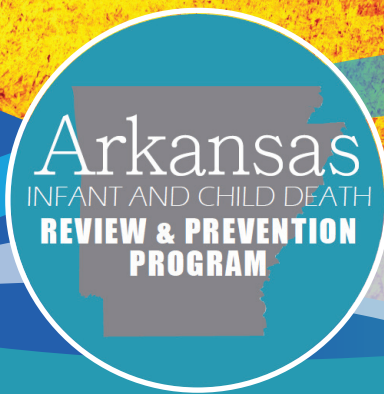




Arkansas
Children's

HOSPITALS • RESEARCH • FOUNDATION



Arkansas Infant and Child Death Review Program

FY22 Report on Deaths Occurring in 2020

Compiled by:
Arkansas Infant and Child Death Review Program
Arkansas Children's Hospital Injury Prevention Center



Funding providing 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.
- Data for ages <1-17 years old are calculated via rate per 100,000 deaths.
- Data for ages <1 years old are calculated via rate per 1,000 deaths.

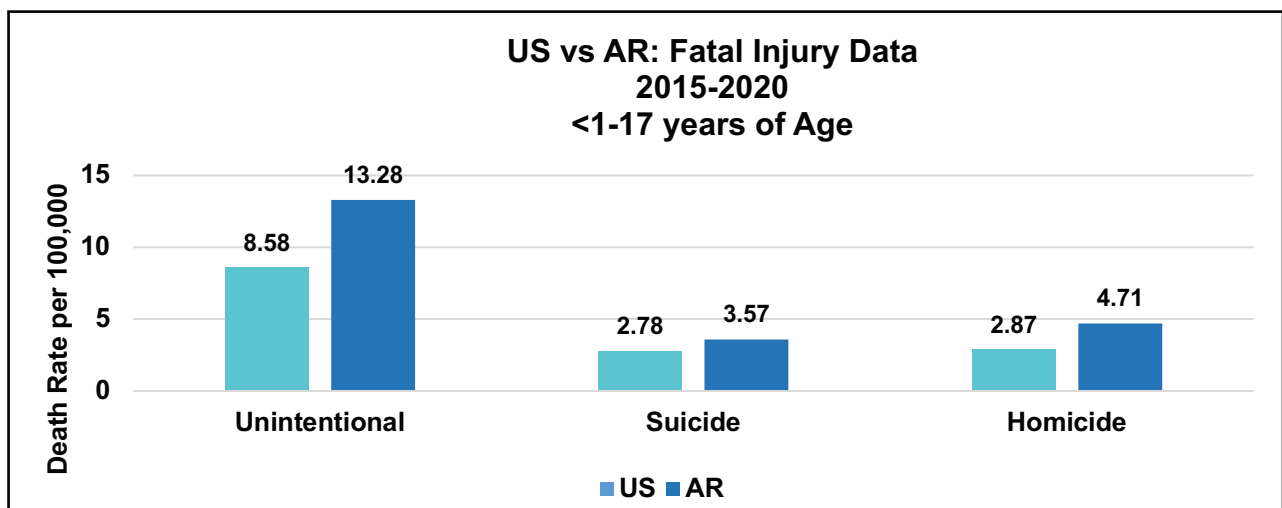
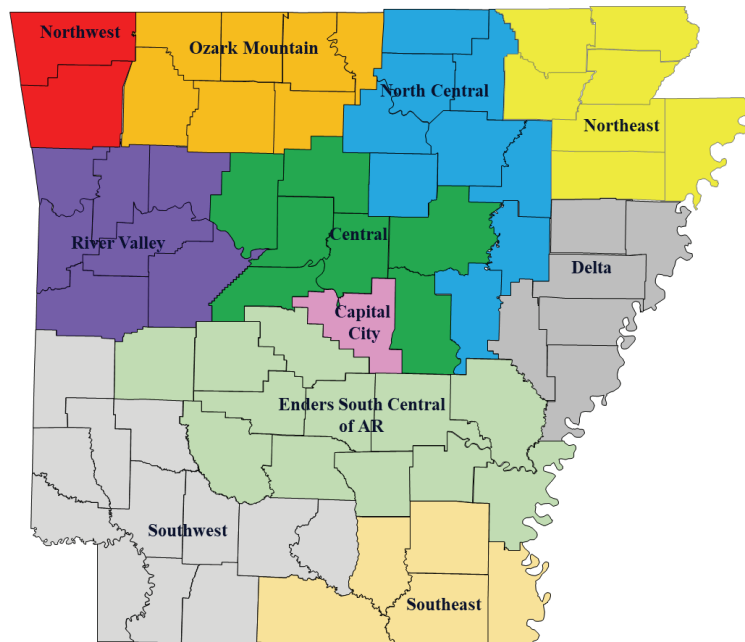


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Introduction

The Infant and Child Death Review Process: Purpose and Data

KEY FINDINGS

- In 2020, there were **470** child deaths among those 0-17 years of age
- Among the **470** all-cause deaths, **188 (40%)** cases were eligible for review by local ICDR teams.
- In 2019, **71%** of eligible cases were reviewed. In 2020, **59%** of eligible cases were reviewed.

In 2020 110 CASES WERE REVIEWED

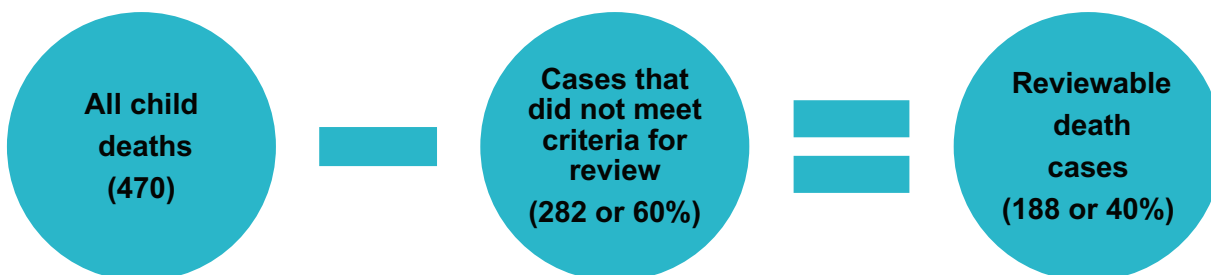
Overview: Established in 2010, the Arkansas (AR) Infant and Child Death Review (ICDR) Program has expanded to 11 regional teams that review unexpected deaths of Arkansas children under the age of 18. The teams cover all 75 Arkansas counties, giving the ICDR Program the potential to evaluate 100% of reviewable 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 are 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.

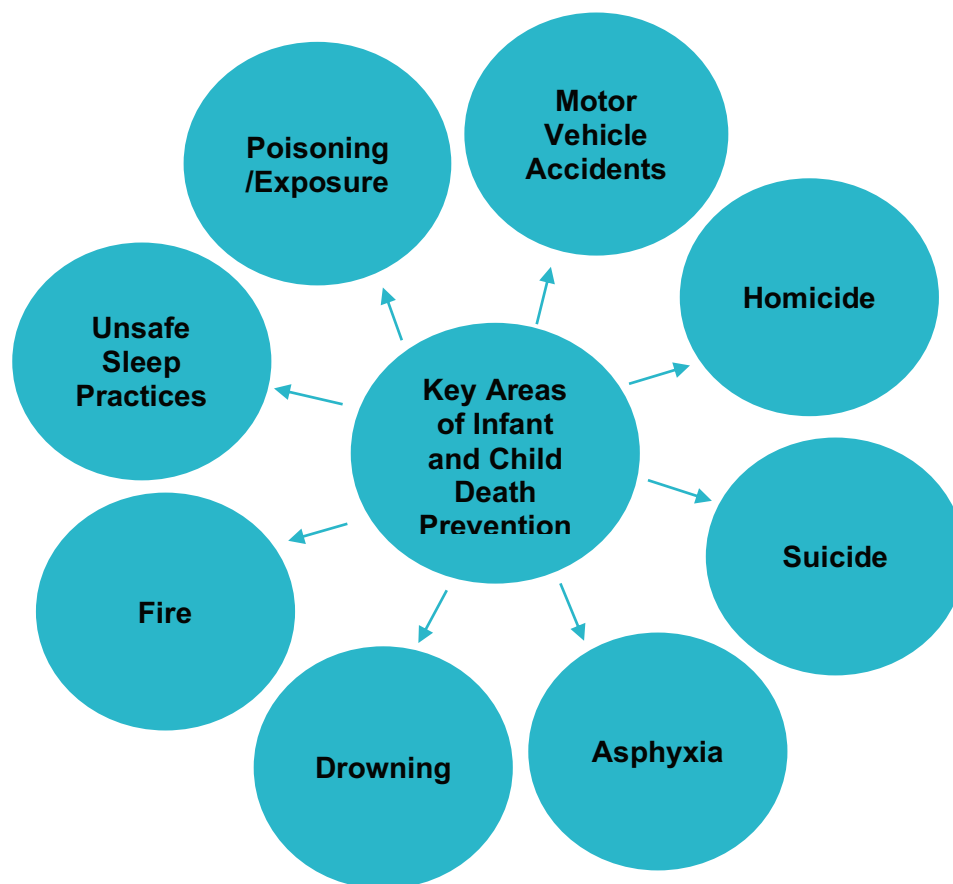
The total infant and child deaths (ages 0-17) in Arkansas for 2020 was 470 deaths, of those 188 (40%) were eligible for review and 110 (59%) of the eligible cases were reviewed. Out of the 78 cases not reviewed, 34 (44%) of those were still under criminal investigation or being prosecuted. The other 44 (56%) were not reviewed due to the impact of the COVID-19 pandemic. The pandemic resulted in team members being assigned other duties which limited access to records for review and limited the ability for teams to meet.



