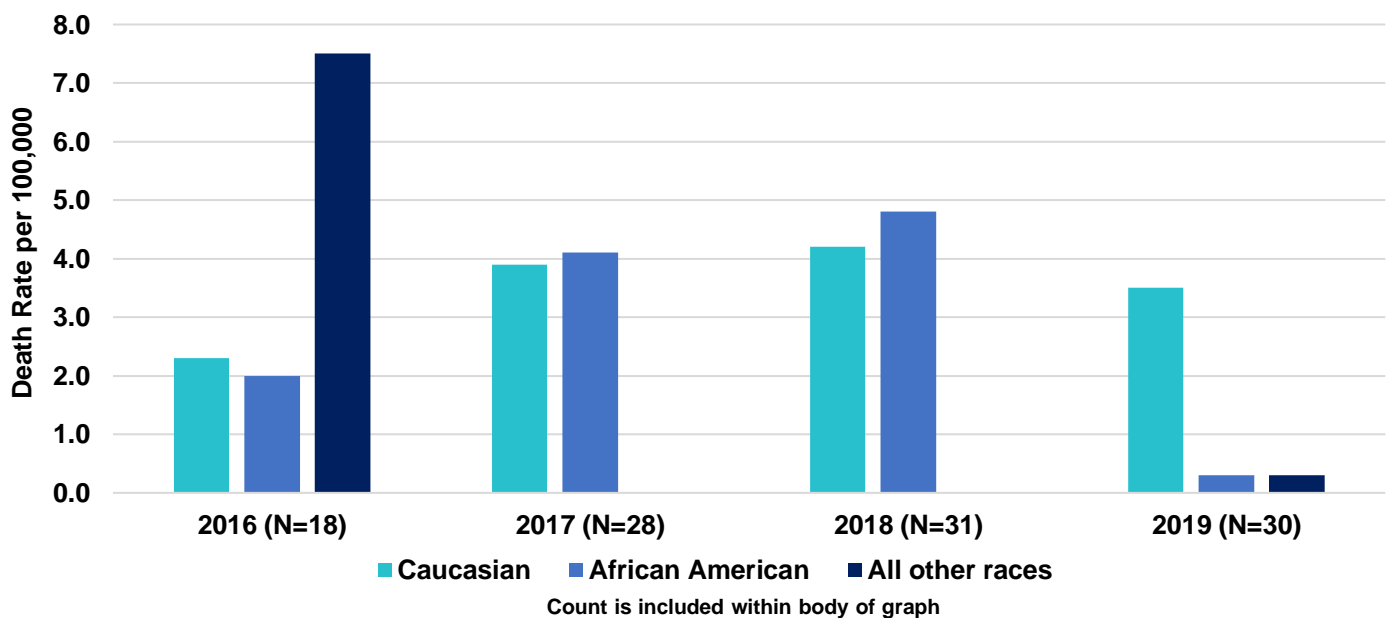


## 4b. Motor Vehicle Deaths

**3. Motor Vehicle Accidents: Gender Distribution  
2016-2019**



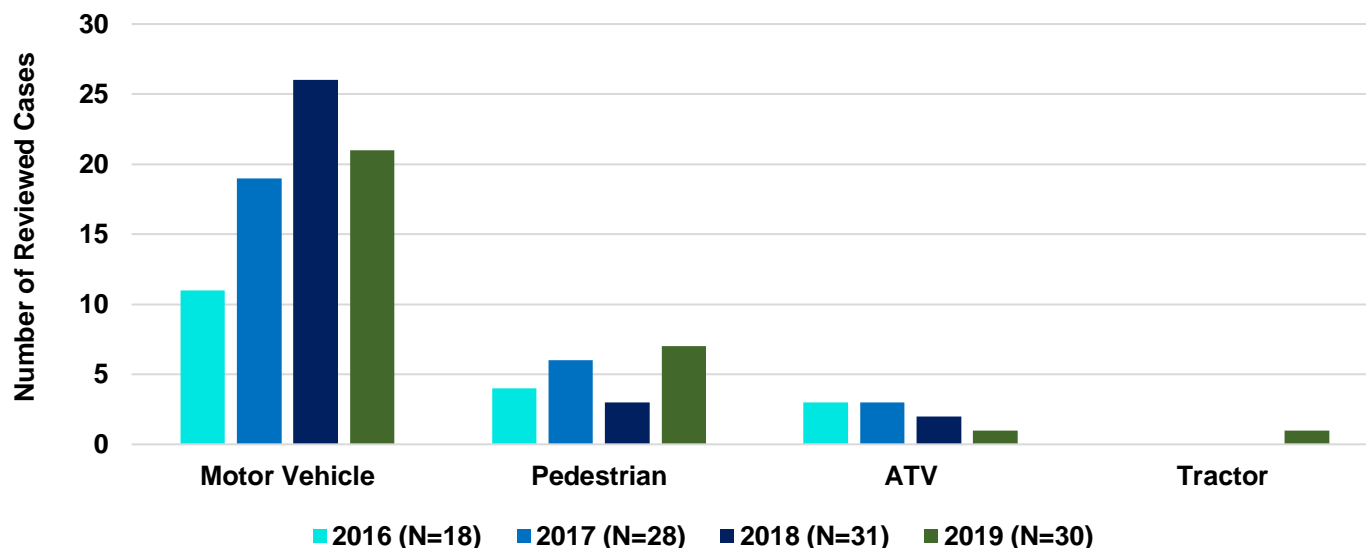
**4. Motor Vehicle Accidents: Racial Distribution  
2016-2019**



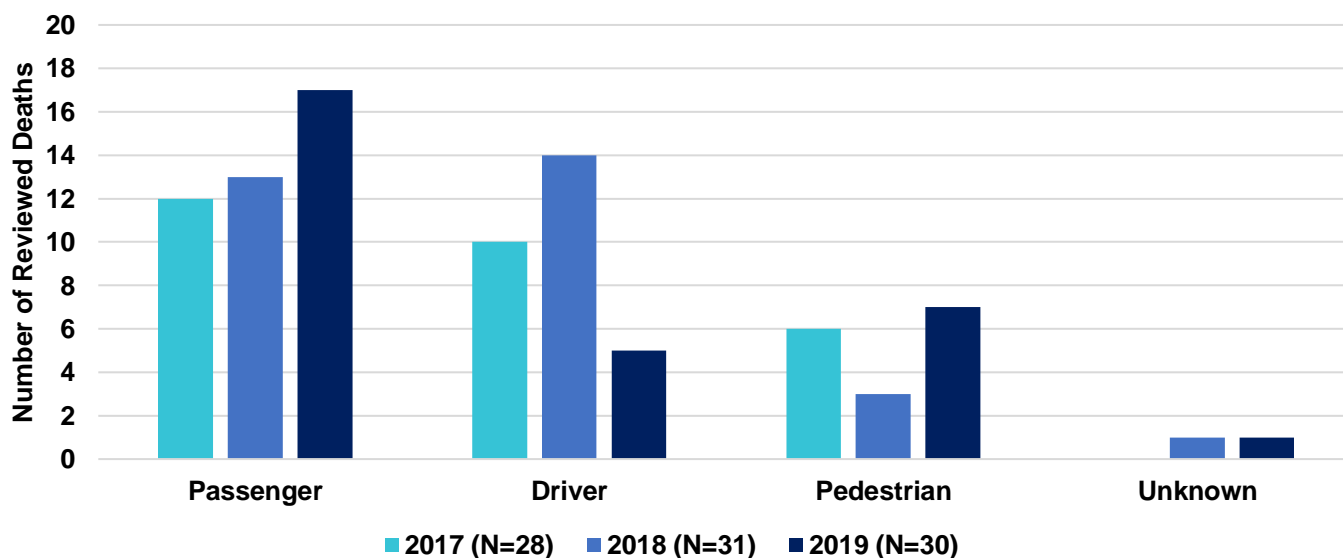


## 4b. Motor Vehicle Deaths

5. Type of Motor Vehicle Accidents  
2016-2019

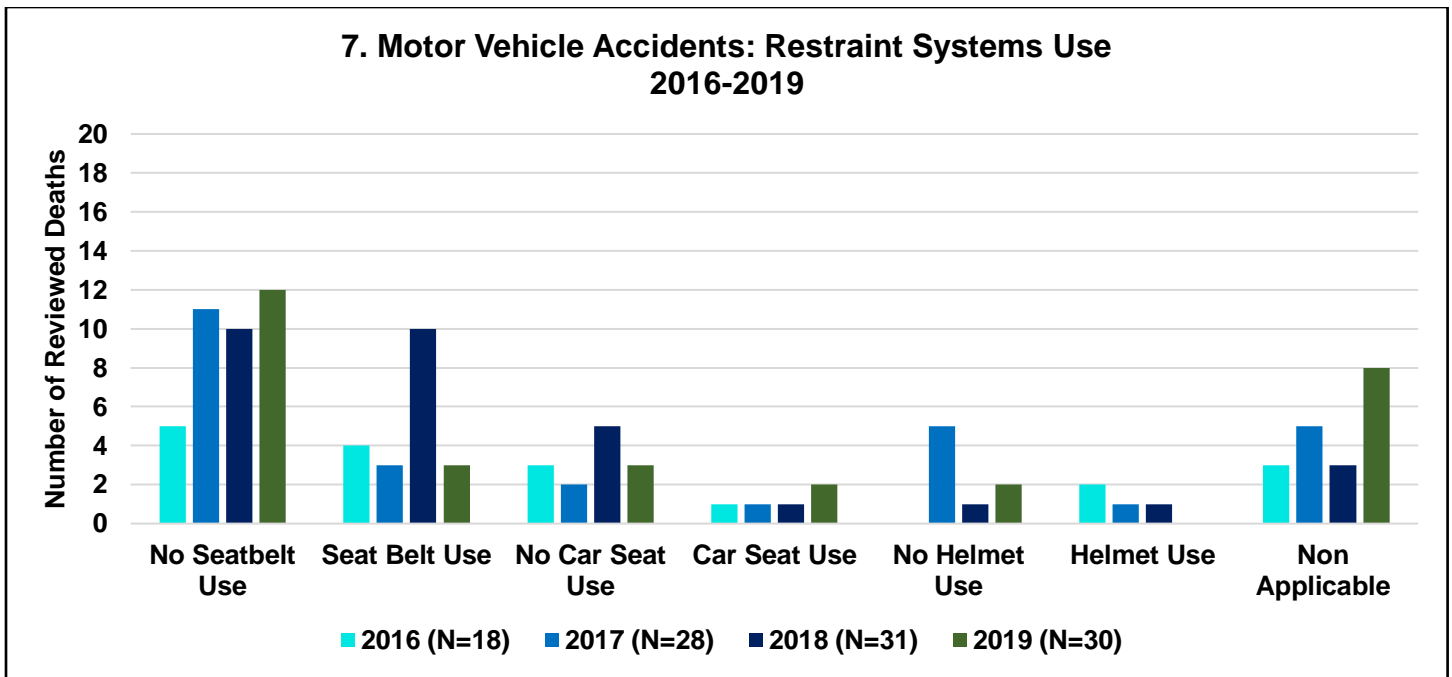


6. Motor Vehicle Accidents: Position of Child at Time of Death,  
2017-2019





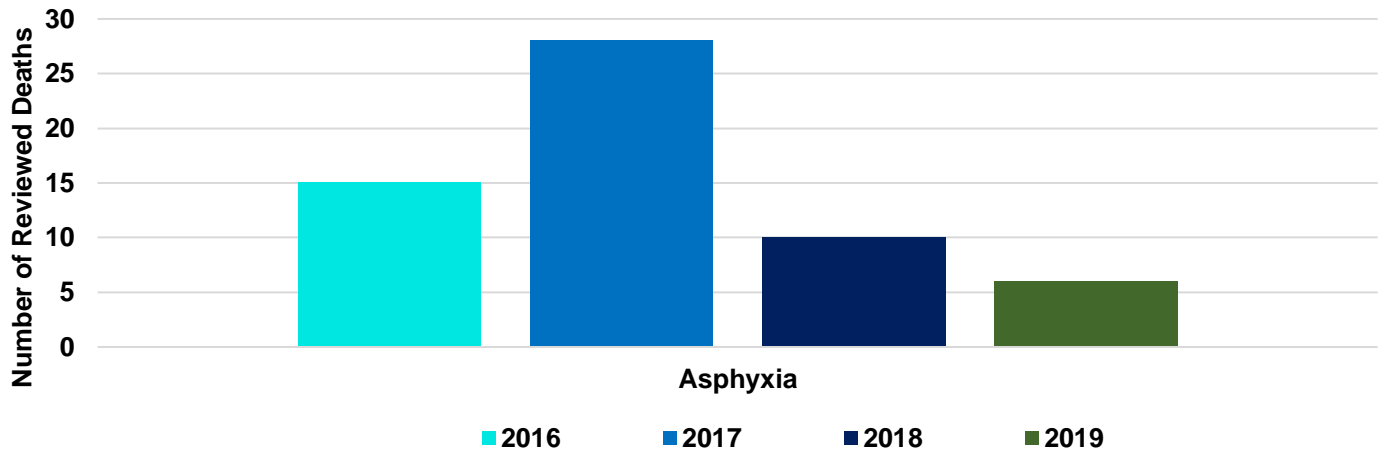
#### 4b. Motor Vehicle Deaths



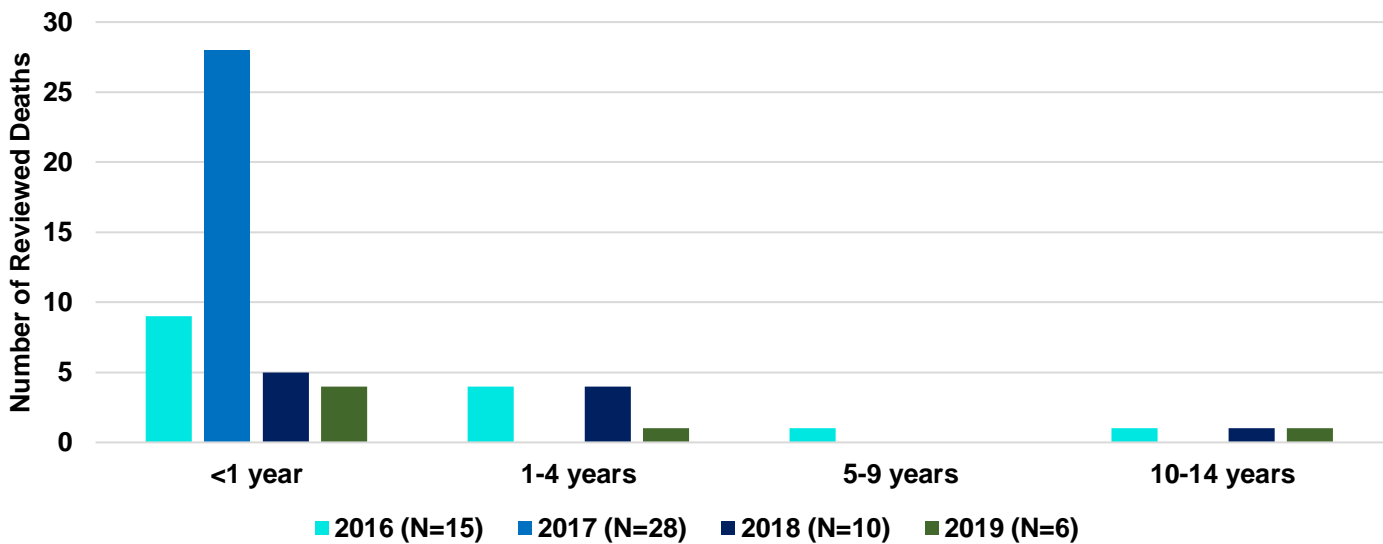


#### 4c. Asphyxia Deaths

1. Total Number of Asphyxia Deaths  
2016-2019



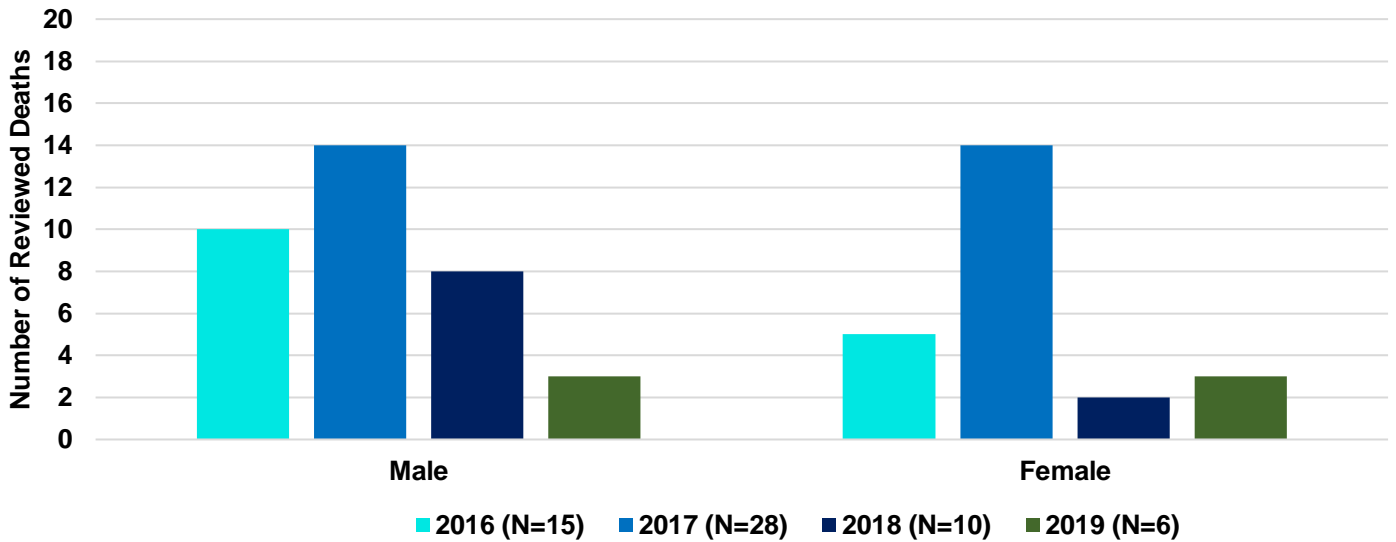
2. Asphyxia Deaths: Age Distribution  
2016-2019