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 and 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.



Annual Report Executive Summary

The total infant and child deaths (ages 0-17) in Arkansas for 2020 was **470** deaths, of those **188 (40%)** were eligible for review and **110 (59%)** of the eligible cases were reviewed. Out of the **78** cases not reviewed, **34 (44%)** of those were still under criminal investigation or being prosecuted. The other **44 (56%)** were not reviewed due to the impact of the global COVID-19 pandemic. Over the last four years, the 11 CDR teams have reviewed a total of **700** eligible cases and **190** of those cases were not reviewed for a review completed average of **73%**.

Death statistics by manner of death for 2020 are expressed in rates per 100,000 population unless otherwise specified. A rate is a ratio that compares two different quantities that have 2 different units of measure. For example, in Arkansas there are more teenagers than babies. By using rates we can determine the true burden of injury by age groups, gender, or race.

2020 Manner of death

Accidental Deaths (48 reviewed):

- **Motor Vehicle Accidents (23):**
 - MVAs are the leading causes of accidental deaths.
 - No seat belt use in motor vehicle accidents was higher than seat belt use (1.00 vs 0.57).
- **Asphyxia (12):**
 - Strangulation was the leading event in asphyxia deaths.
 - Sleep related deaths had a higher rate than other asphyxia related events (0.57 vs 0.14).
 - Males had a higher rate of asphyxia deaths than females (2.79 vs 0.59).
 - The rate of white children who died of asphyxia was lower than black children (1.36 vs 1.56).
- **Drowning (9):**
 - There was a higher overall rate of drowning deaths that occurred in pools versus open water (0.71 vs 0.57).
 - Drowning deaths among males was higher than females (2.23 vs 0.29).

Undetermined Deaths (34):

- Undetermined deaths predominately occurred in adult beds.
- Undetermined deaths related to sleeping or sleep environment had a higher rate than any other undetermined deaths (4.57 vs 0.29).
- Black children had a higher rate of undetermined deaths than white children (6.00 vs 5.25).

Suicide (18):

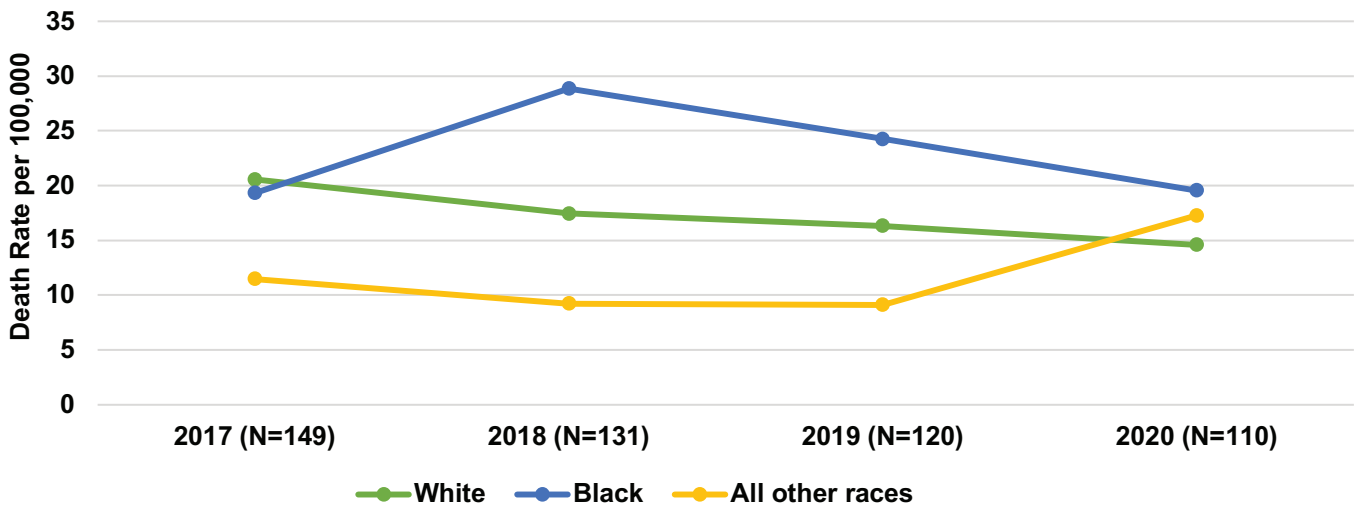
- Firearms was the leading contributing factor in suicide deaths.
- Suicide death rate among 14-17 year olds was higher than 9-13 year olds (9.37 vs 1.51).
- The rate of black children who died by suicide was higher than white children (4.69 vs 1.95).

Reviewed Infant and Child Deaths: Demographic Characteristics

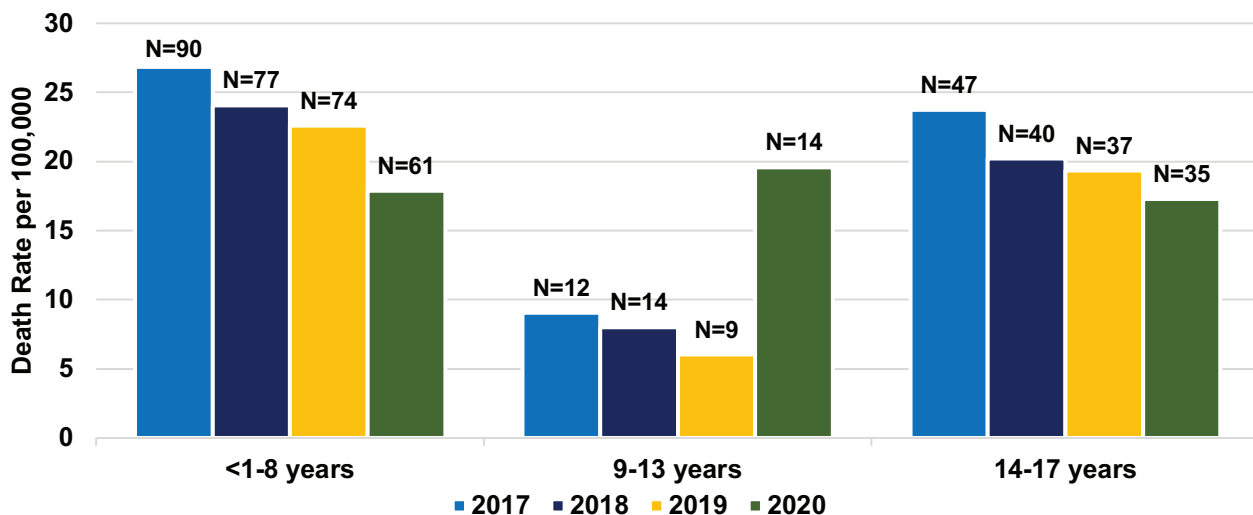
Findings:

- Black children have died at a higher rate than white children and children of other races for the last 4 years (Chart 1).
- Usually children under age 8 die at higher rates than 9 to 13 years or 14 to 17 years. However, in 2020, youth age 9-13 had the highest rates of death (Chart 2).
- Males have higher rates of death than females, with teen males having the highest rates of death (Chart 3).