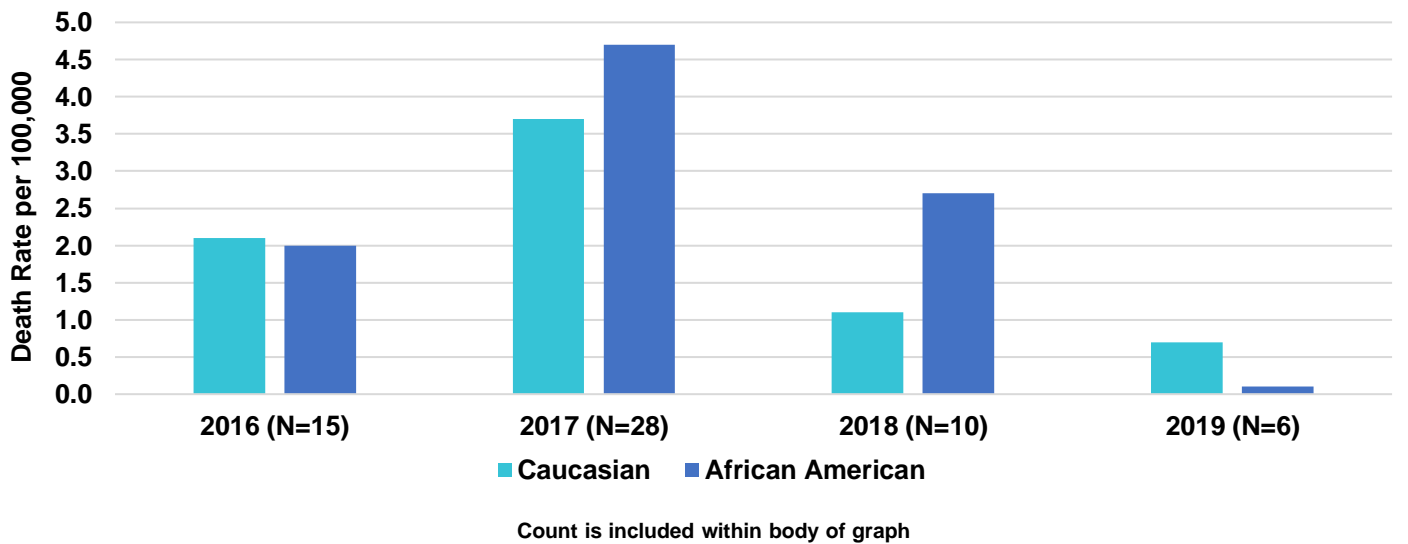


#### 4c. Asphyxia Deaths

3. Asphyxia Deaths: Gender Distribution  
2016-2019



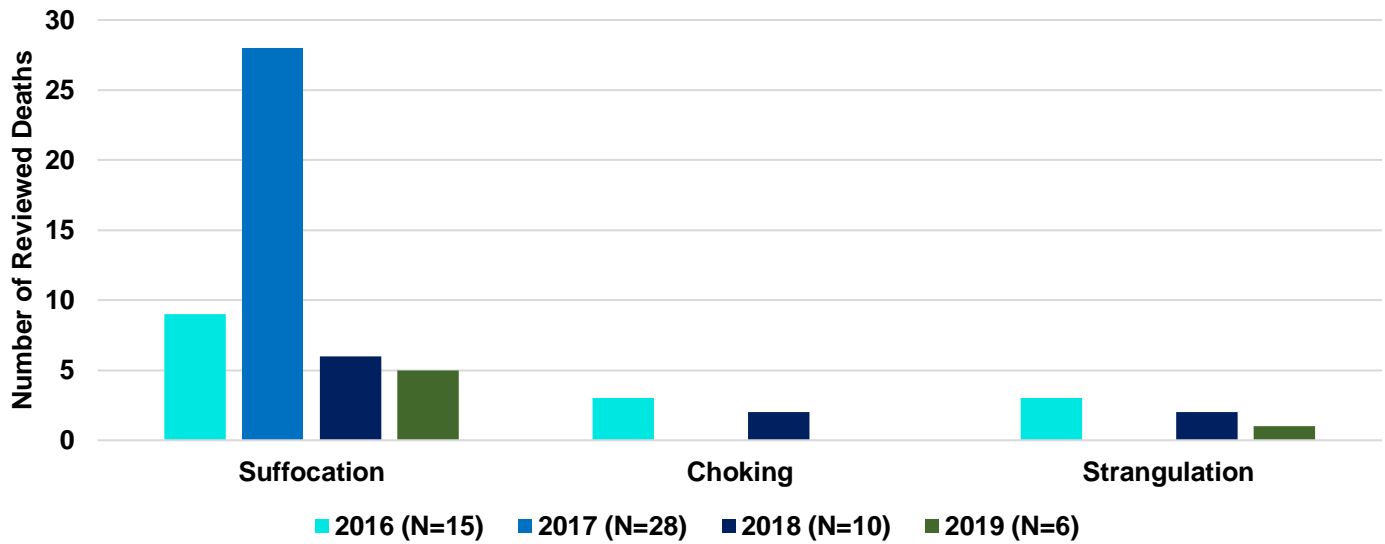
4. Asphyxia Deaths: Racial Distribution  
2016-2019



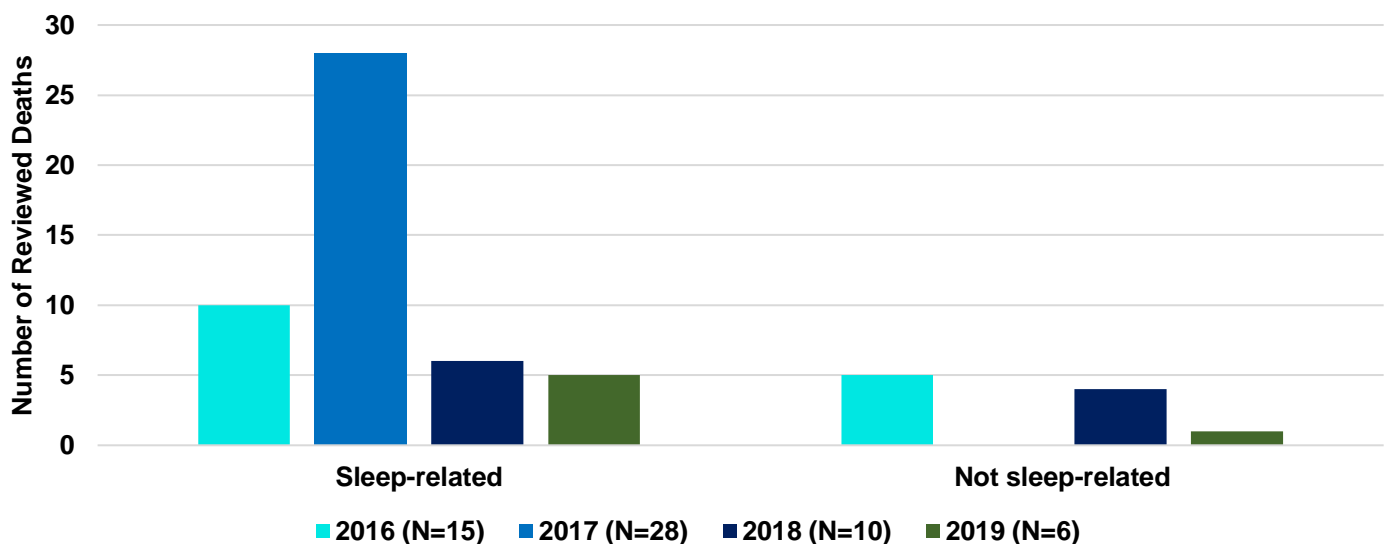


#### 4c. Asphyxia Deaths

5. Asphyxia Deaths: Event  
2016-2019



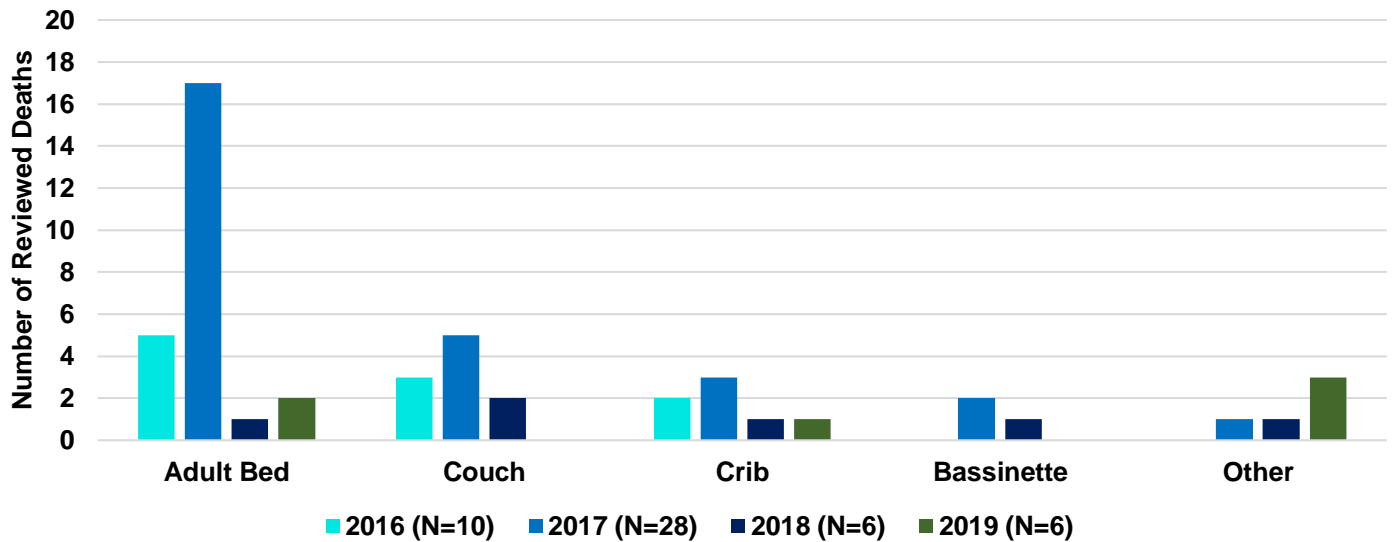
6. Asphyxia Deaths: Cause  
2016-2019



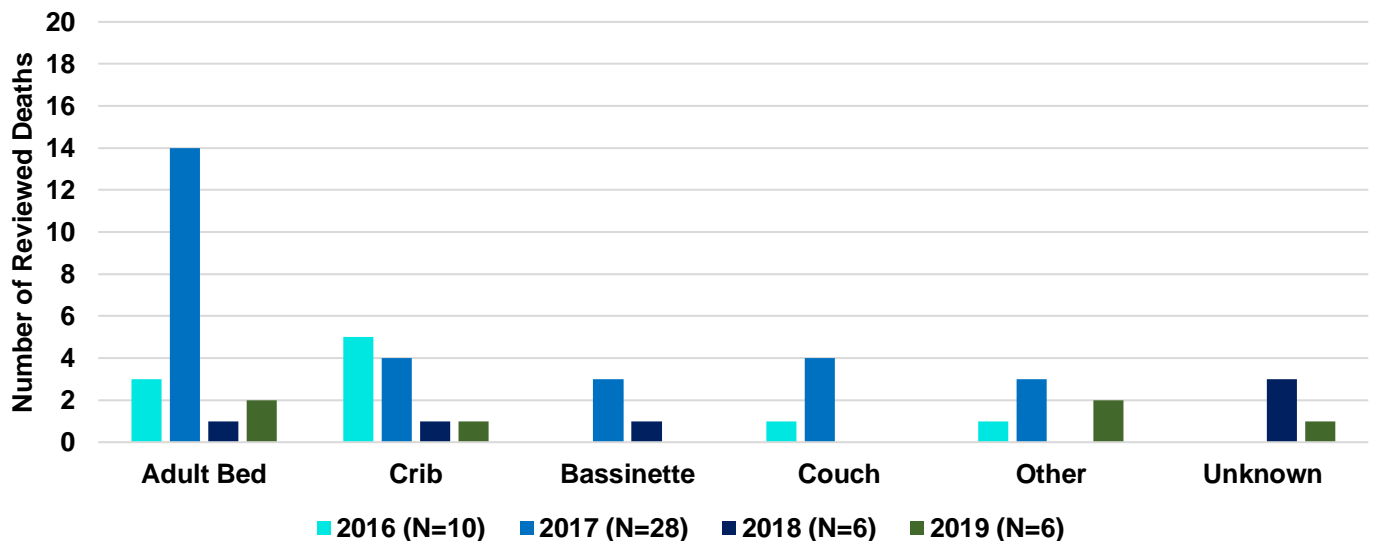


#### 4c. Asphyxia Deaths

7. Asphyxia Deaths: Incident Sleep Location  
2016-2019



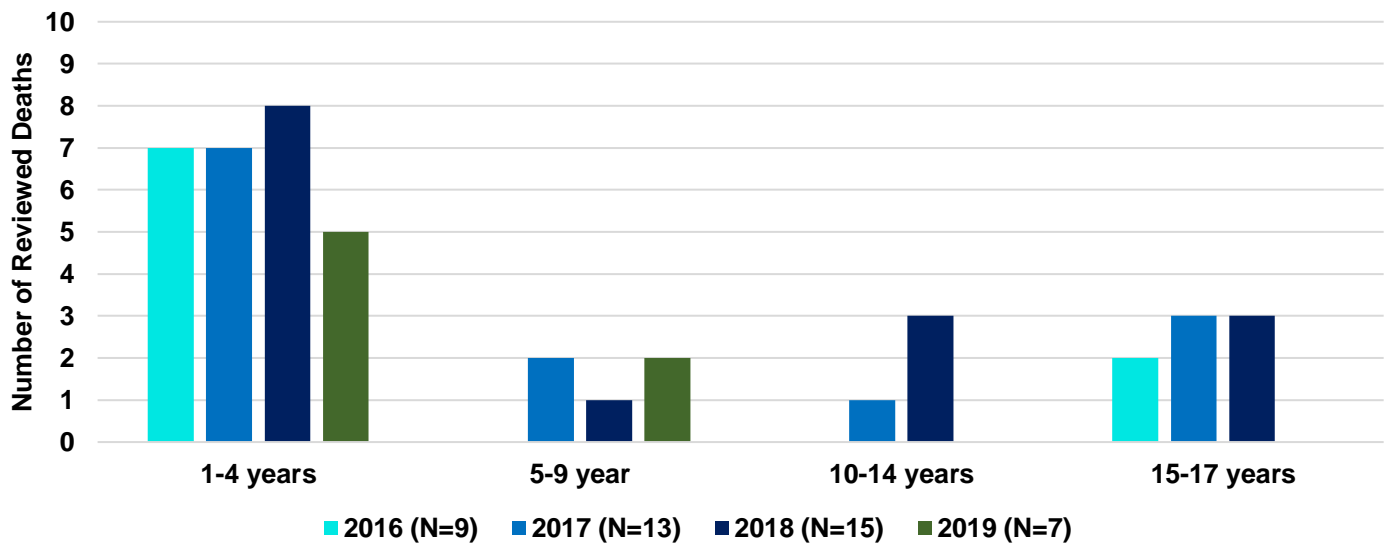
8. Asphyxia Deaths: Usual Sleep Location  
2016-2019



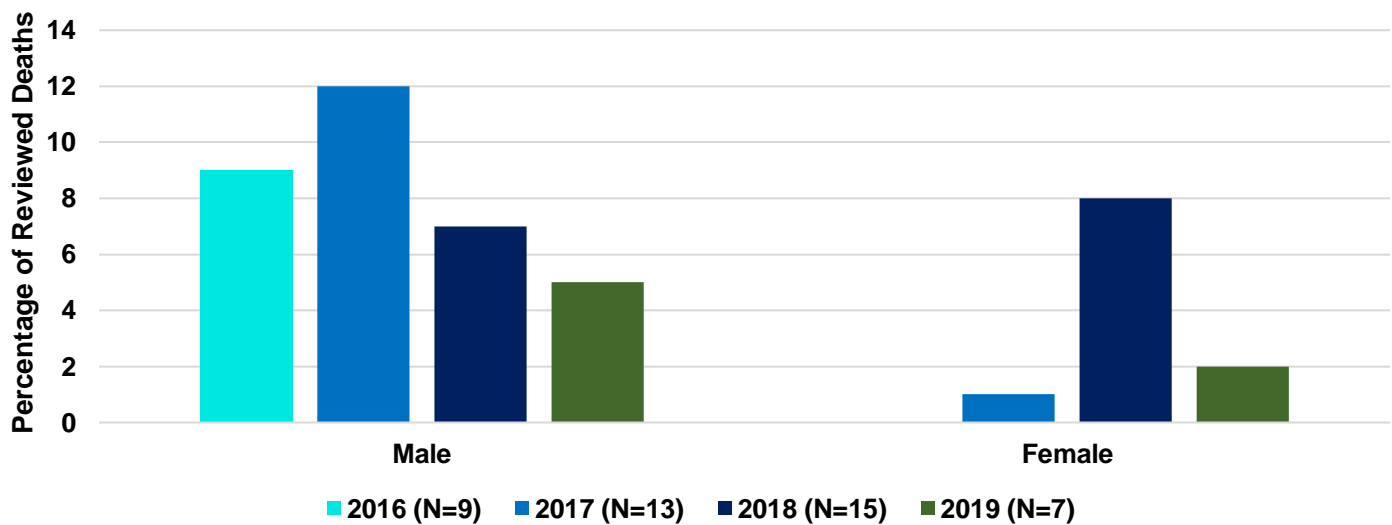


#### 4d. Drowning Deaths

1. Drowning Deaths: Age Distribution  
2016-2019



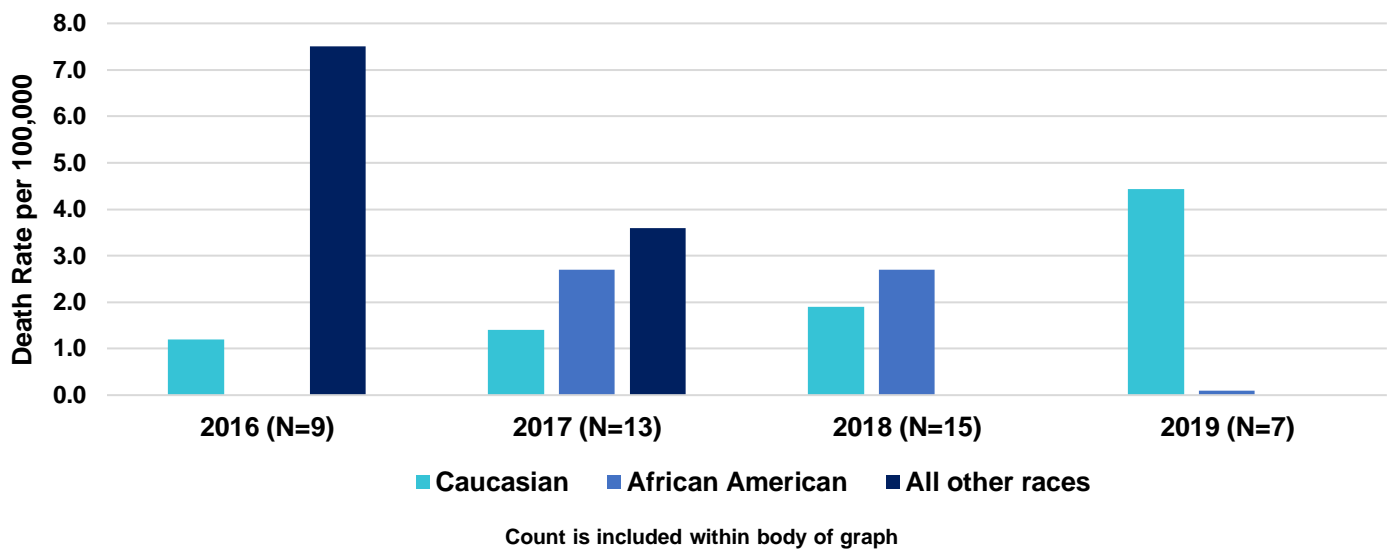
2. Drowning Deaths: Gender Distribution  
2016-2019