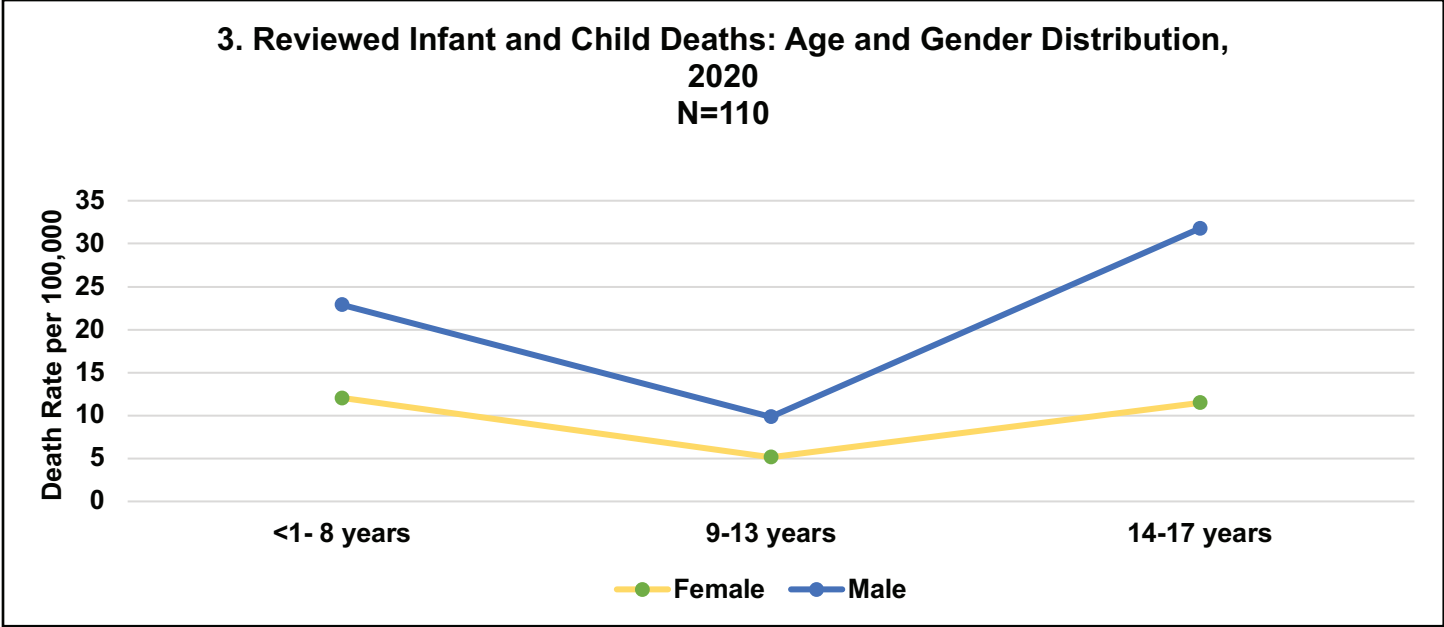
1. Reviewed Infant and Child Deaths: Racial Distribution, 2017-2020



2. Reviewed Infant and Child Deaths: Age at Time of Death, 2017-2020

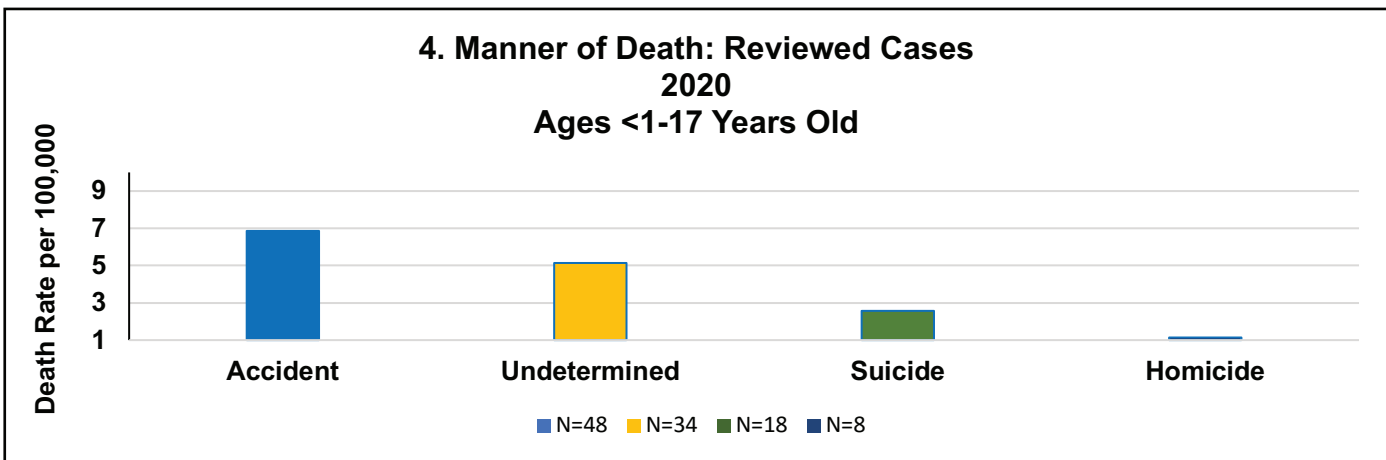
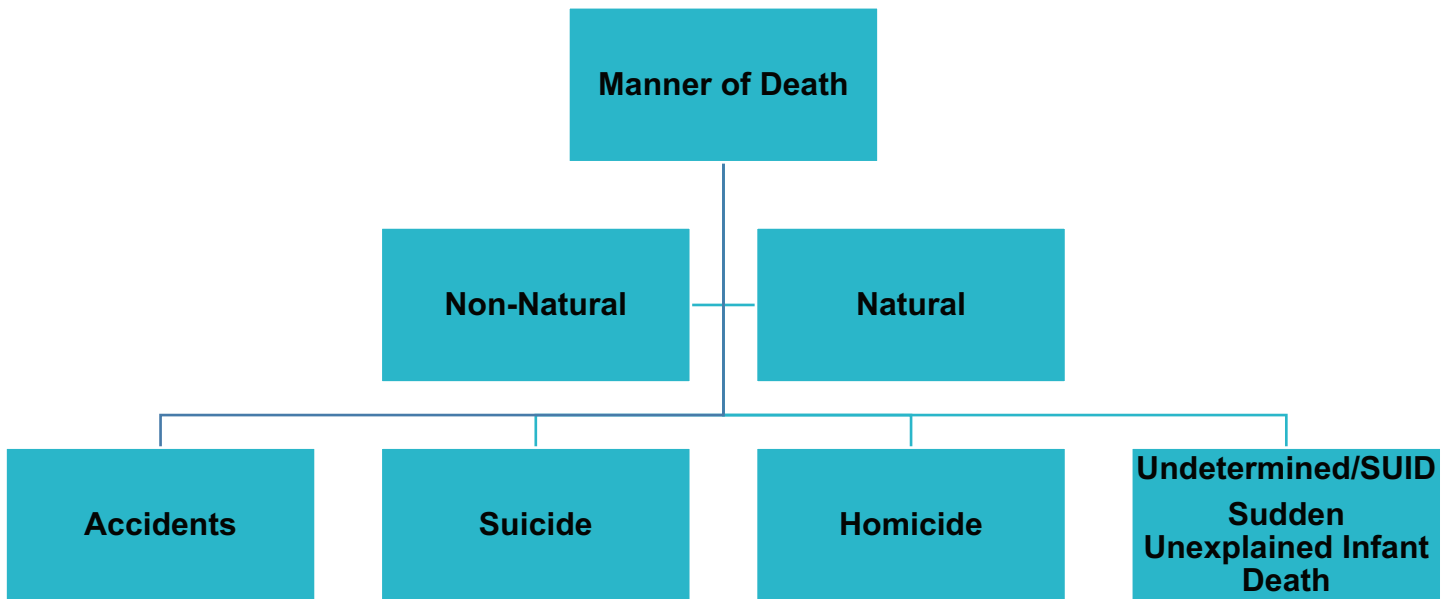


Reviewed Infant and Child Deaths: Demographic Characteristics continued



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.