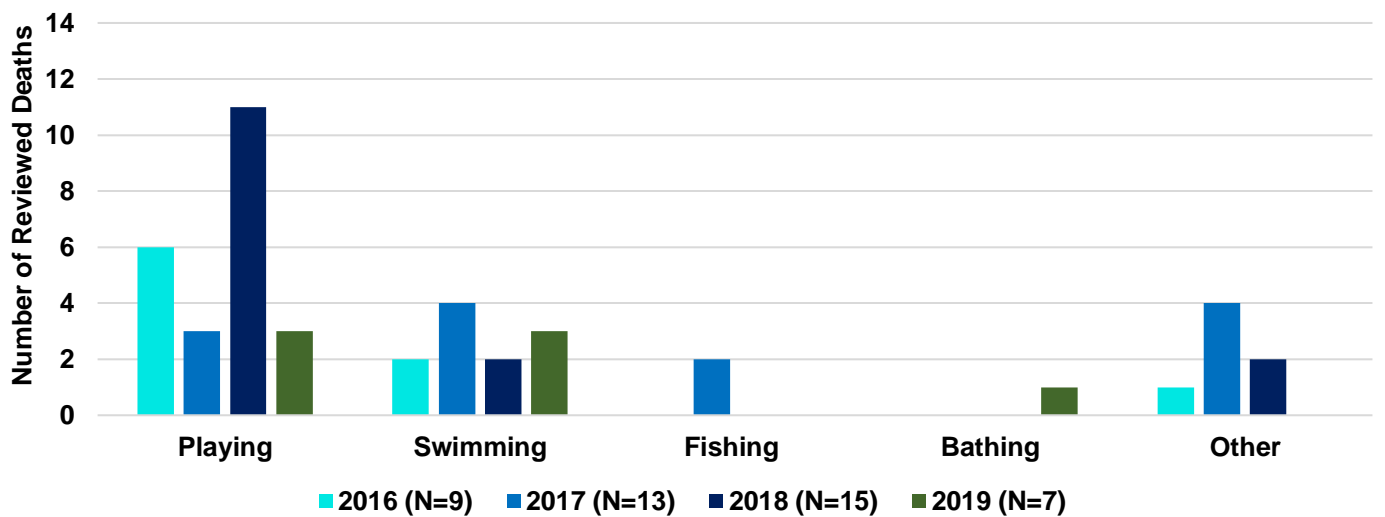


#### 4d. Drowning Deaths

3. Drowning Deaths: Race Distribution  
2016-2019

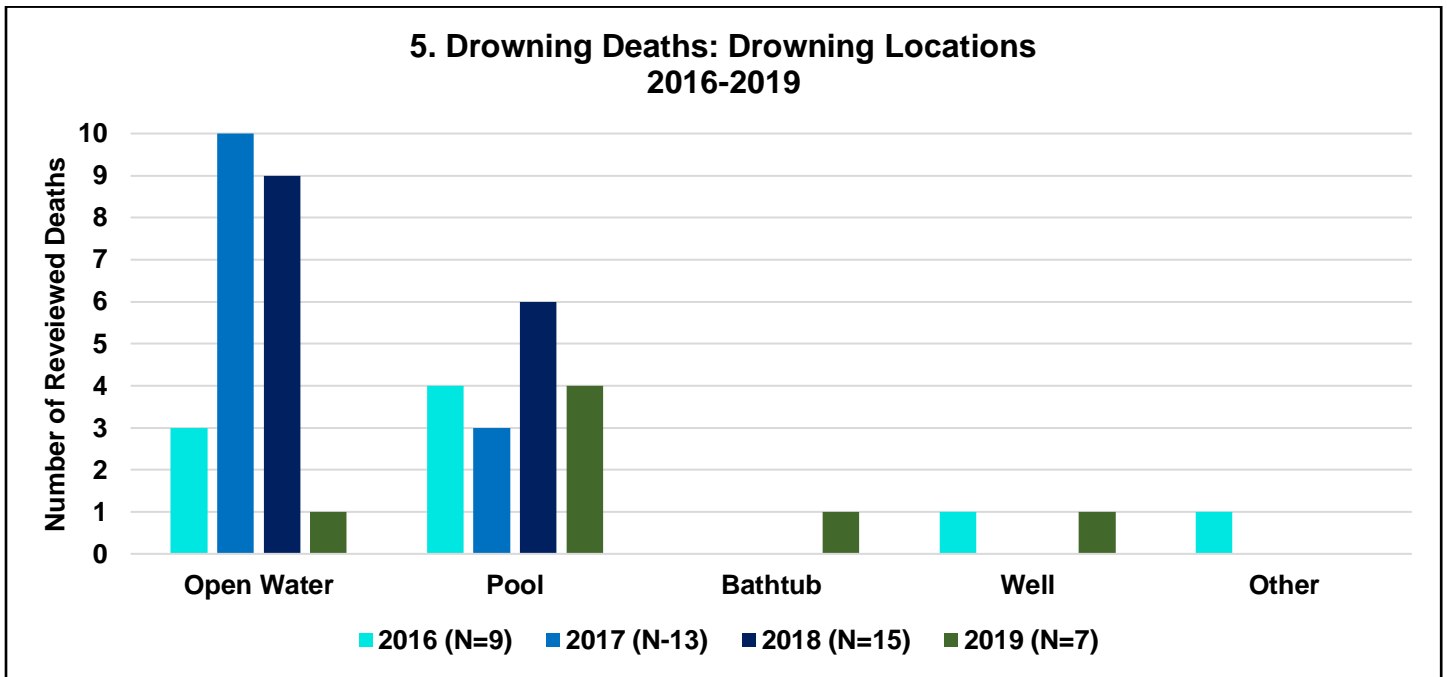


4. Drowning Deaths: Drowning Action  
2016-2019





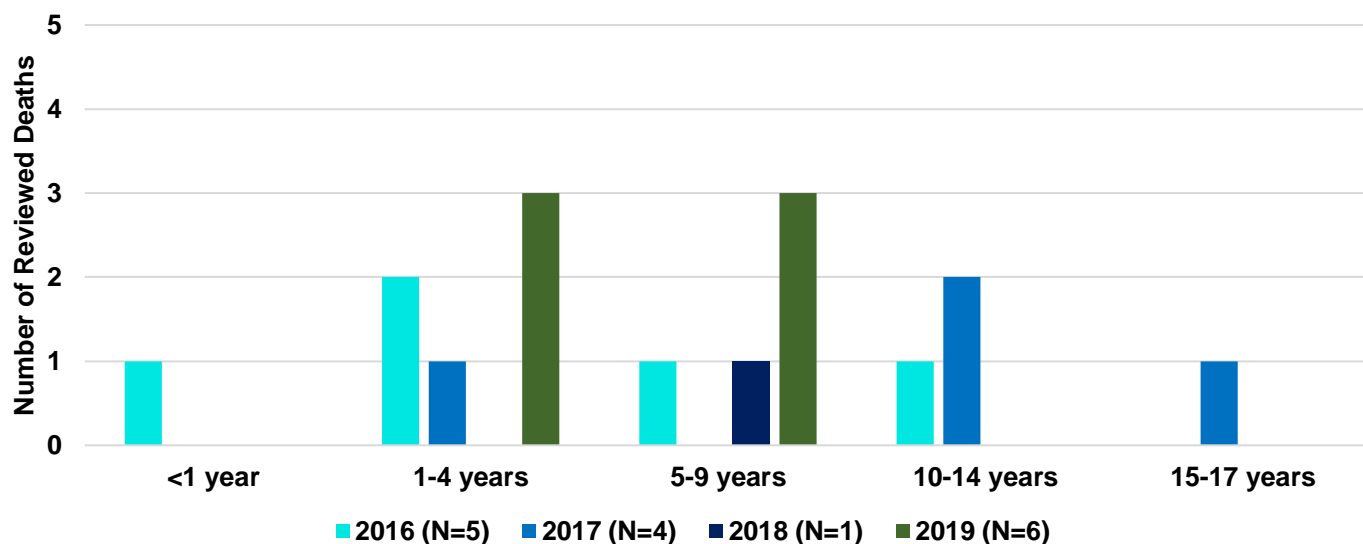
#### 4d. Drowning Deaths



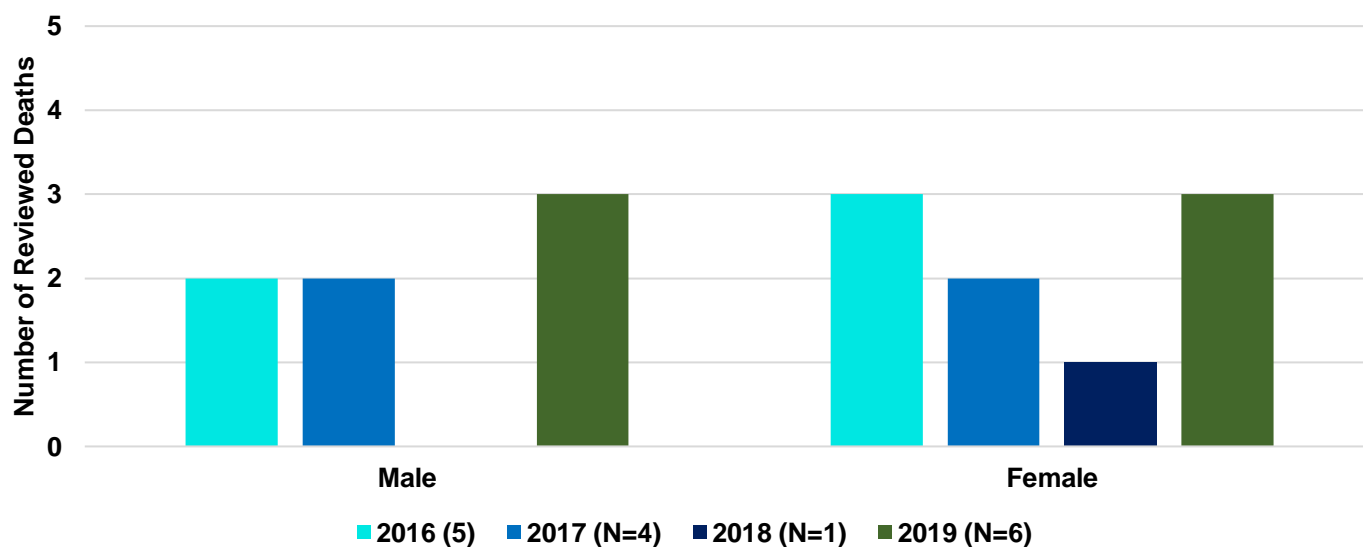


## 4e. Fire Deaths

**1. Fire Deaths: Age Distribution  
2016-2019**

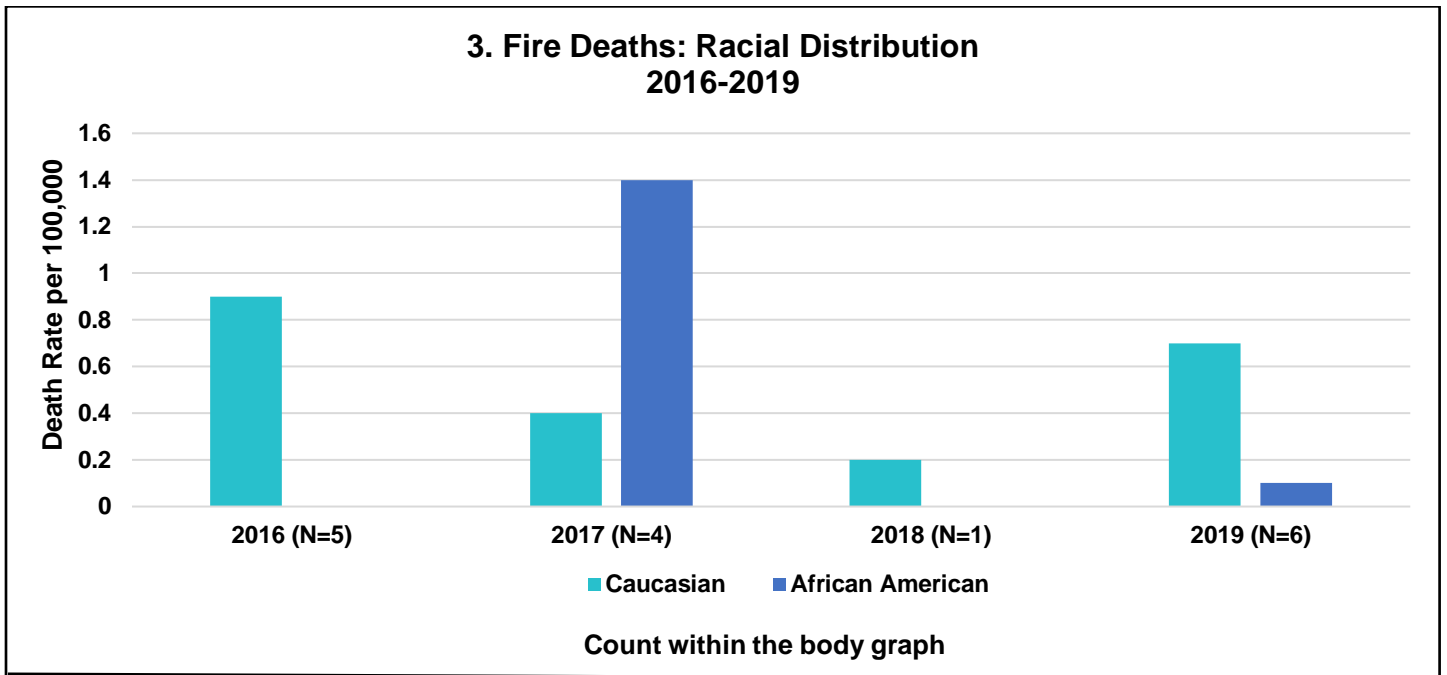


**2. Fire Deaths: Gender Distribution  
2016-2019**





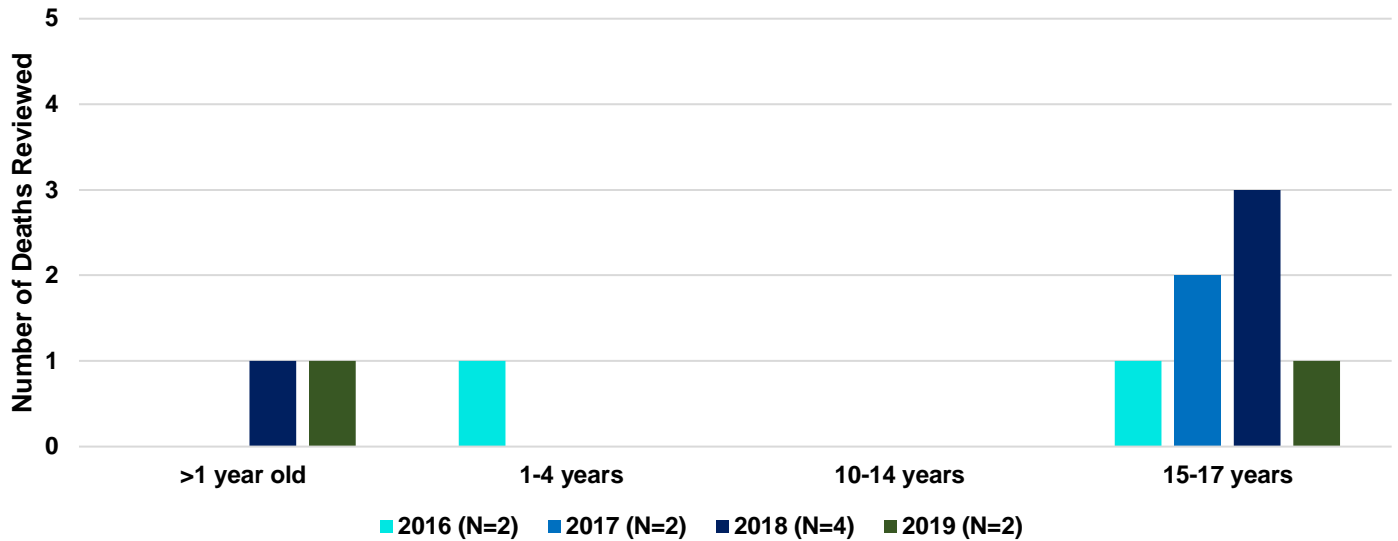
#### 4e. Fire Deaths



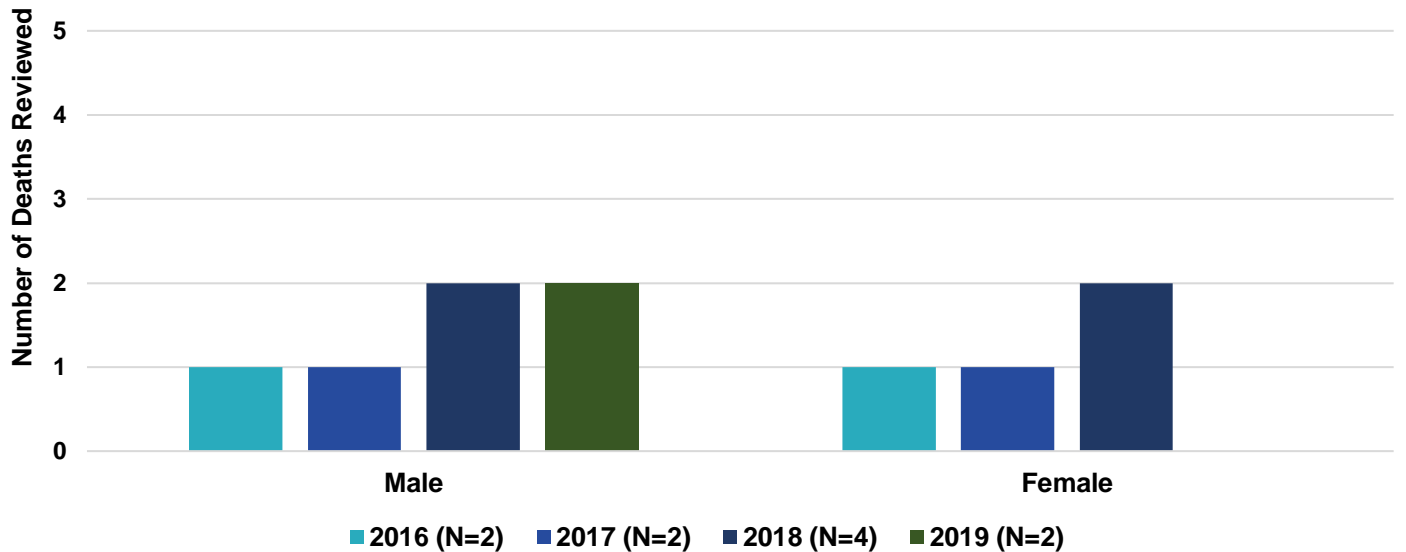


#### 4f. Poison Deaths

1. Poison Deaths: Age Distribution  
2016-2019



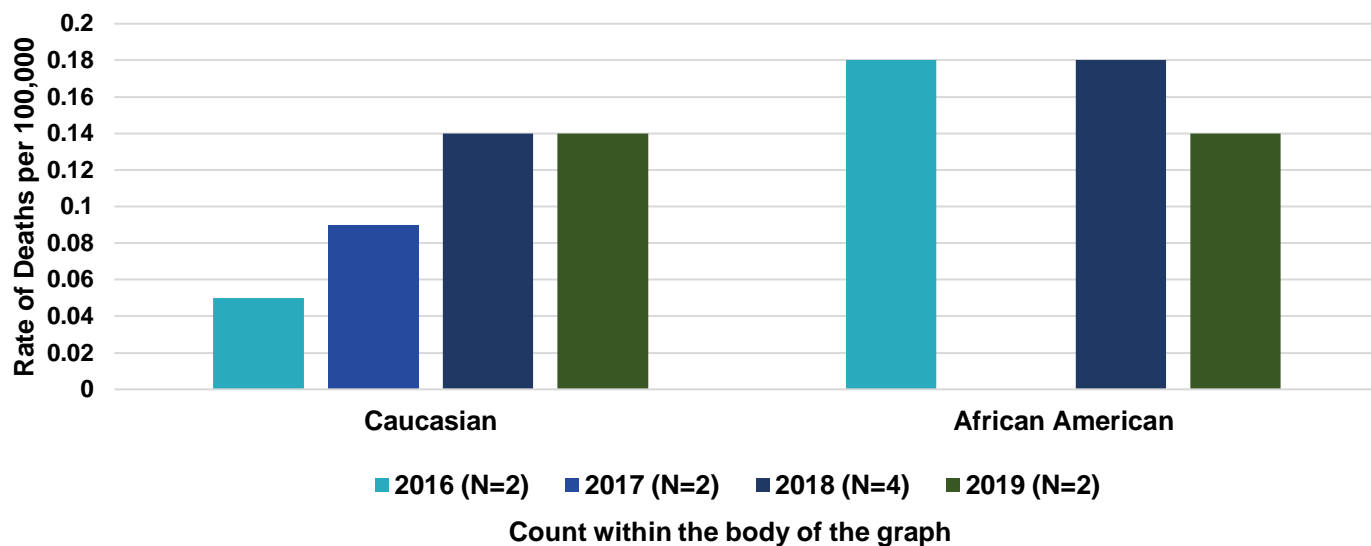
2. Poison Deaths: Gender Distribution  
2016-2019



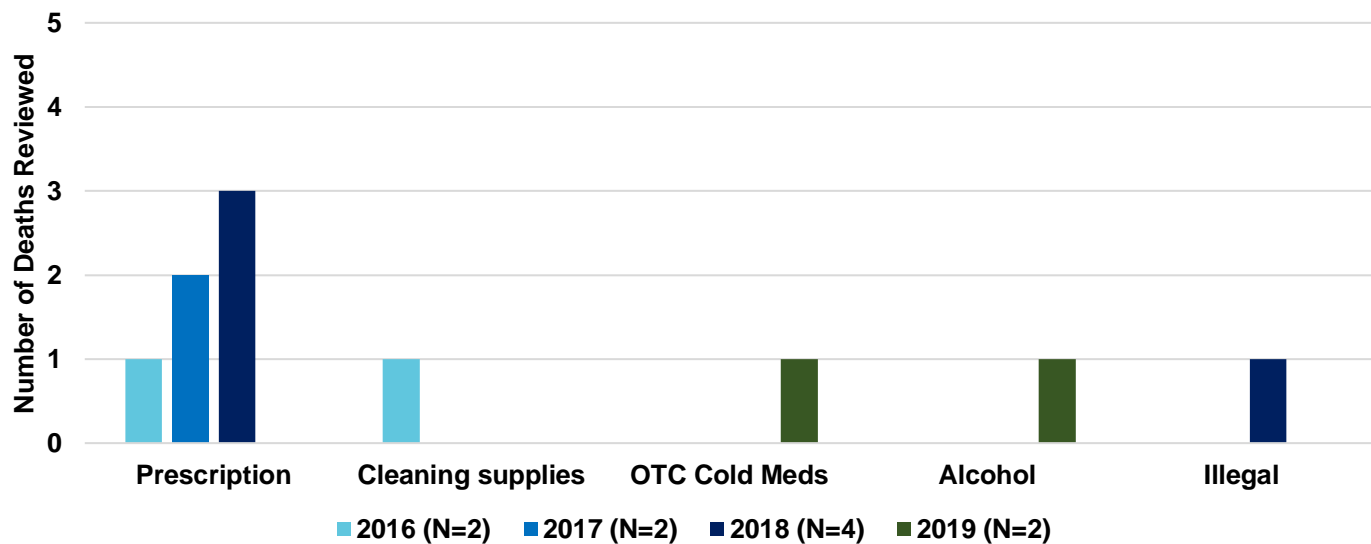


#### 4f. Poison Deaths

**3. Poison Deaths: Racial Distribution  
2016-2019**



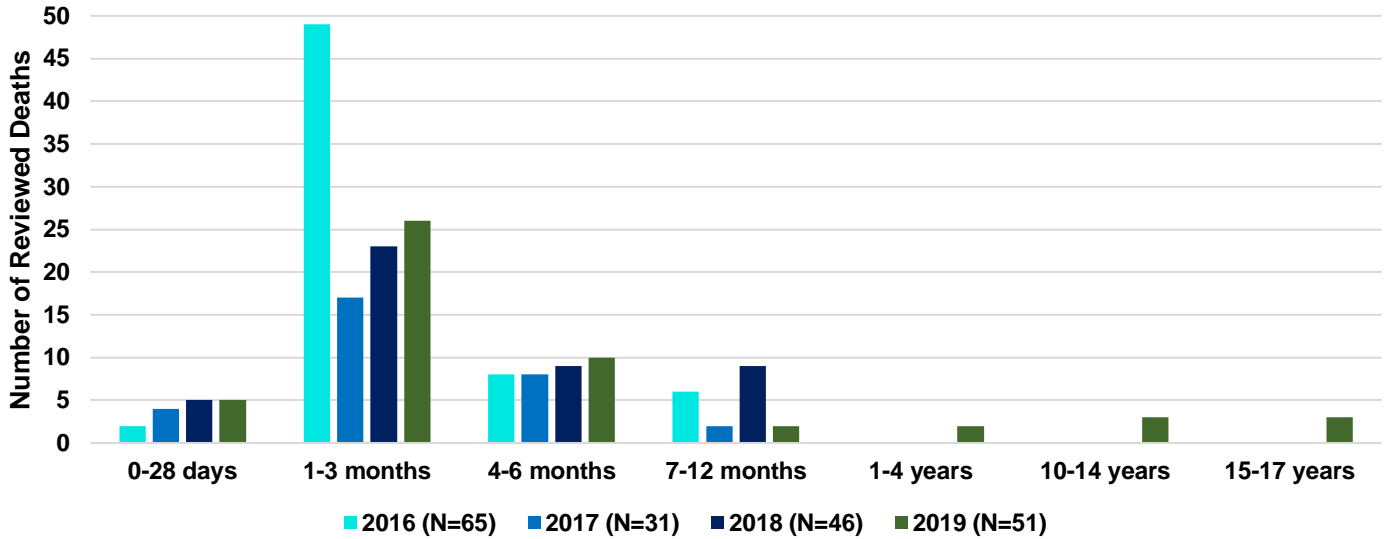
**4. Poison Deaths: Method Used  
2016-2019**



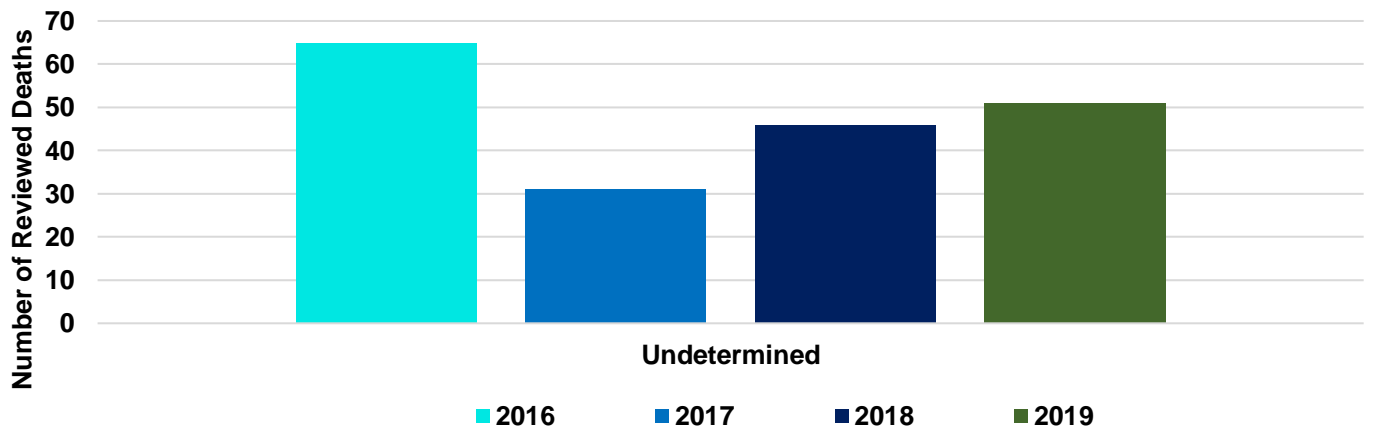


## 5. Undetermined Deaths

**5a. Undetermined Deaths: Age Distribution  
2016-2019**



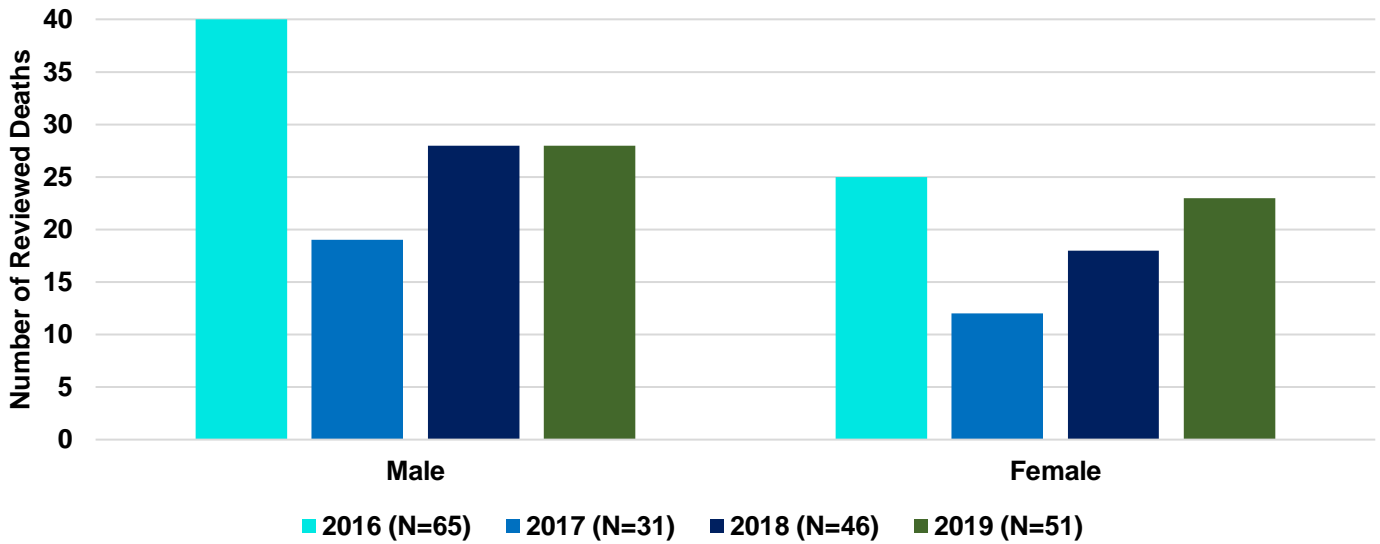
**5b. Total Number of Undetermined Deaths  
2016-2019**



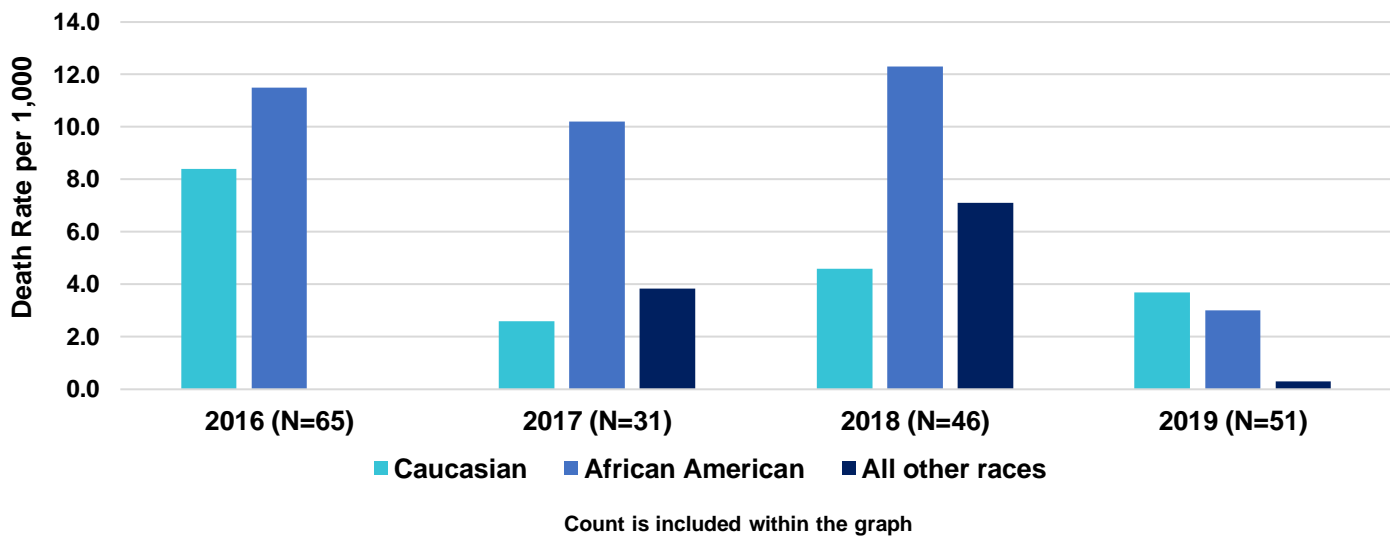


## 5. Undetermined Deaths

**5c. Undetermined Deaths: Gender Distribution  
2016-2019**



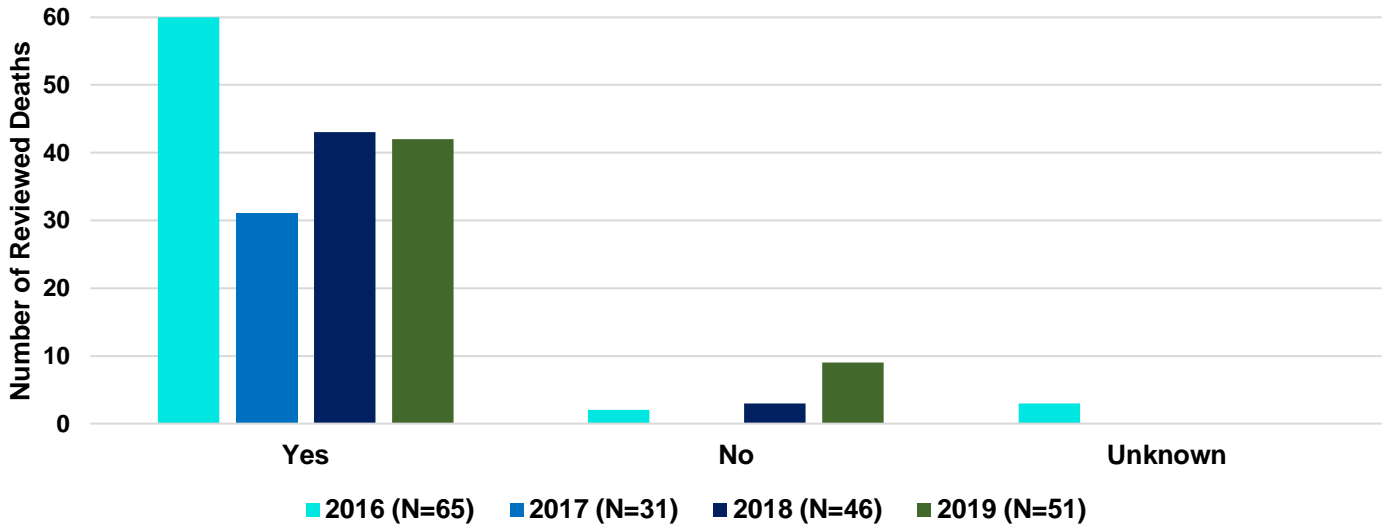
**5d. Undetermined Deaths: Racial Distribution  
2016-2019**



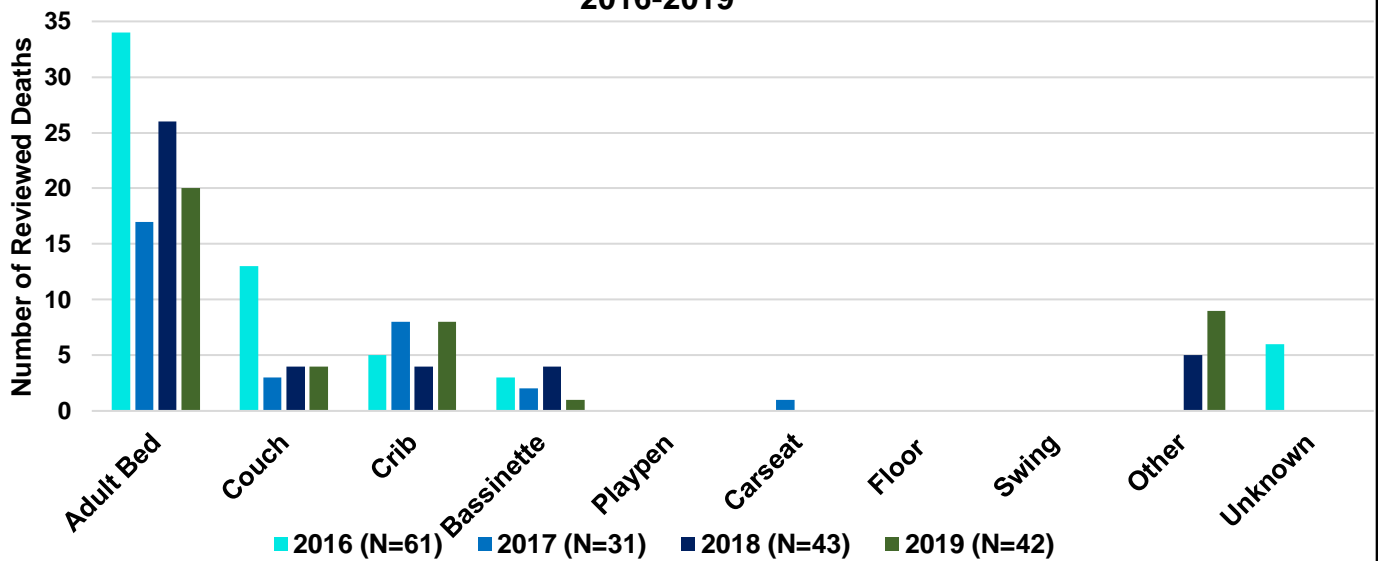


## 5. Undetermined Deaths

**5e. Undetermined Deaths: Sleep Related  
2016-2019**



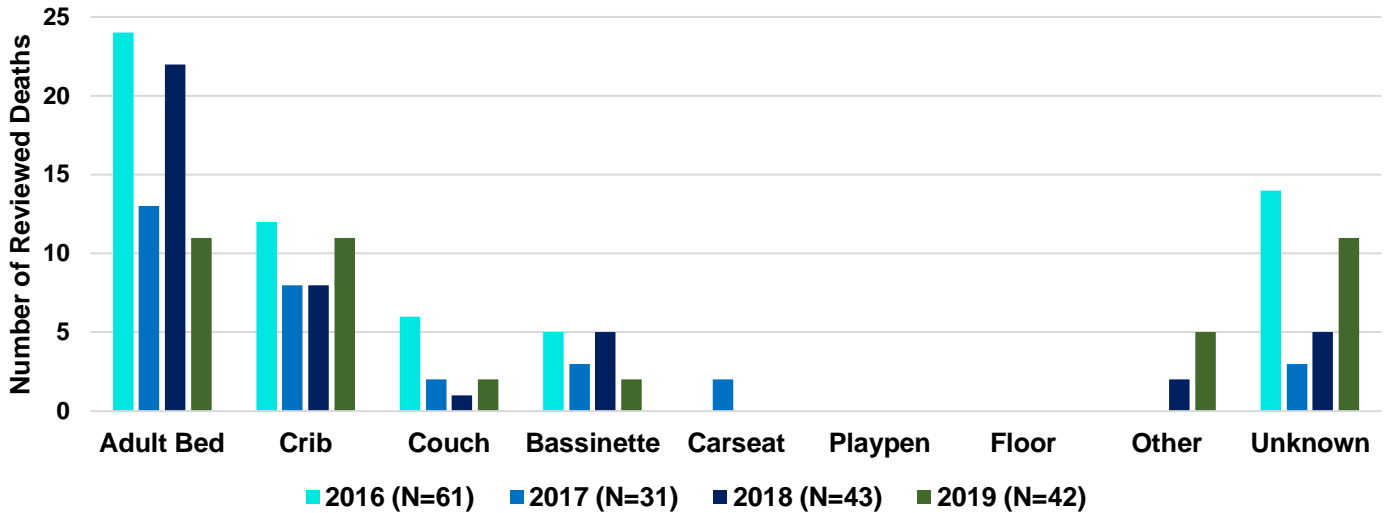
**5f. Undetermined Deaths: Incident Sleep Location  
2016-2019**





## 5. Undetermined Deaths

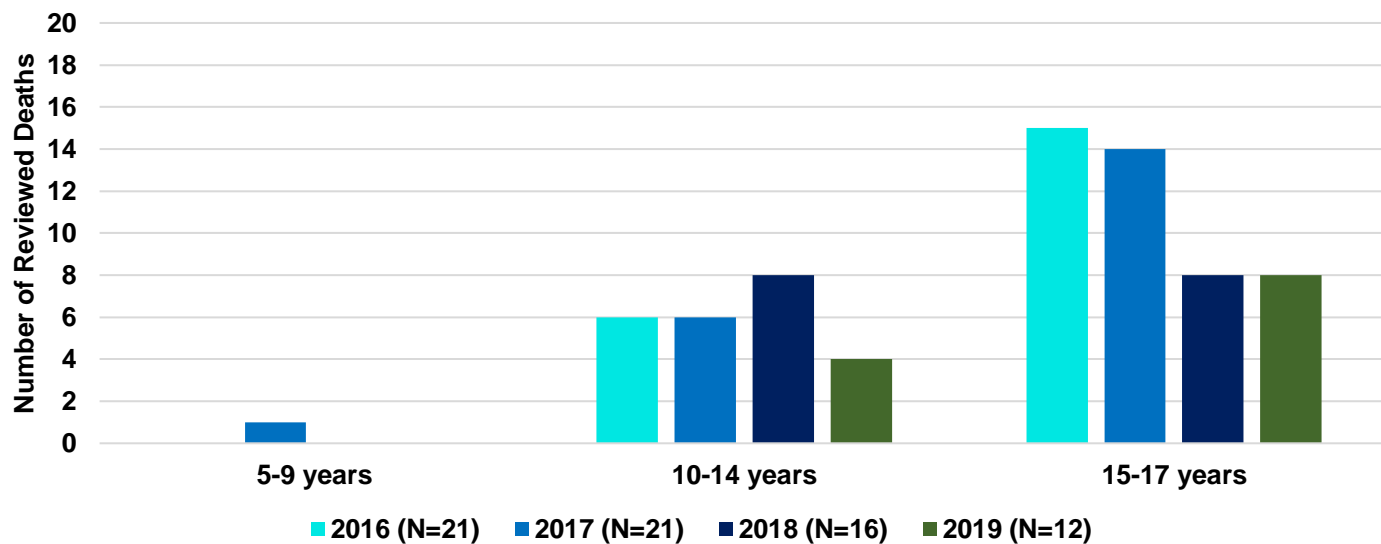
5g. Undetermined Deaths: Usual Sleep Environment  
2016-2019



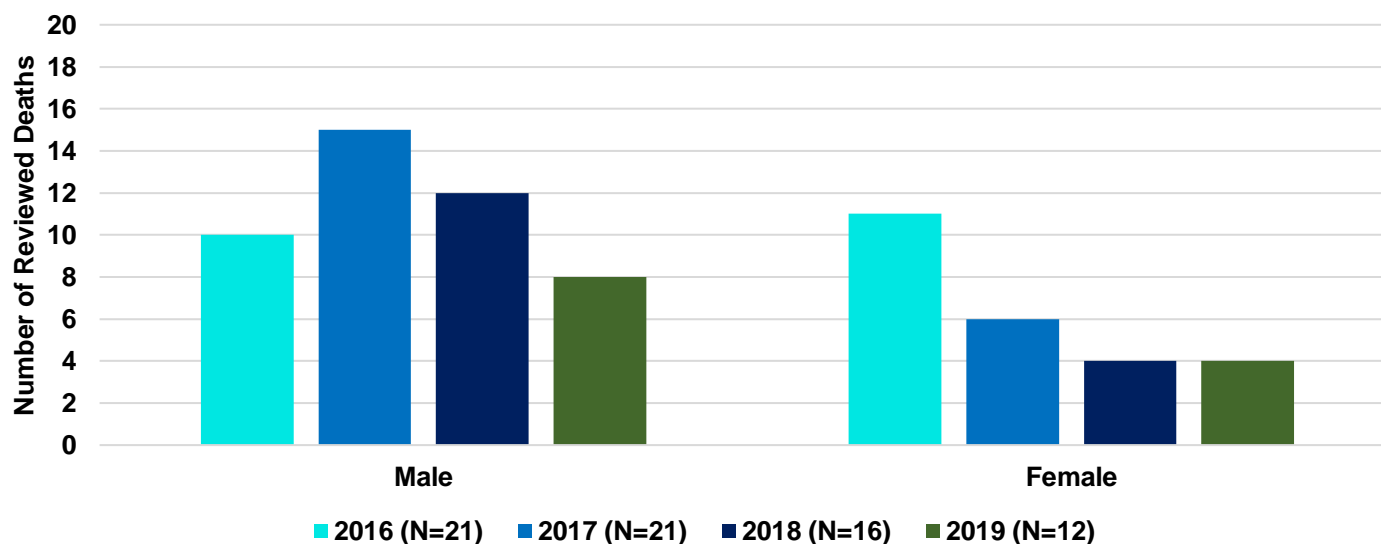


## 6. Suicide Deaths

**6a. Suicide Deaths: Age Distribution  
2016-2019**



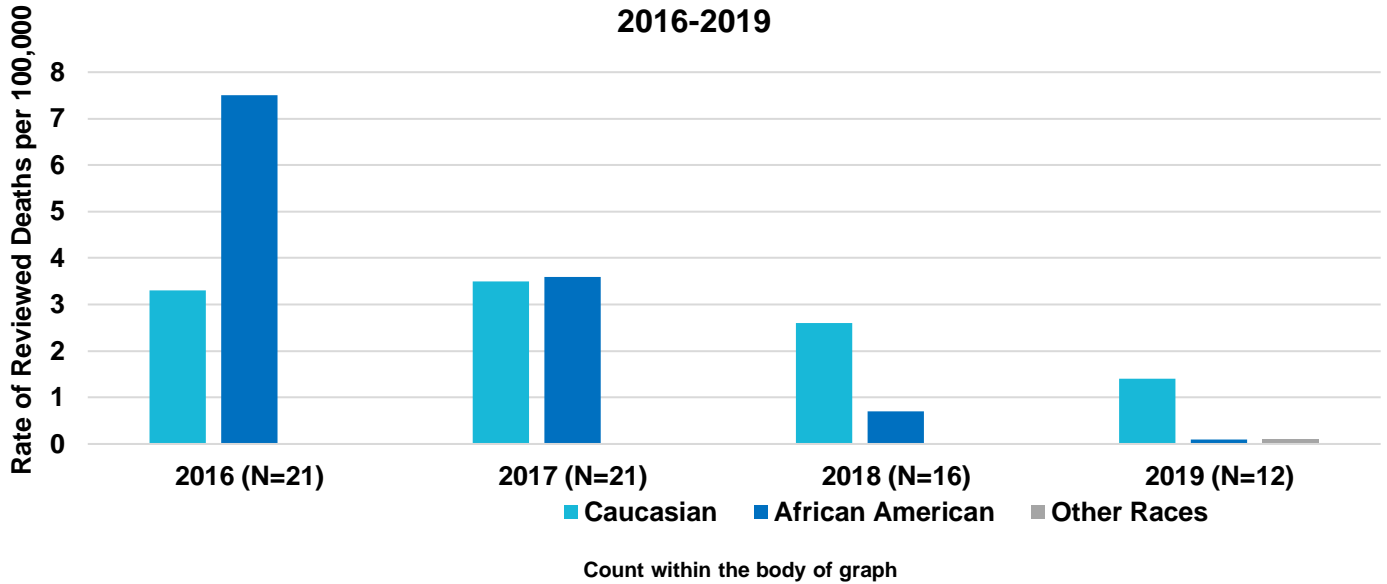
**6b. Suicide Deaths: Gender Distribution  
2016-2019**