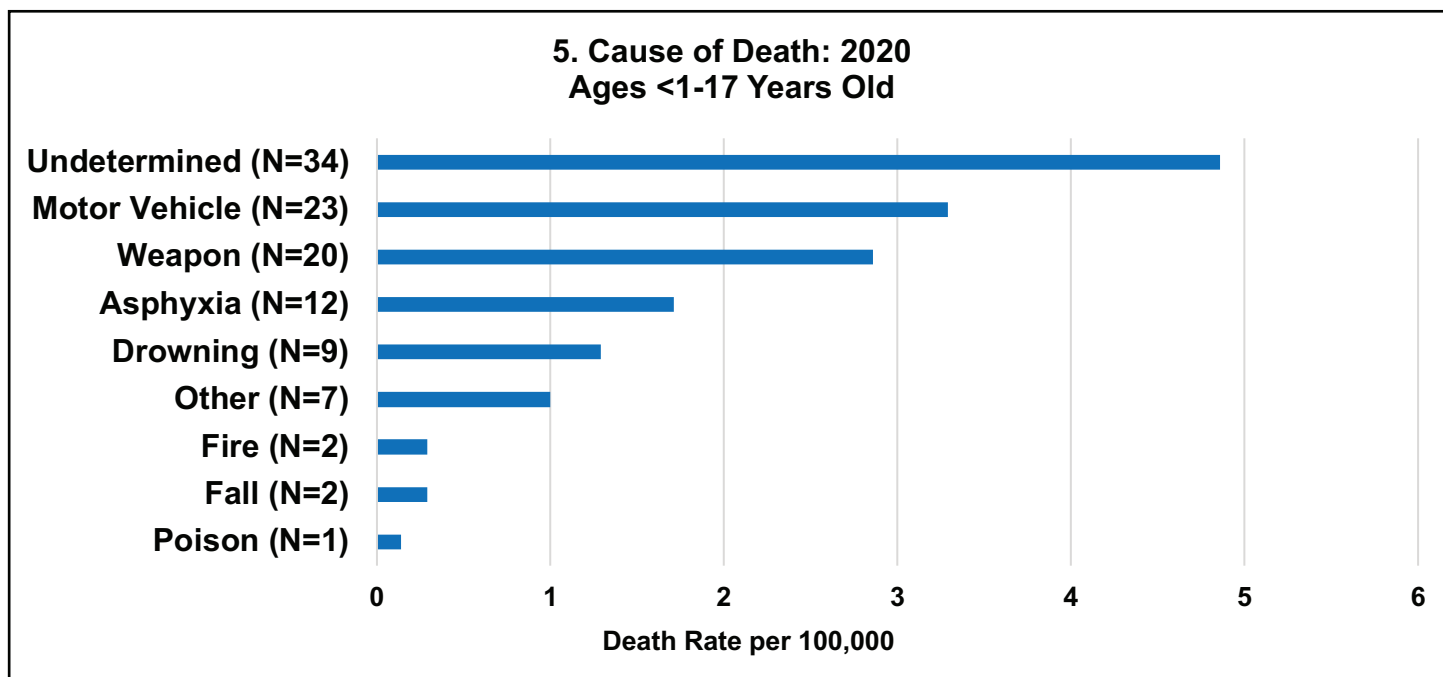


Reviewed Infant and Child Deaths: Cause of Death

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).

Findings:

Undetermined death was the leading cause of death in 2020 (4.86) followed by motor vehicle accidents (3.29) (Chart 5).



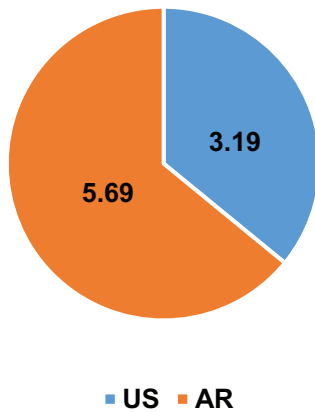
Accidental Deaths: Motor Vehicle Accidents (MVA)

Findings (death rates for charts are per 100,000):

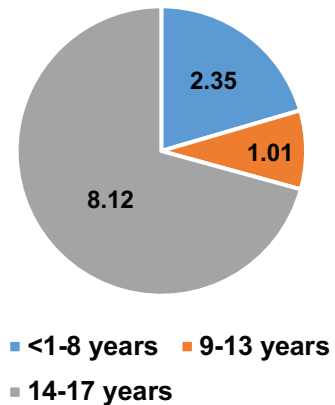
MVAs include motor vehicle crashes or MV vs. non MV, such as pedestrians, ATVs or motorcycles.

- Arkansas had a higher rate of MVA's compared to the US (AR 5.69 vs US 3.19) (Chart 6a).
- Teens, males and whites had high rates of MVA. (Charts 6b, 6c, 6d).
- Automobiles were the leading cause of motor vehicle accidents as compared to ATVs (2.57 vs 0.43) (Chart 6e).
- No seat belt use in motor vehicle accidents was higher than seat belt use (1.00 vs 0.57) (Chart 6F).

**6a. Motor Vehicle Accidents: US vs AR
2017-2020
Ages <1-17 Years Old**

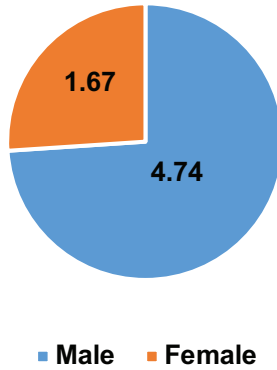


**6b. Motor Vehicle Accidents: Age
2020
Ages <1-17 Years Old
N=23**

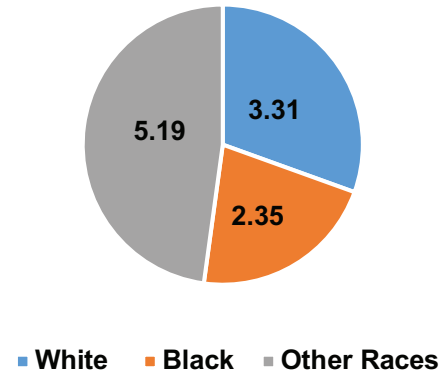


Accidental Deaths: Motor Vehicle Accidents

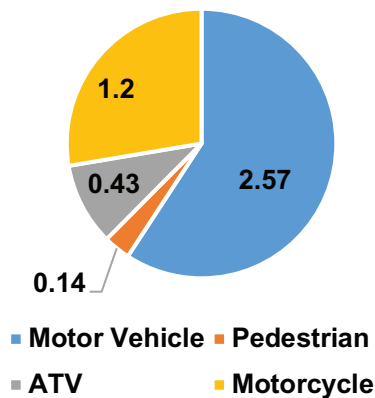
6c. Motor Vehicle Accidents: Gender 2020
Ages <1-17 Years Old
N=23



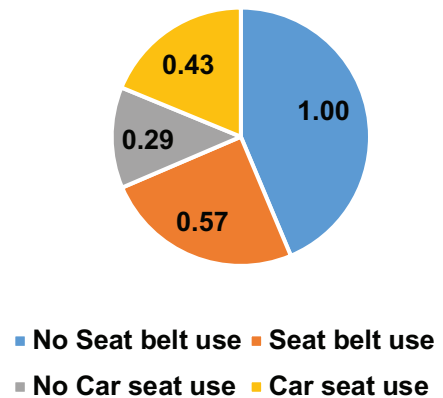
6d. Motor Vehicle Accidents: Race 2020
Ages <1-17 Years Old
N=23



6e. Type of Motor Vehicle Accidents 2020
Ages <1-17 Years Old
N=23)



6f. Type of Restraint Use 2020
Ages <1-17 Years Old
N=16



ICDR Team Recommendations:

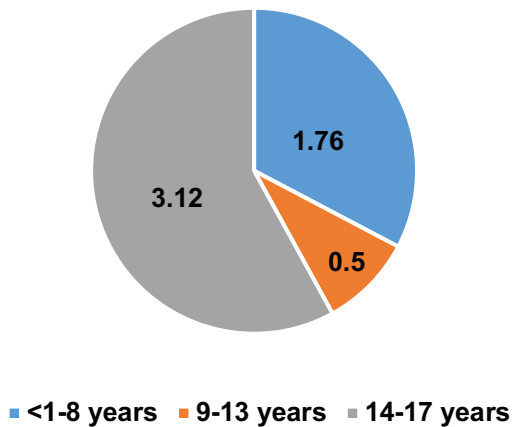
Northwest teams reviewed several MVA deaths where a small child was run over, by a caregiver, in their driveway. The team suggests developing educational messaging for caregivers with small children to raise awareness of the dangers of backing up.

Accidental Deaths: Asphyxia

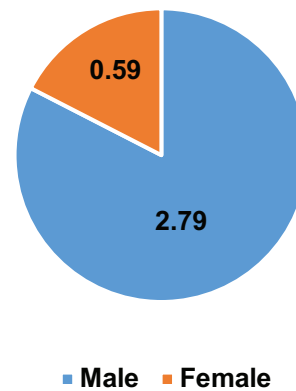
Findings (death rates for charts are per 100,000):

- Teens had higher rates of asphyxia than other children combined (3.12 vs 2.26) (Chart 7a).
- Males had a higher rate of asphyxia deaths than females (2.79 vs 0.59) (Chart 7b).
- The rate of white children who died of asphyxia was lower than among black children (1.36 vs 1.56) (Chart 7c).
- Strangulation was the leading event in asphyxia deaths (Chart 7d).