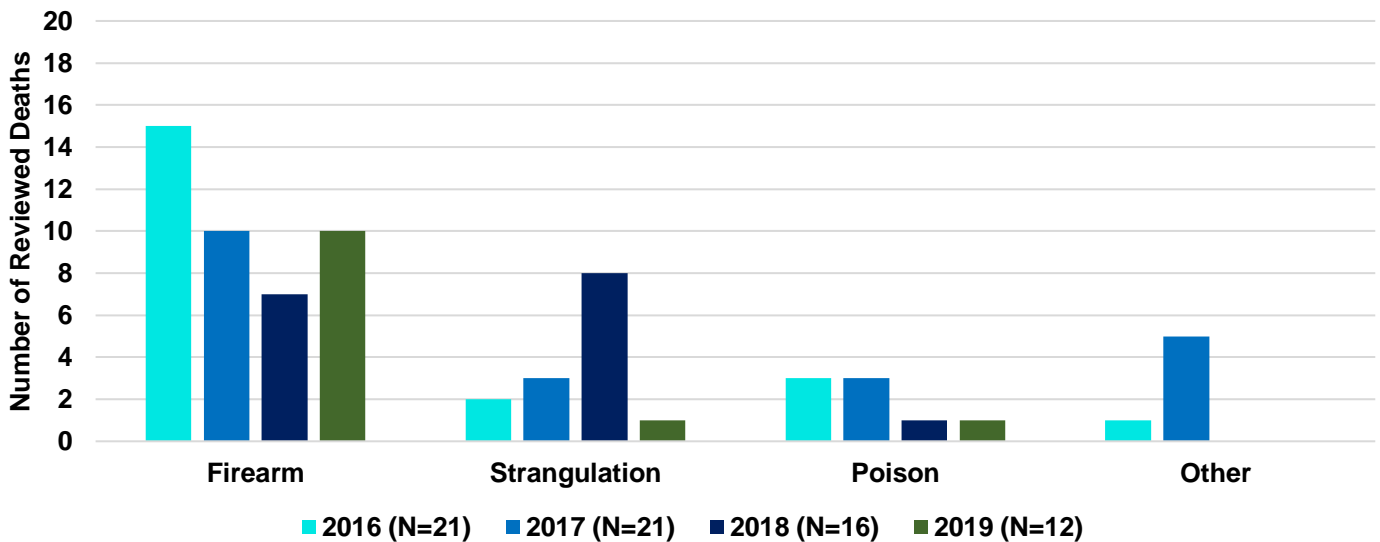


## 6. Suicide Deaths

**6c. Suicide Deaths: Racial Distribution  
2016-2019**

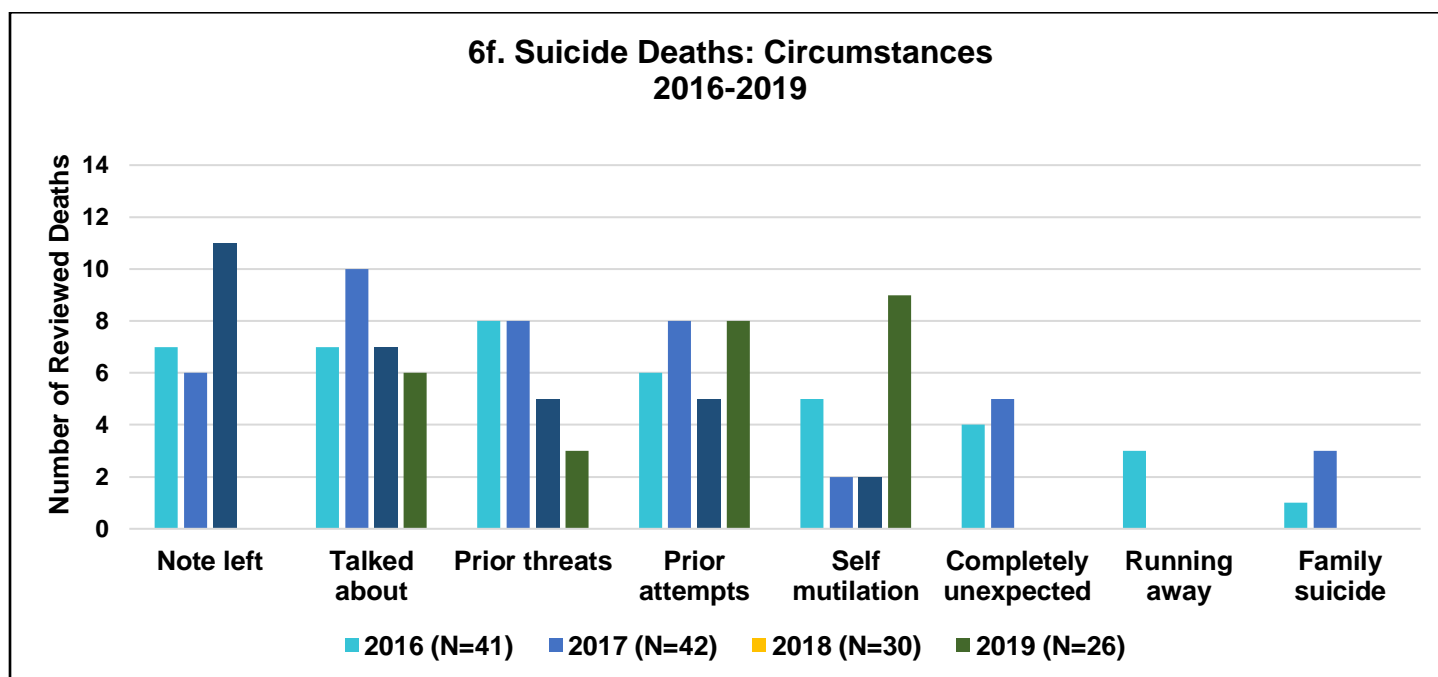
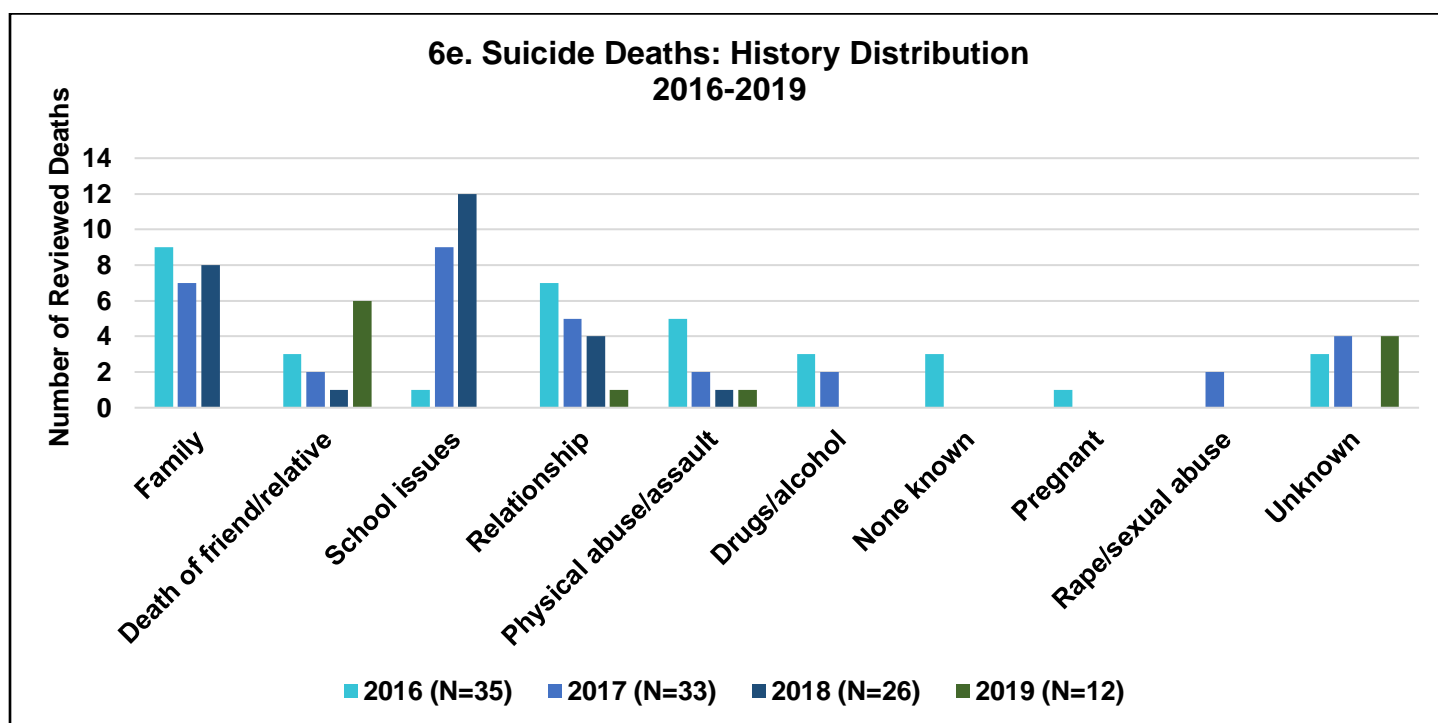


**6d. Suicide Deaths: Means Distribution  
2016-2019**





## 6. Suicide Deaths

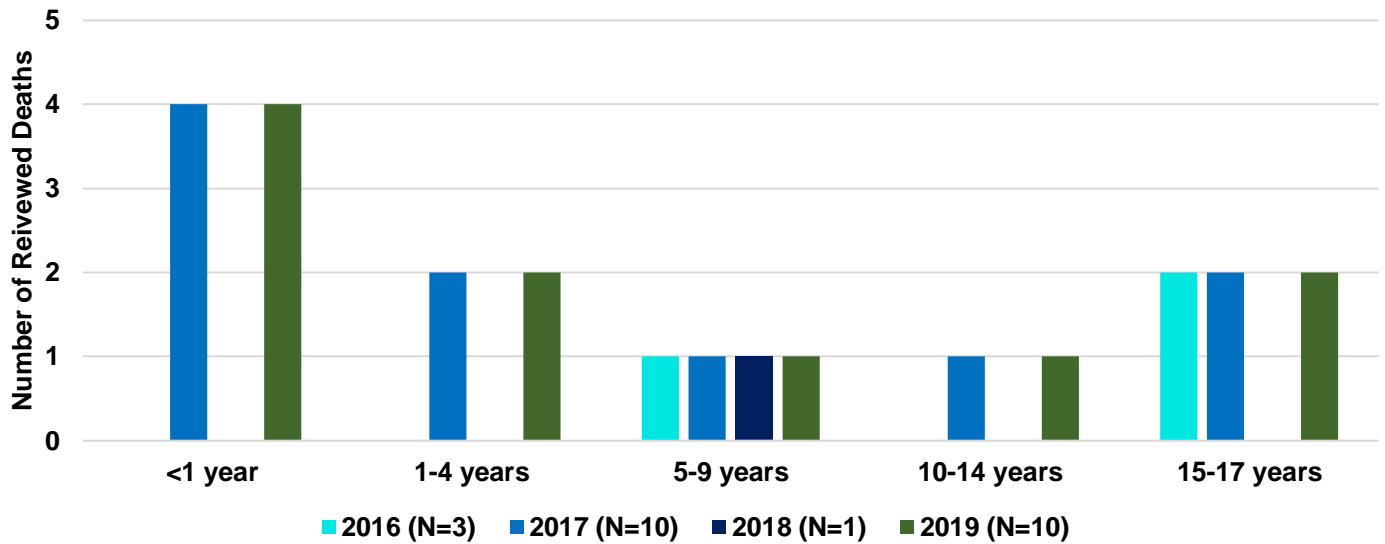


\*Each death can have multiple History/Circumstance factors. The results can equal more than (n).

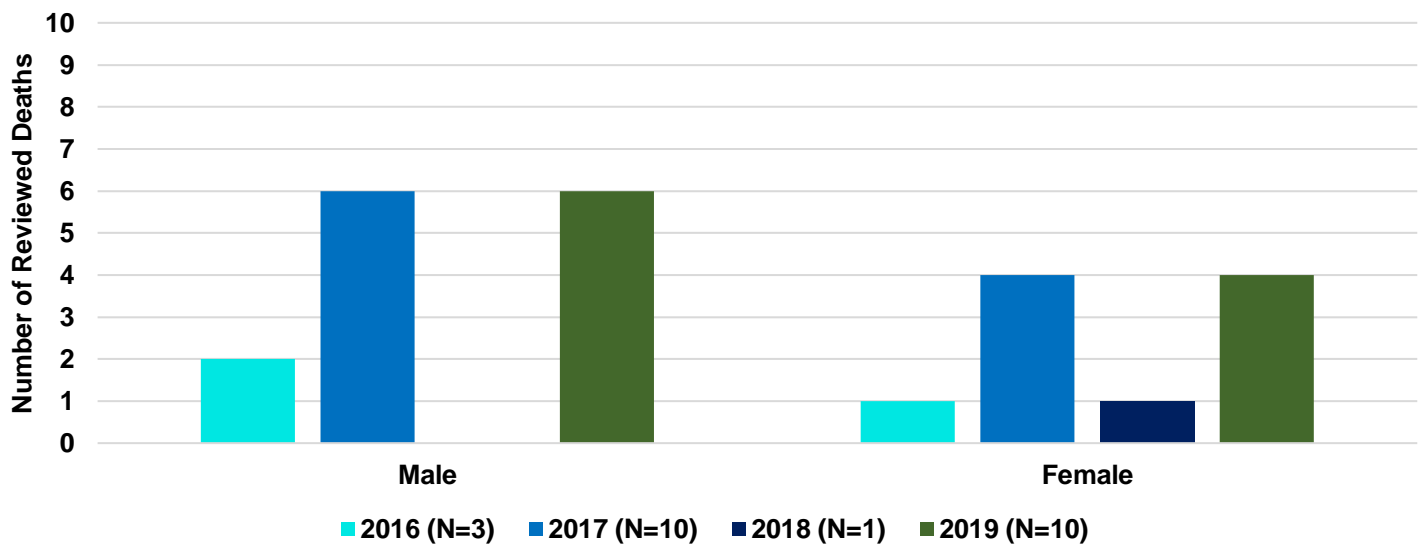


## 7. Homicide Deaths

**7a. Homicide Deaths: Age Distribution  
2016-2019**

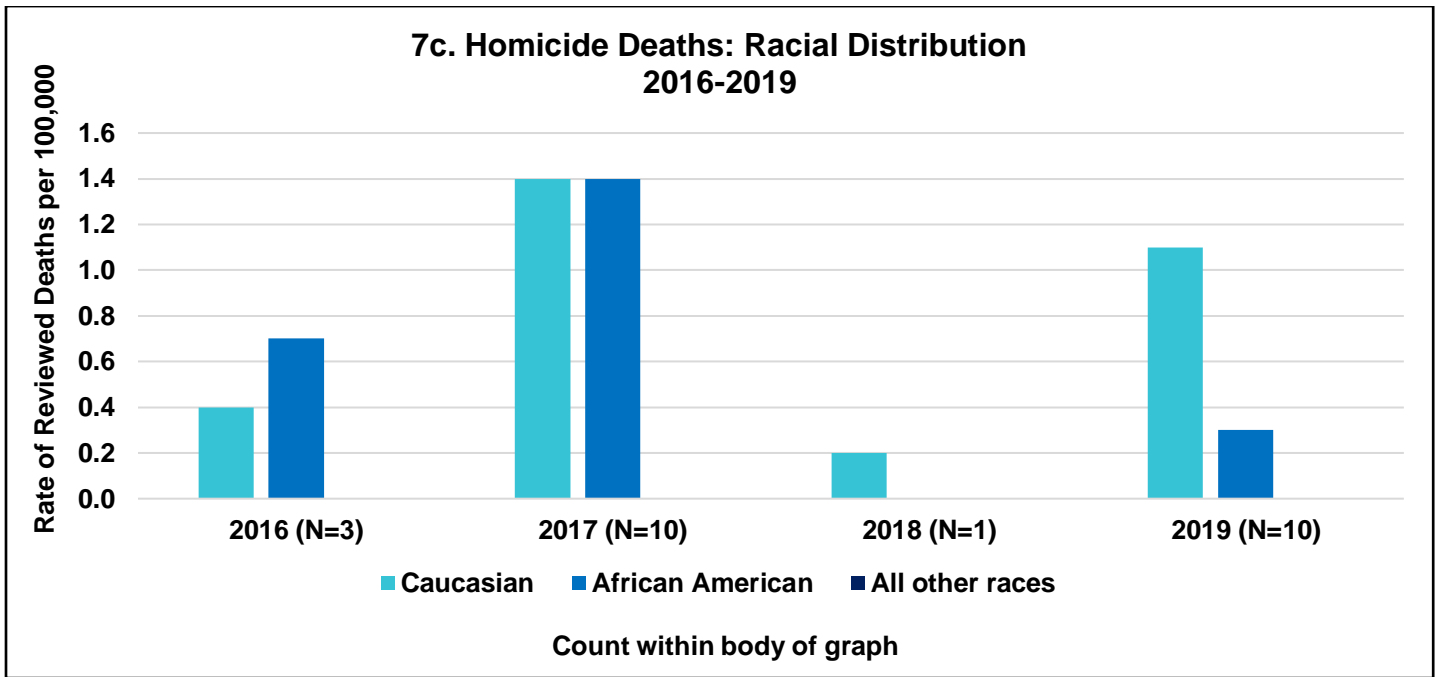


**7b. Homicide Deaths: Gender Distribution  
2016-2019**

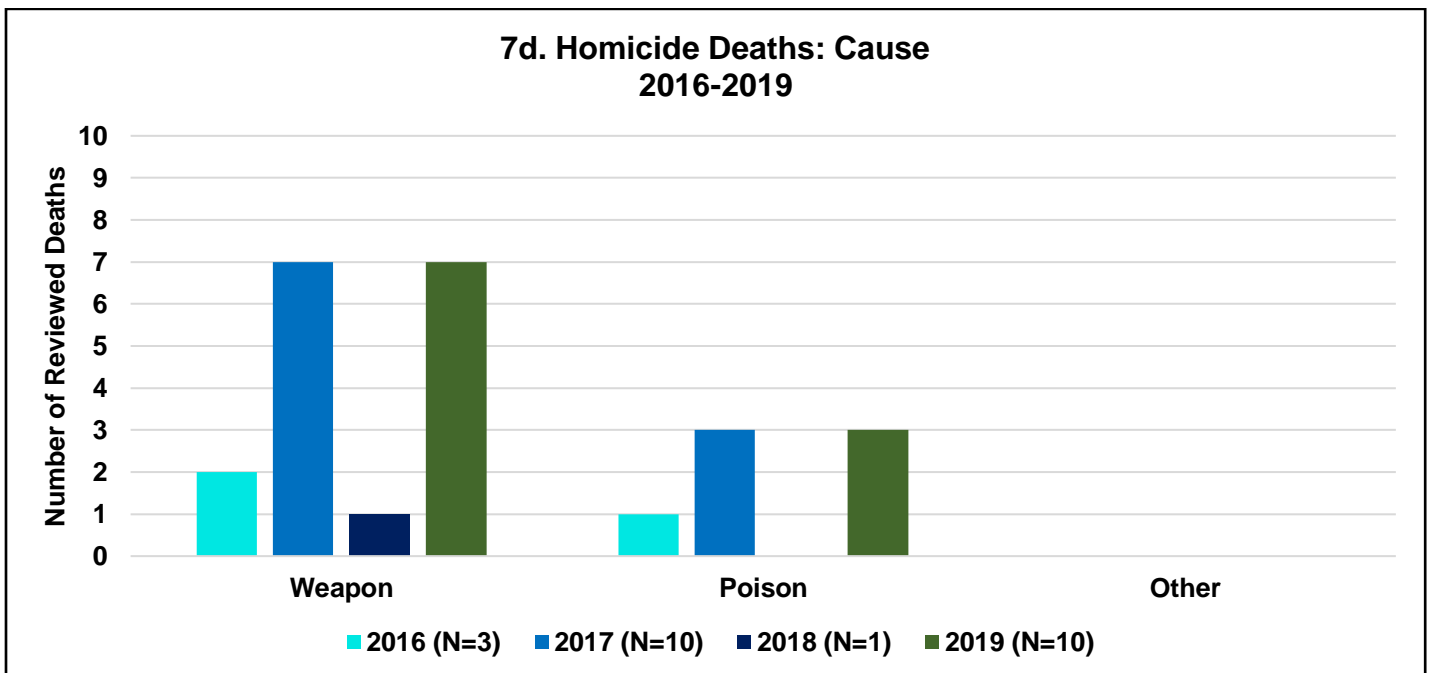




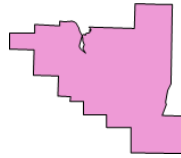
## 7. Homicide Deaths



\*Racial numbers are too small for valid rates in Homicide Deaths.

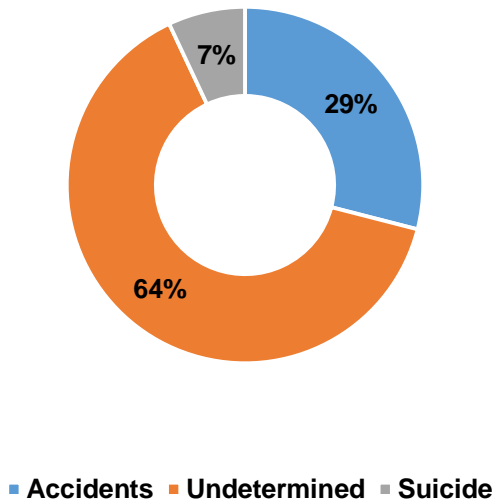




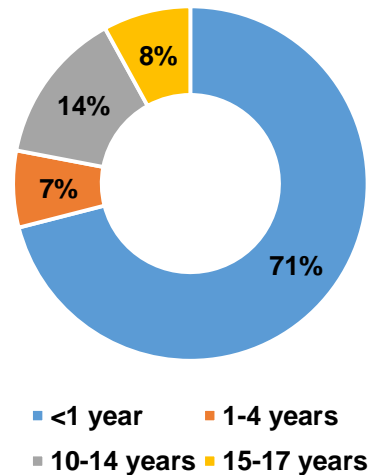


Capital City Team: Pulaski County

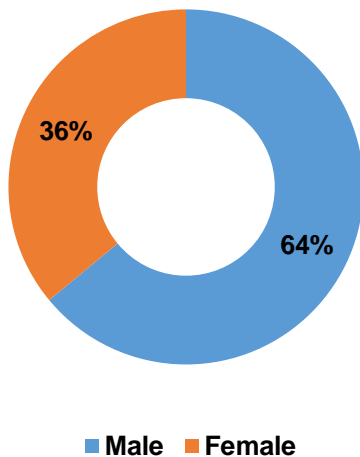
2019 Reviewed Deaths:  
Manner of Death  
N=14



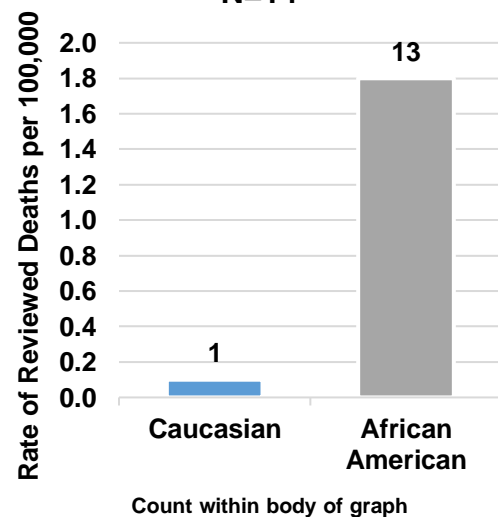
2019 Reviewed Deaths:  
Age Distribution  
N=14



2019 Reviewed Deaths:  
Gender Distribution  
N=14

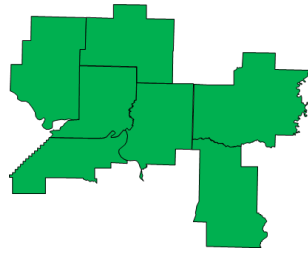


2019 Reviewed Deaths:  
Racial Distribution  
N=14



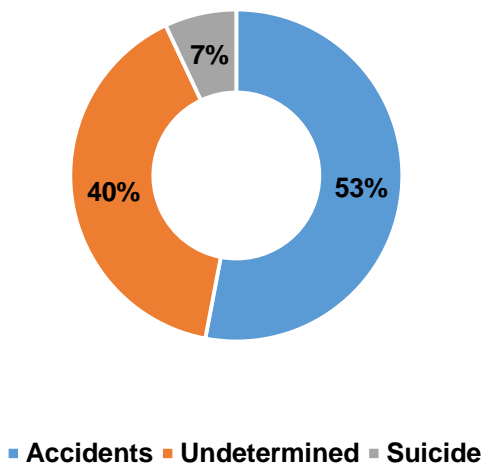


## ICDR Team Data

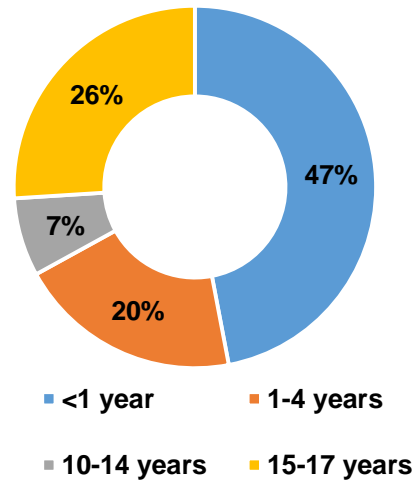


Central Team: Conway, Faulkner, Lonoke, Perry, Pope, Van Buren and White Counties

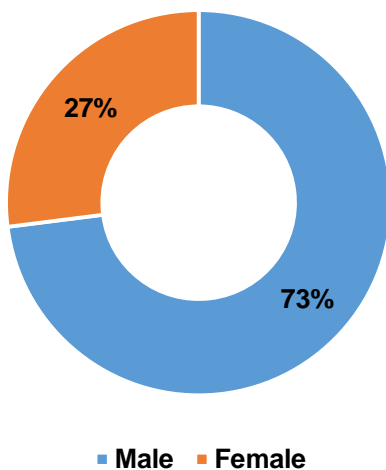
**2019 Reviewed Deaths:  
Manner of Death  
N=15**



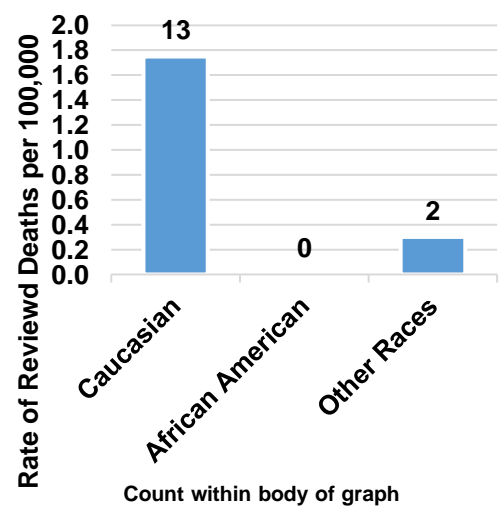
**2019 Reviewed Deaths: Age  
Distribution  
N=15**



**2019 Reviewed Deaths:  
Gender Distribution  
N=15**

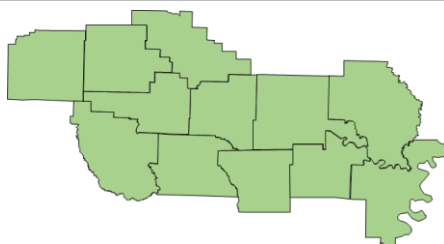


**2019 Reviewed Deaths:  
Racial Distribution  
N=15**



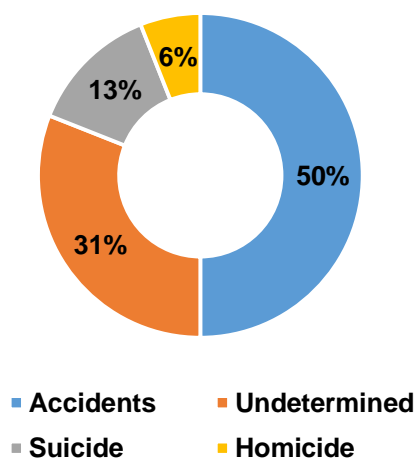


## ICDR Team Data

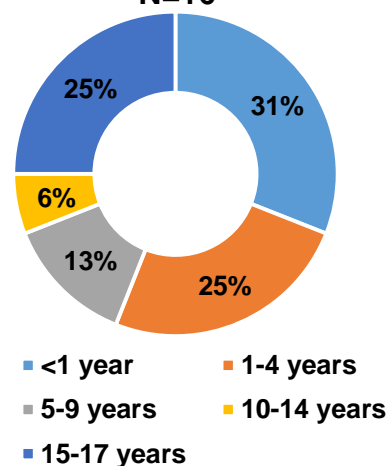


**Enders South Central Team: Arkansas, Clark, Cleveland, Dallas, Desha, Garland, Grant, Hot Spring, Jefferson, Lincoln, Montgomery and Saline Counties**

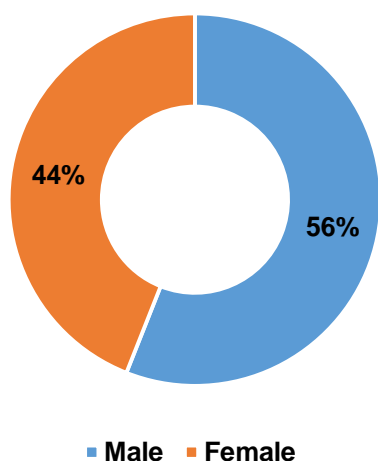
**2019 Reviewed Deaths:  
Manner of Death  
N=16**



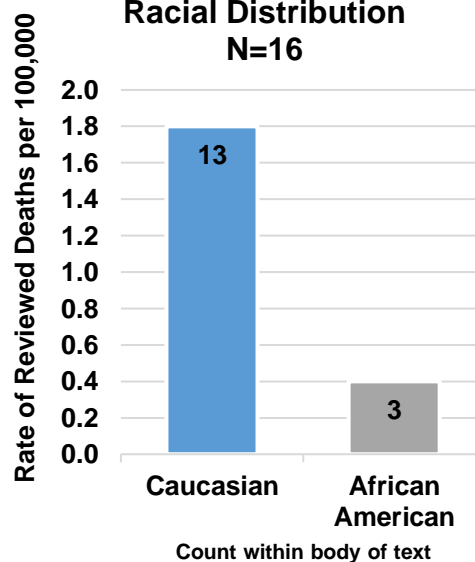
**2019 Reviewed Deaths: Age  
Distribution  
N=16**



**2019 Reviewed Deaths:  
Gender Distribution  
N=16**



**2019 Reviewed Deaths:  
Racial Distribution  
N=16**



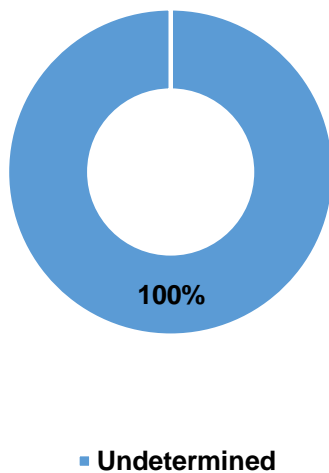


## ICDR Team Data

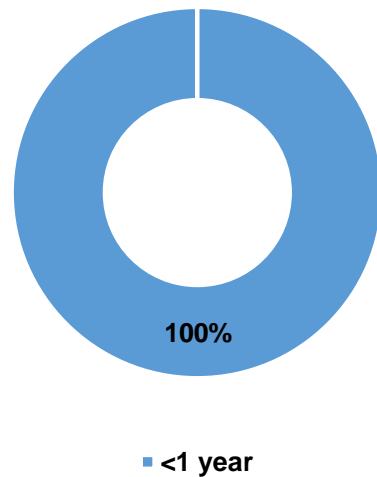


### Delta Team: Crittenden, Cross, Lee, Monroe, Phillips, and St. Francis Counties

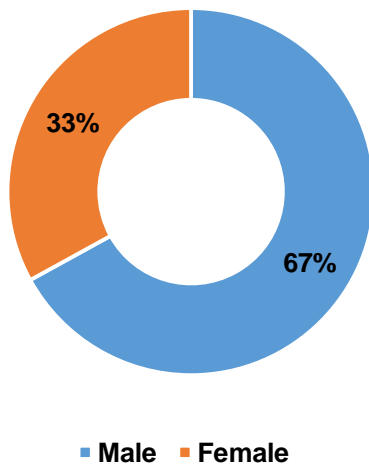
**2019 Reviewed Deaths:  
Manner of Death  
N=3**



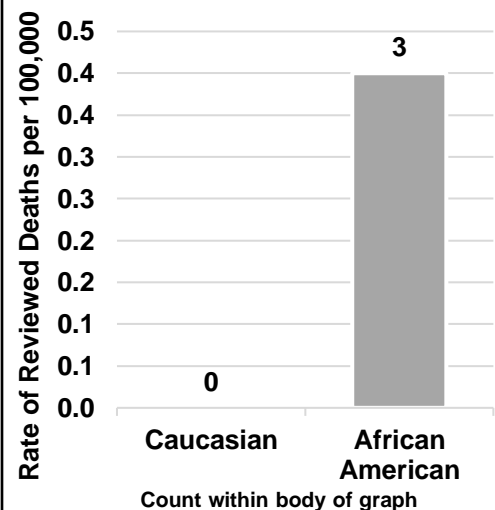
**2019 Reviewed Deaths:  
Age Distribution  
N=3**



**2019 Reviewed Deaths:  
Gender Distribution  
N=3**

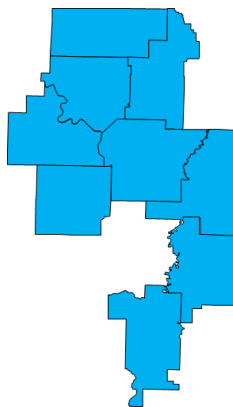


**2019 Reviewed Deaths:  
Racial Distribution  
N=3**



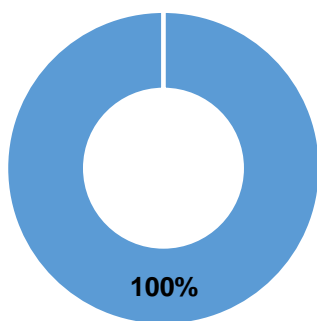


## ICDR Team Data



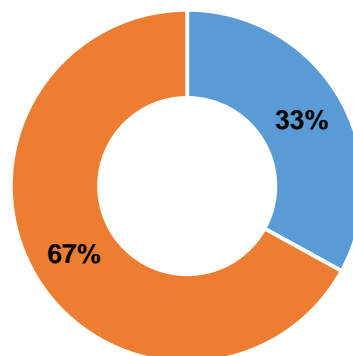
North Central Team: Cleburne, Fulton, Independence, Izard, Jackson, Prairie, Sharp, Stone and Woodruff Counties

**2019 Reviewed Deaths:  
Manner of Death  
N=3**



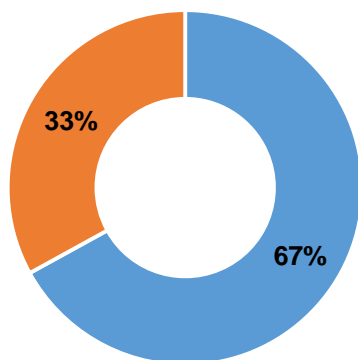
■ Accidents

**2019 Reviewed Deaths:  
Age Distribution  
N=3**



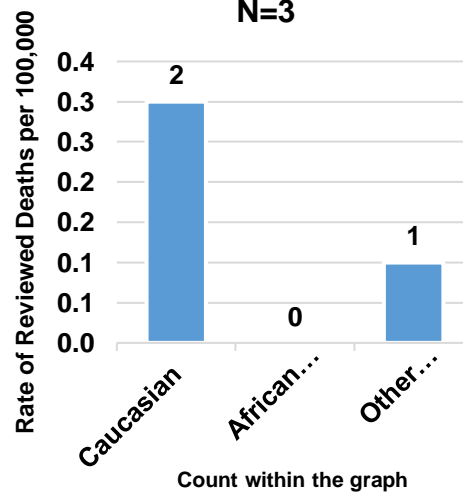
■ 1-4 years ■ 15-17 years

**2019 Reviewed Deaths:  
Gender Distribution  
N=3**



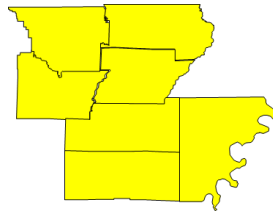
■ Male ■ Female

**2019 Reviewed Deaths:  
Racial Distribution  
N=3**



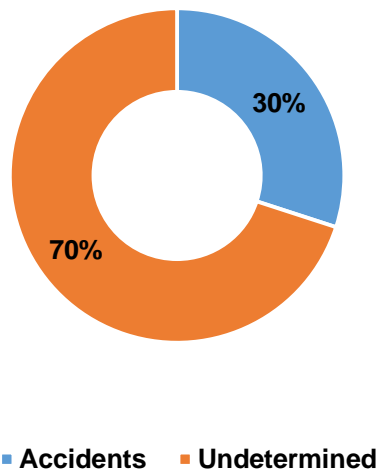


## ICDR Team Data

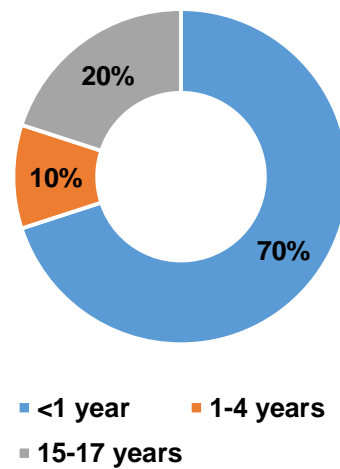


Northeast Team: Clay, Craighead, Greene, Lawrence, Mississippi, Poinsett and Randolph Counties