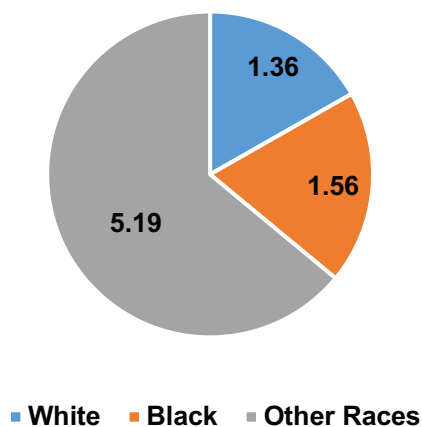
7a. Asphyxia Deaths: Age
2020
Ages <1-17 Years Old
N=12



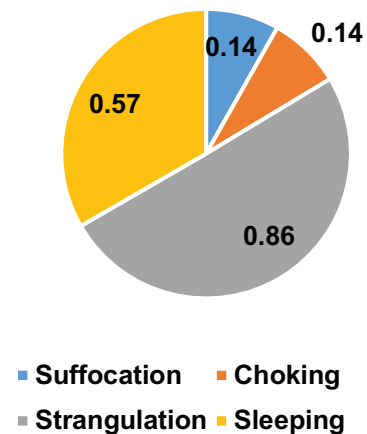
7b. Asphyxia Deaths:
Gender
2020
Ages <1-17 Years Old
N=12



7c. Asphyxia Deaths: Race
2020
Ages <1-17 Years Old
N=12



7d. Asphyxia Deaths: Event
2020
Ages <1-17 Years Old
N=12



Accidental Deaths: Asphyxia

ICDR Team Recommendations:

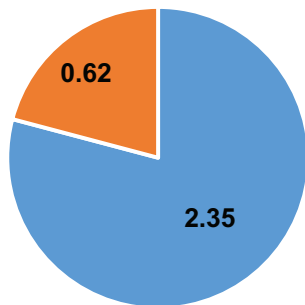
- Increase community awareness about choking hazards in small children such as: button batteries, small toys, and food.
 - Increase community awareness about teen participation in autoerotic asphyxiation activities due to social media influences. Autoerotic asphyxiation is defined as a state of asphyxia intentionally induced (as by smothering or strangling oneself) so as to heighten sexual arousal during masturbation (Merriam-Webster.com, accessed on 1/4/2023).
-

Accidental Deaths: Drowning

Findings (death rates for charts are per 100,000):

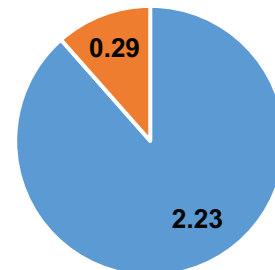
- Drowning deaths among males were higher than females (2.23 vs 0.29) (Chart 8b).
- More white children drowned than black children (1.56 vs.78) (Chart 8c).
- There was a higher rate of drowning deaths that occurred in pools versus open water (0.71 vs 0.57) (Chart 8d).

8a. Drowning Deaths: Age
2020
Ages <1-17 Years Old
N=9



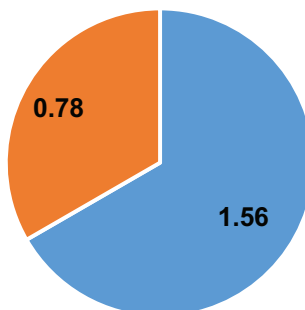
■ <1-8 years ■ 14-17 years

8b. Drowning Deaths: Gender
2020
Ages <1-17 Years Old
N=9



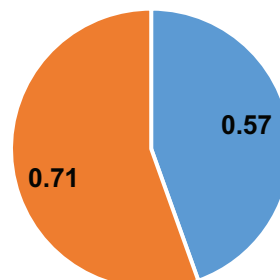
■ Male ■ Female

8c. Drowning Deaths: Race
2020
Ages <1-17 Years Old
N=9



■ White ■ Black

8d. Drowning Deaths: Location
2020
Ages <1-17 Years Old
N=9



■ Open Water ■ Pool

6. Accidental Deaths: Drowning

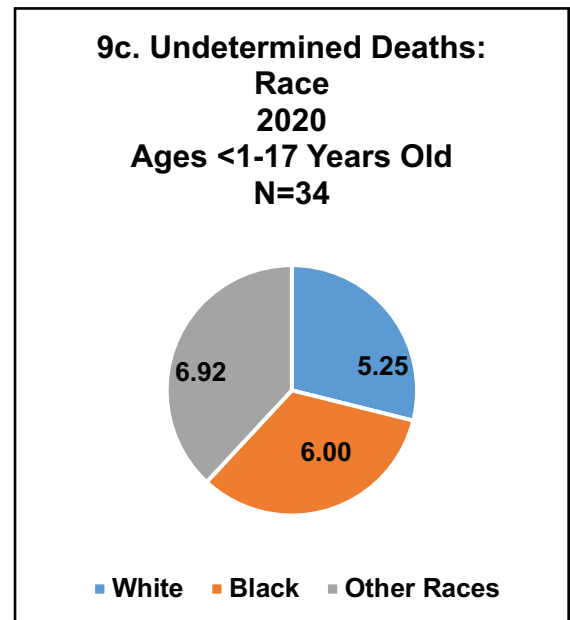
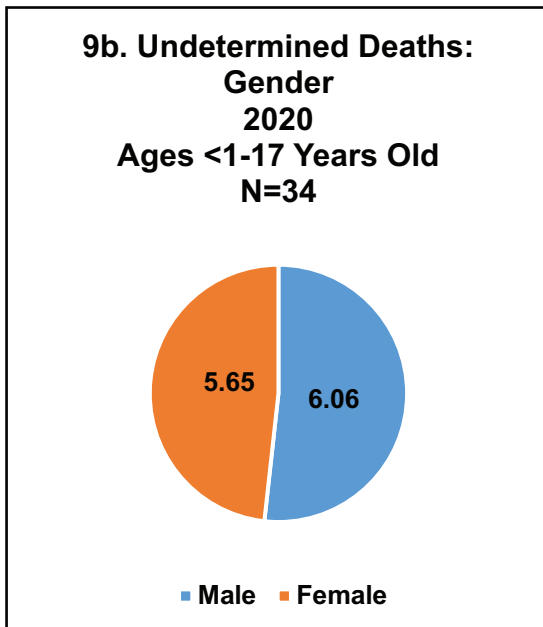
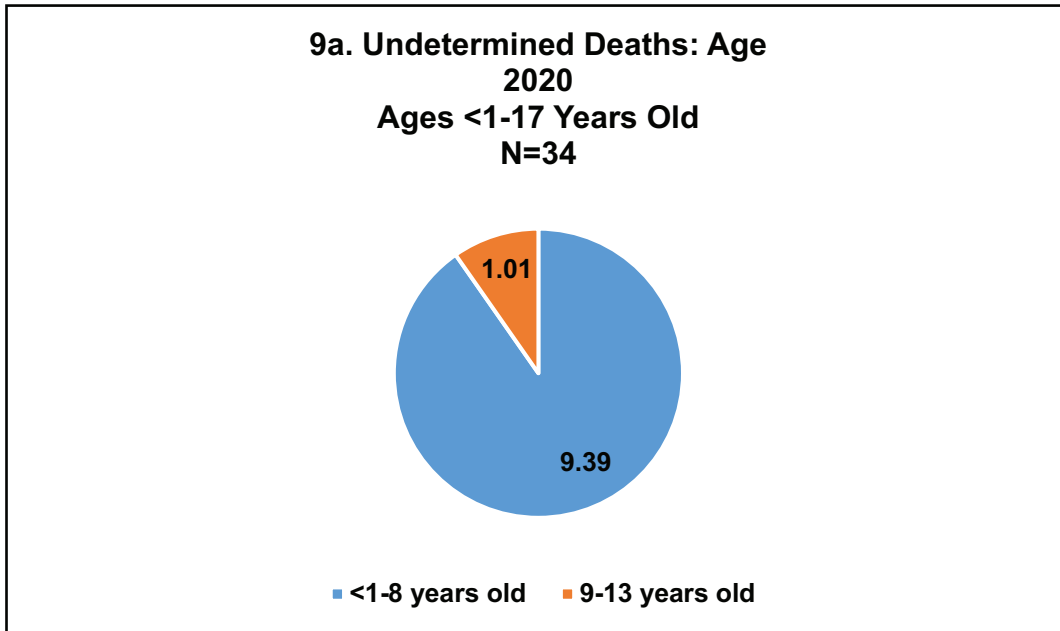
ICDR Team Recommendations:

Pass city ordinances, for private pool owners, requiring four-sided fences with self closing/locking gates.

Undetermined Deaths

Findings (death rates for charts are per 100,000):

- Undetermined deaths predominately occurred among children <1-8 years old (Chart 9a).
- Black children had a higher rate of undetermined deaths than white children (6.00 vs 5.25) (Chart 9c).
- Undetermined deaths related to sleeping or sleep environment had a higher rate than any other undetermined deaths (4.57 vs 0.29) (Chart 9d).