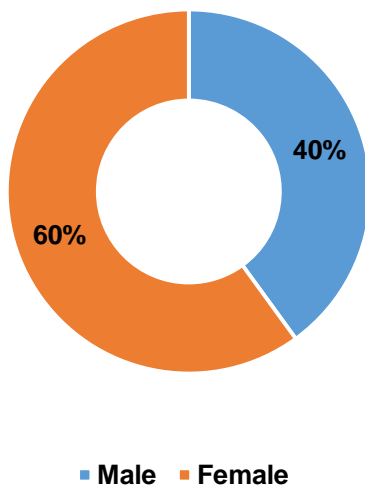
**2019 Reviewed Deaths:  
Manner of Death  
N=10**



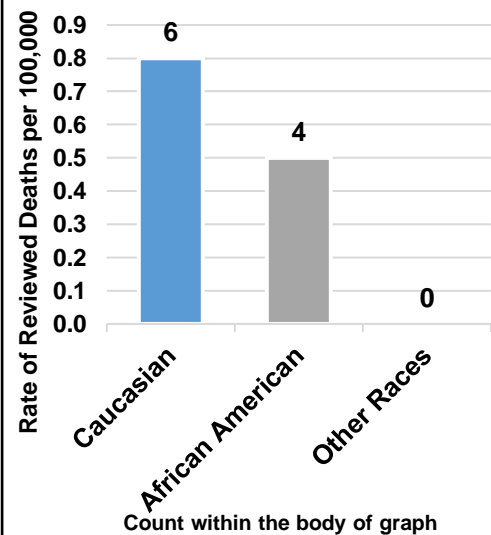
**2019 Reviewed Deaths:  
Age Distribution  
N=10**



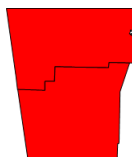
**2019 Reviewed Deaths:  
Gender Distribution  
N=10**



**2019 Reviewed Deaths:  
Racial Distribution  
N=10**

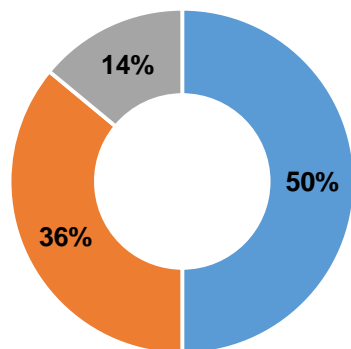






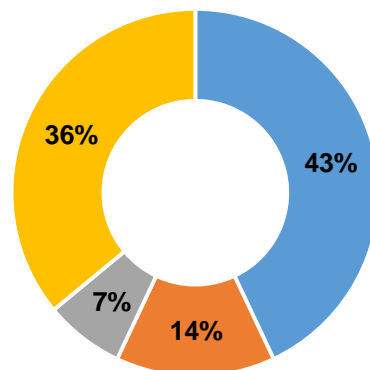
Northwest Team: Benton and Washington Counties

2019 Reviewed Deaths:  
Manner of Death  
N=14



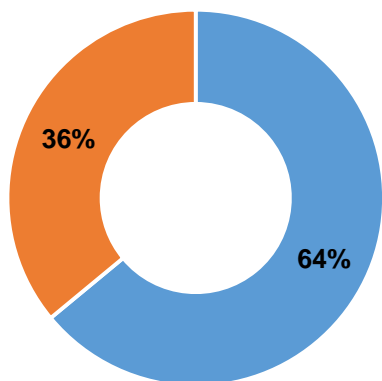
■ Accidents ■ Undetermined  
■ Suicide

2019 Reviewed Deaths:  
Age Distribution  
N=14



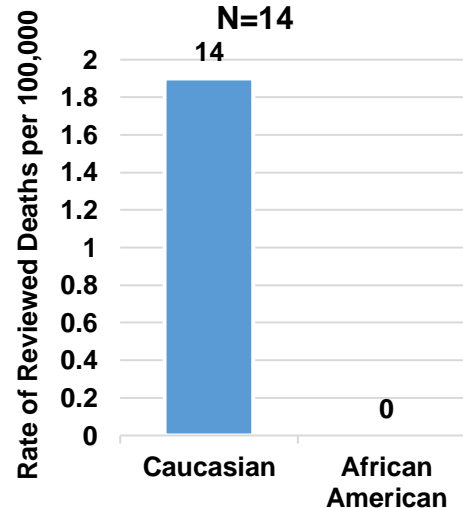
■ <1 year ■ 1-4 years  
■ 10-14 years ■ 15-17 years

2019 Reviewed Deaths:  
Gender Distribution  
N=14



■ Male ■ Female

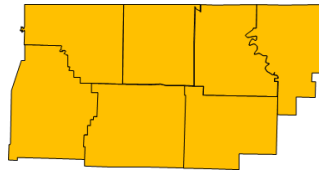
2019 Reviewed Deaths:  
Racial Distribution  
N=14



Count within body of graph

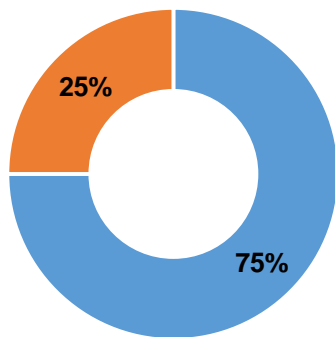


## ICDR Team Data



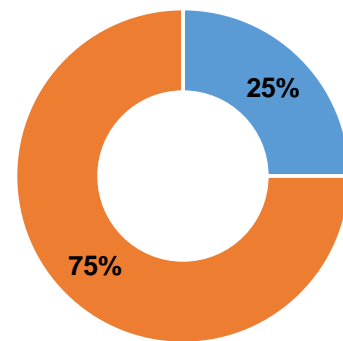
**ICDR Ozark Mountain Team: Baxter, Boone, Carroll, Madison, Marion, Newton and Searcy Counties**

**2019 Reviewed Deaths:  
Manner of Death  
N=8**



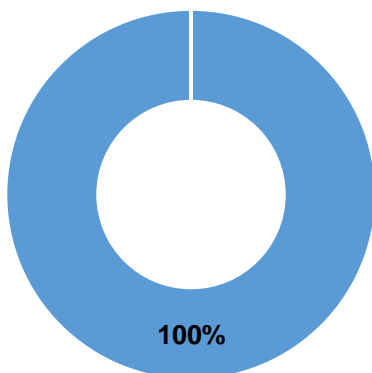
■ Accidents ■ Suicide

**2019 Reviewd Deaths:  
Age Distribution  
N=8**



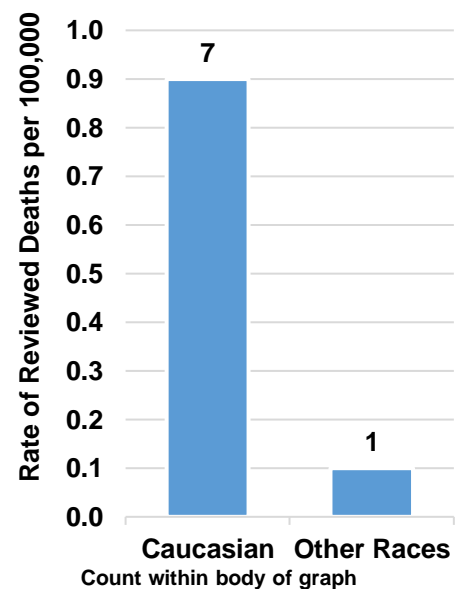
■ 10-14 years ■ 15-17 years

**2019 Reviewed Deaths:  
Gender Distribution  
N=8**

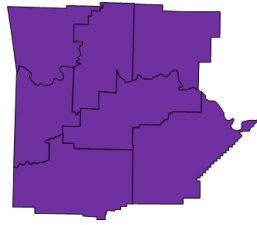


■ Male

**2019 Reviewed Deaths:  
Racial Distribution  
N=8**

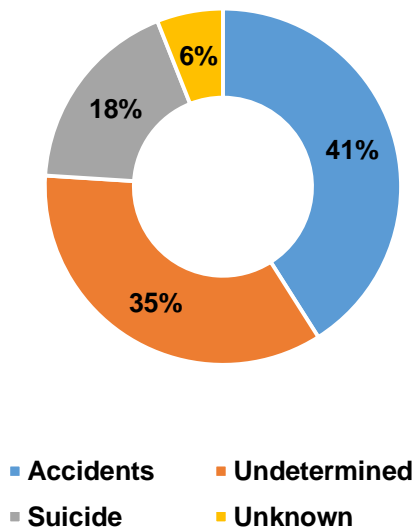




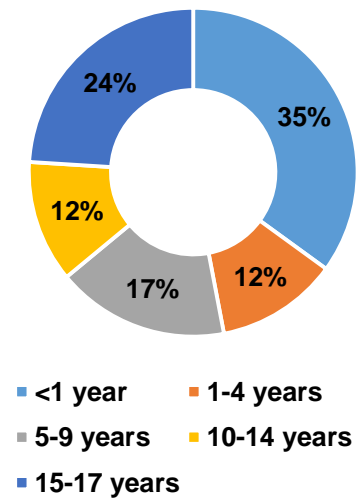


River Valley Team: Crawford, Franklin, Johnson, Logan, Scott, Sebastian and Yell Counties

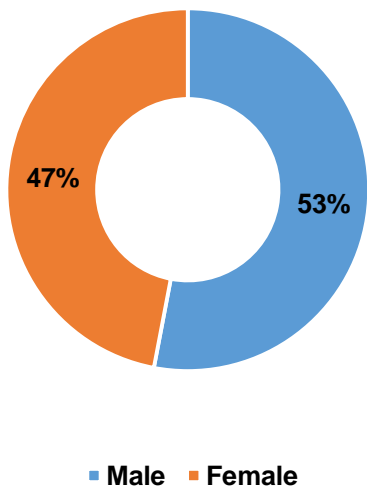
2019 Reviewed Deaths:  
Manner of Death  
N=17



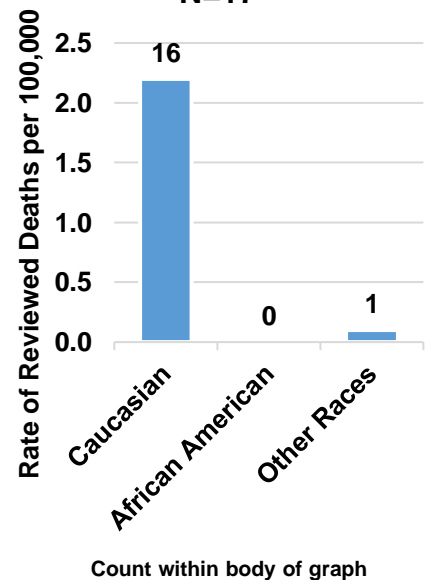
2019 Reviewed Deaths:  
Age Distribution  
N=17



2019 Reviewed Deaths:  
Gender Distribution  
N=17

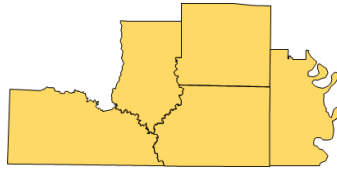


2019 Reviewed Deaths:  
Racial Distribution  
N=17



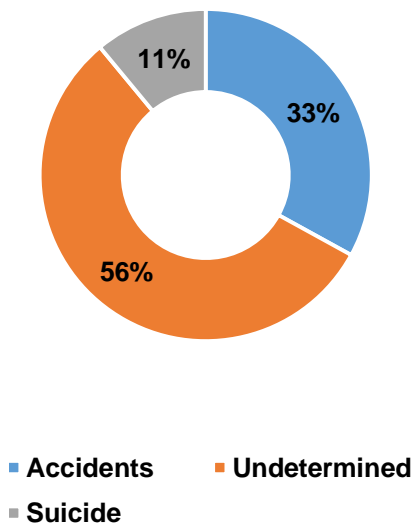


## ICDR Team Data

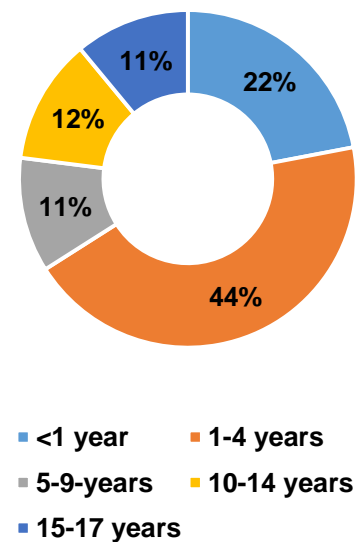


### Southeast Team: Ashley, Bradley, Chicot, Drew and Union Counties

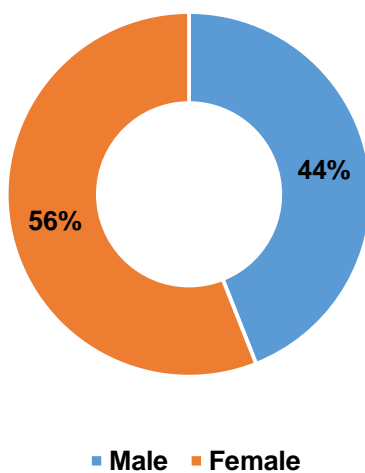
**2019 Reviewed Deaths:  
Manner of Death  
N=9**



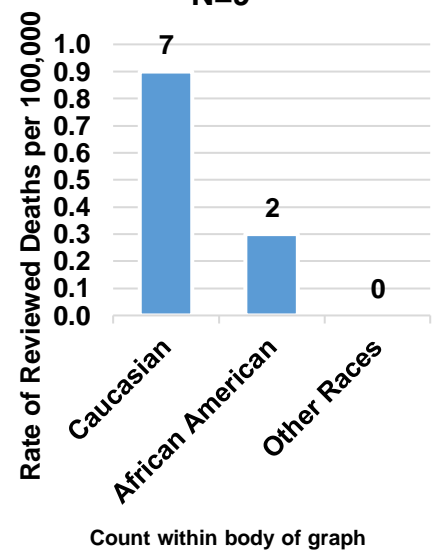
**2019 Reviewed Deaths:  
Age Distribution  
N=9**



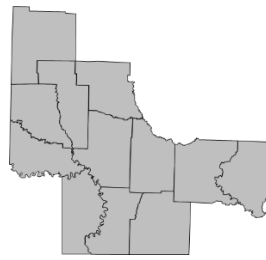
**2019 Reviewed Deaths:  
Gender Distribution  
N=9**



**2019 Reviewed Deaths:  
Racial Distribution  
N=9**

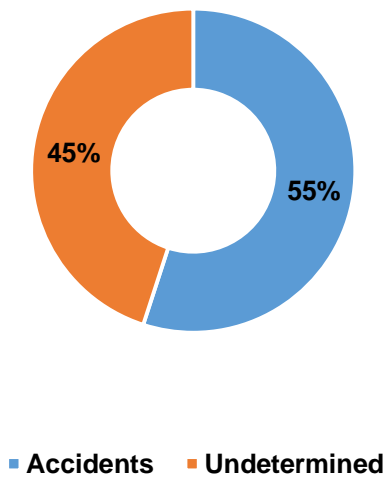




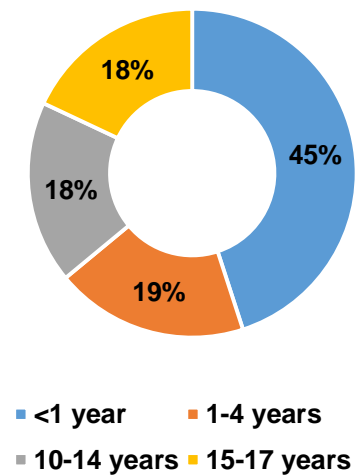


**Southwest Team: Calhoun, Columbia, Hempstead, Howard, Lafayette, Little River, Miller, Nevada, Ouachita, Pike, Polk, and Sevier Counties**

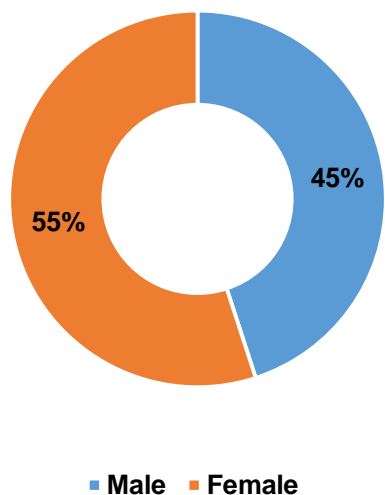
**2019 Reviewed Deaths:  
Manner of Death  
N=11**



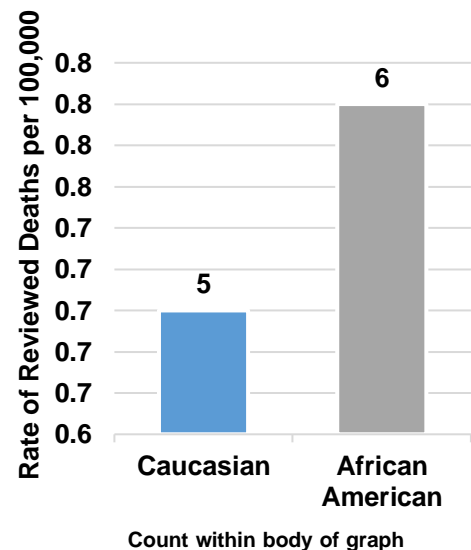
**2019 Reviewed Deaths:  
Age Distribution  
N=11**



**2019 Reviewed Deaths:  
Gender Distribution  
N=11**



**2019 Reviewed Deaths:  
Racial Distribution  
N=11**





## ICDR Team Discretionary Projects

The ICDR Discretionary Projects was created by the ICDR Strategic Planning Committee to assist local teams with addressing gaps and needs within their communities. Those gaps or needs could be providing training for local agencies, assisting with policy implementation or creating and implementing education. **Due to COVID-19 discretionary projects were not used as much as FY19.**

### FY21

**Southeast Team:** Gap Identified: Water safety for middle school students. Life jackets were provided to all Middle School students at Monticellow Middle School along with water safety education.



## Data Analysis: National vs. Arkansas

The data quality summary report identifies the “missing” and “unknown” data variables that are identified by the National Child Fatality Review Program (NCFRP) as CORE variables. The ICDR sets goals to reduce missing elements utilizing the following data.