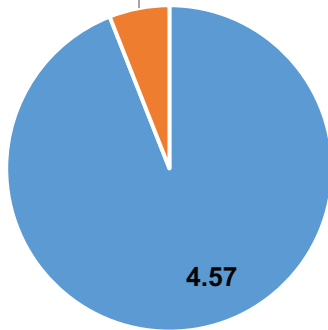
Undetermined Deaths

9d. Undetermined Deaths: Sleep Related 2020

Ages <1-17 Years Old

N=34

0.29



■ Yes ■ No

9e. Undetermined Deaths: Incident Sleep Location 2020

Ages <1-17 Years Old

N=32

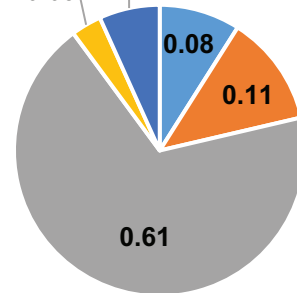
0.03

0.06

0.08

0.11

0.61



■ Crib ■ Bassinette
■ Adult Bed ■ Couch
■ Floor

ICDR Team Recommendations:

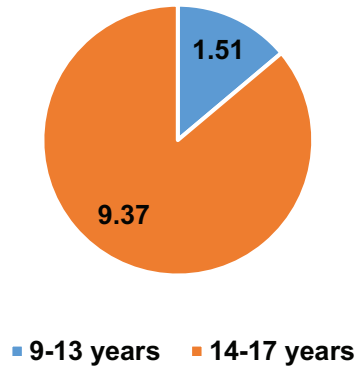
The American Academy of Pediatrics recommends (Alone, Back, Crib) safe sleep guidelines to be followed as best practice. The teams will continue promoting this within their communities by distributing safe sleep education and materials.

Suicide Deaths

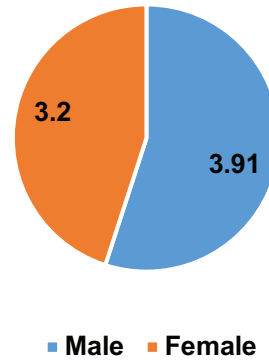
Findings (death rates for charts are per 100,000):

- Suicide death rate among 14-17 year olds was higher than 9-13 year olds (9.37 vs 1.51) (Chart 10a).
- Females had slightly higher rates of suicide death than males (3.91 vs 3.2) (Chart 10b).
- The rate of black children who died by suicide is higher than white children (4.69 vs 1.95) (Chart 10c).
- Firearms were the leading contributing means in suicide deaths (Chart 10d).

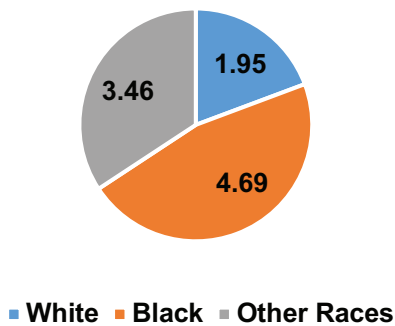
**10a. Suicide Deaths:
Age
2020
Ages 9-17 Years Old
N=18**



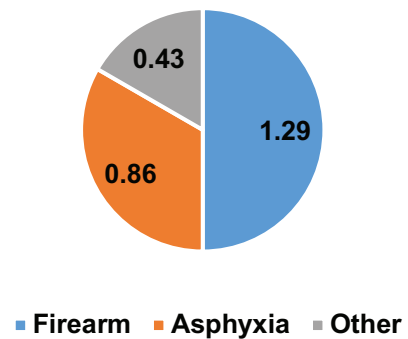
**10b. Suicide Deaths:
Gender
2020
Ages 9-17 Years Old
N=18**



**10c. Suicide Deaths:
Race
2020
Ages 9-17 Years Old
N=18**



**10d. Suicide Deaths:
Means
2020
Ages 9-17 Years Old
N=18**



ICDR Team Recommendations:

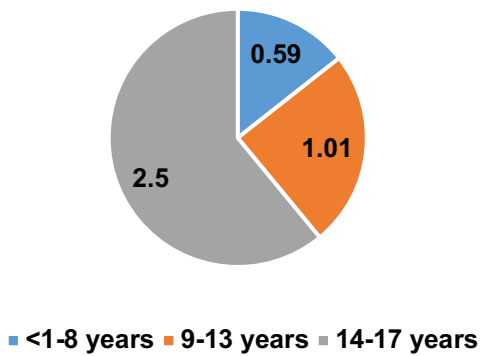
- **Continue offering ASIST (Applied Suicide Intervention Skills) trainings for educators throughout the state.**
 - **Continue to increase public awareness about firearm safe storage options and AR4U.org website.**
-

Homicide Deaths

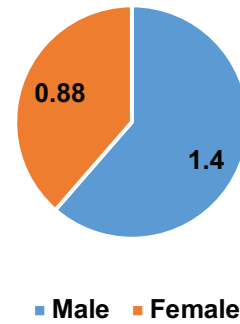
Findings (death rates for charts are per 100,000):

- Homicide deaths were higher in 14-17 year olds than any other age group (2.50 vs 1.6) (Chart 11a).
- Males had a higher rate of death by homicide than females (1.40 vs 0.88) (Chart 11b).
- Black children had higher rates of homicide-related deaths than whites (2.35 vs .97) (Chart 11c).
- Firearms were the leading means among homicide deaths (0.71 vs 0.43) (Chart 11d).

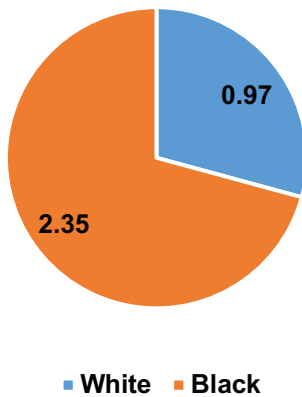
11a. Homicide Deaths: Age
2020
Ages <1-17 Years Old
N=8



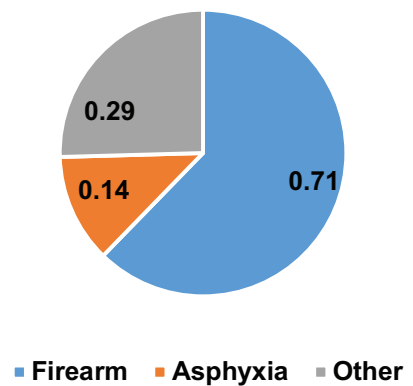
11b. Homicide Deaths:
Gender
2020
Ages <1-17 Years Old
N=8



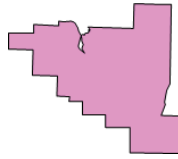
11c. Homicide Deaths: Race
2020
Ages <1-17 Years Old
N=8



11d. Homicide Deaths:
Means
2020
Ages <1-17 Years Old
N=8

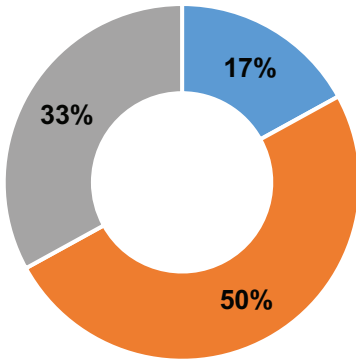


ICDR Team Data



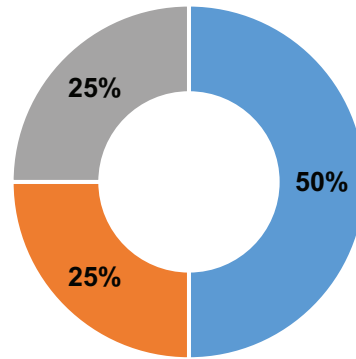
Capital City Team: Pulaski County

**2020 Reviewed Deaths:
Manner of Death
N=12**



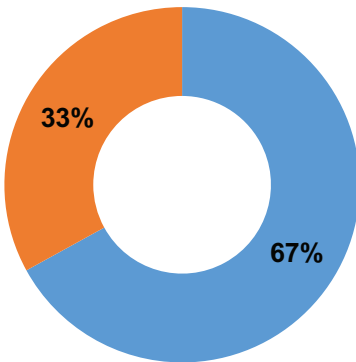
■ Accidents ■ Undetermined ■ Suicide

**2020 Reviewed Deaths:
Age Distribution
N=12**



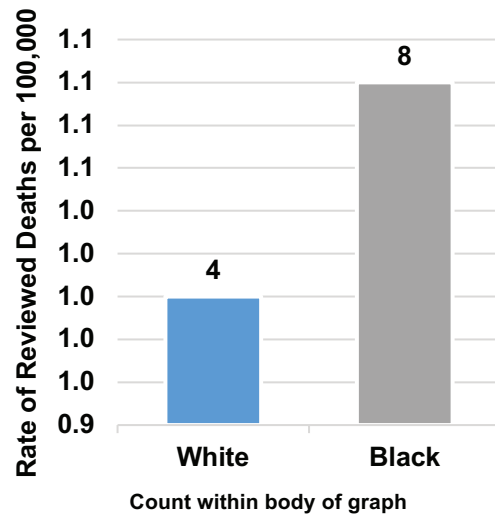
■ <1-8 years ■ 9-13 years
■ 14-17 years

**2020 Reviewed Deaths:
Gender Distribution
N=12**

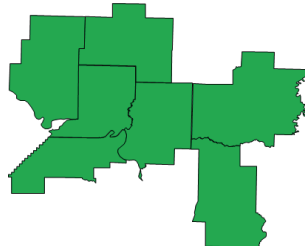


■ Male ■ Female

**2020 Reviewed Deaths:
Racial Distribution
N=12**

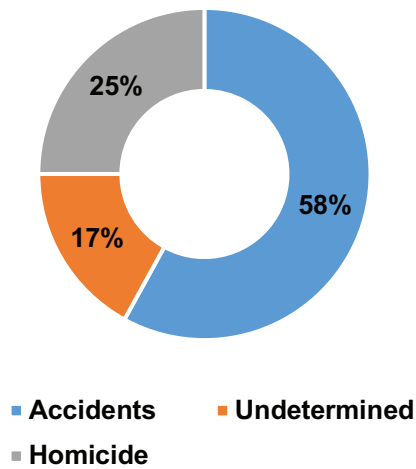


ICDR Team Data

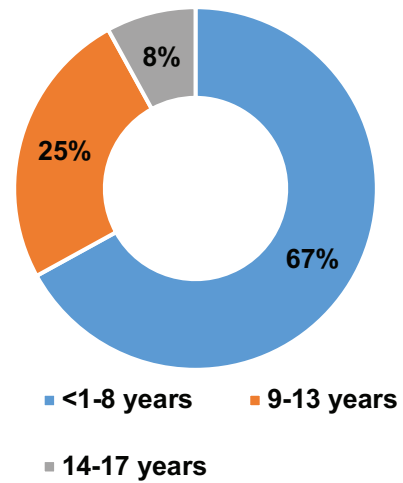


Central Team: Conway, Faulkner, Lonoke, Perry, Pope, Van Buren and White Counties

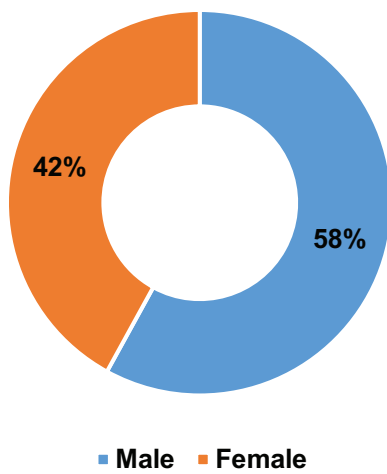
**2020 Reviewed Deaths:
Manner of Death
N=12**



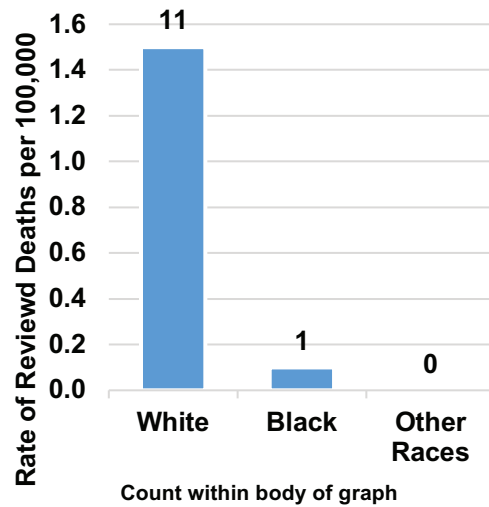
**2020 Reviewed Deaths: Age
Distribution
N=12**



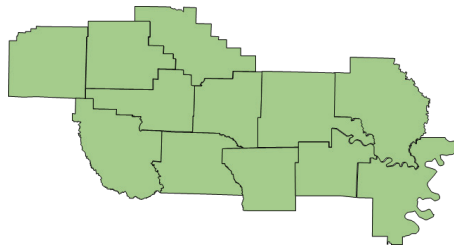
**2020 Reviewed Deaths:
Gender Distribution
N=12**



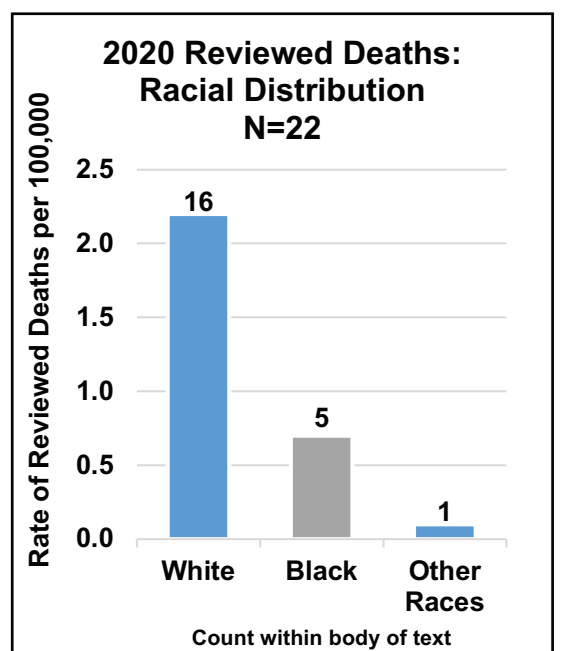
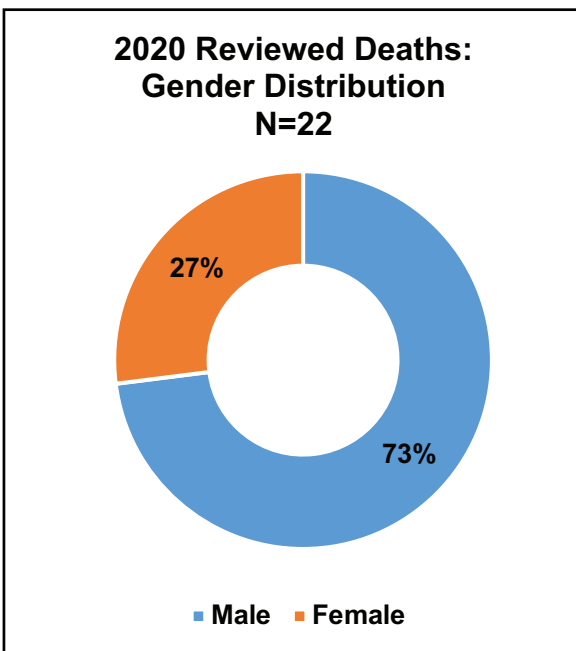
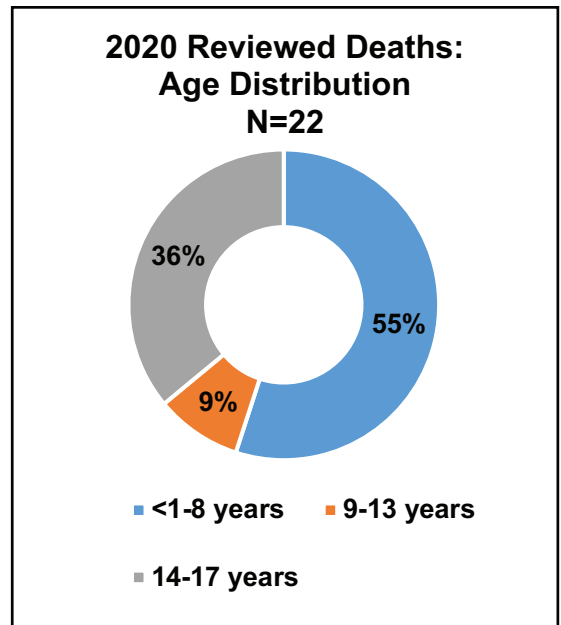
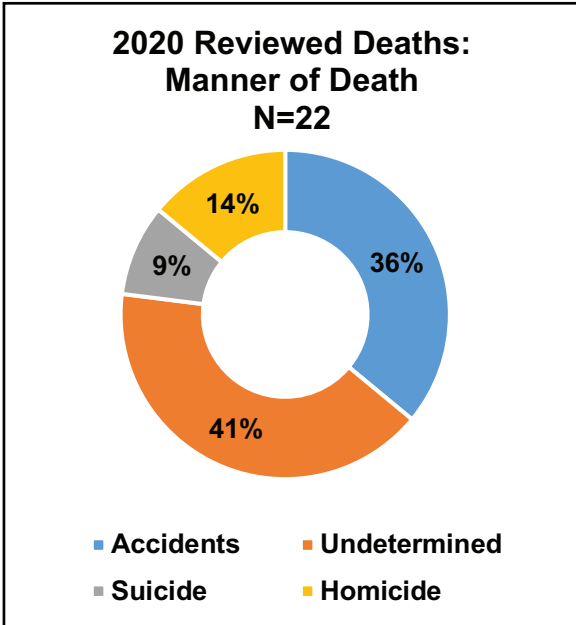
**2020 Reviewed Deaths:
Racial Distribution
N=12**



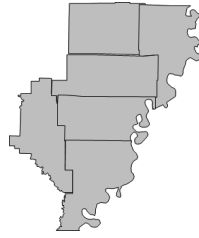
ICDR Team Data



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

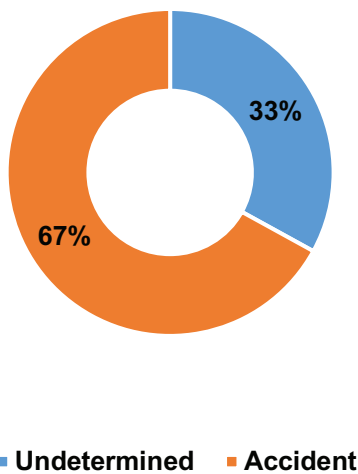


ICDR Team Data

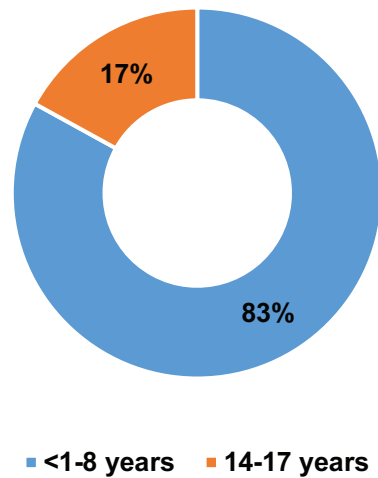


Delta Team: Crittenden, Cross, Lee, Monroe, Phillips, and St. Francis Counties

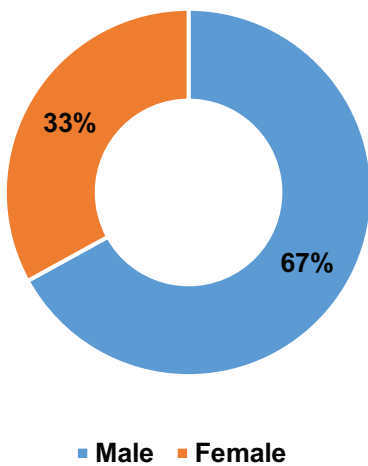
**2020 Reviewed Deaths:
Manner of Death
N=6**



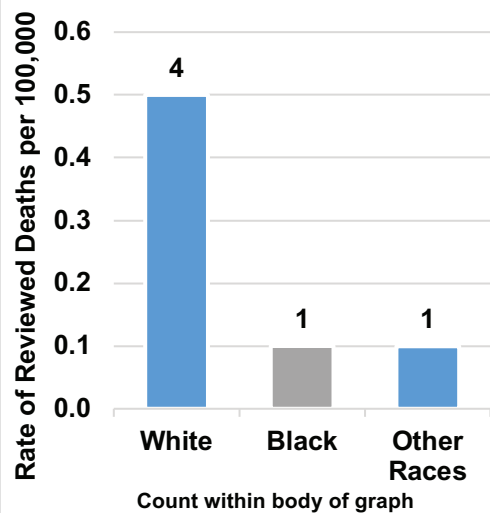
**2020 Reviewed Deaths:
Age Distribution
N=6**



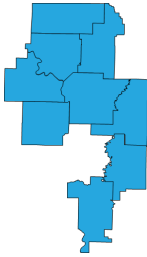
**2020 Reviewed Deaths:
Gender Distribution
N=6**



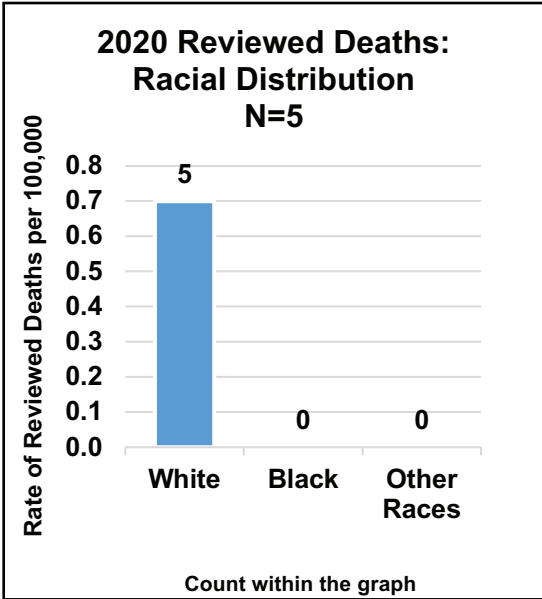
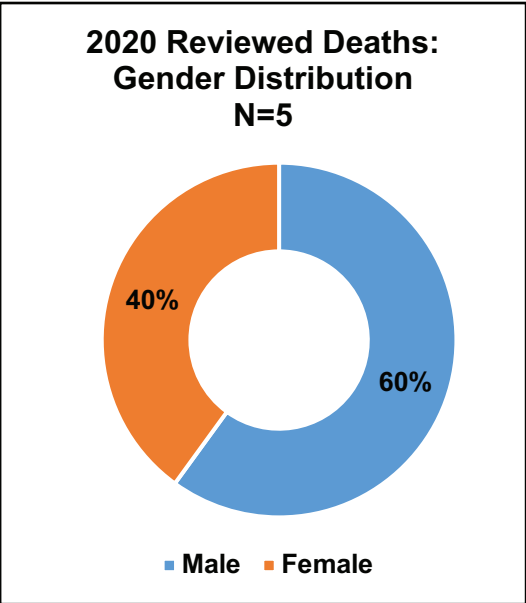
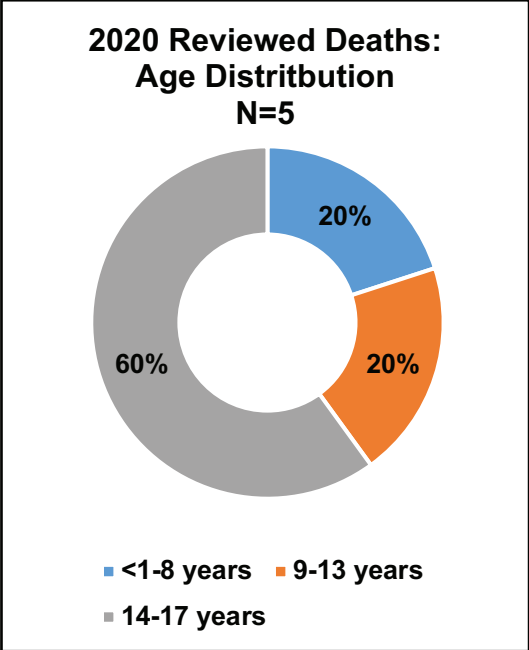
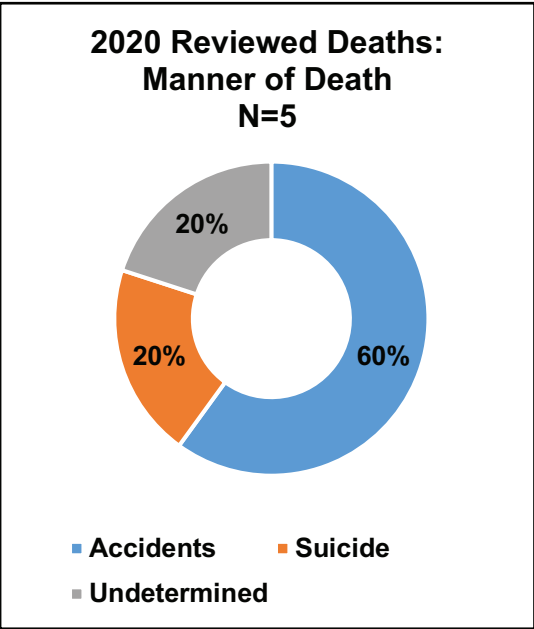
**2020 Reviewed Deaths:
Racial Distribution
N=6**



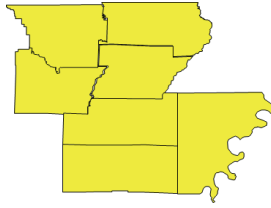
ICDR Team Data



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

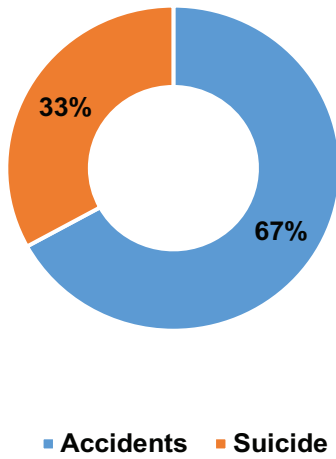


ICDR Team Data

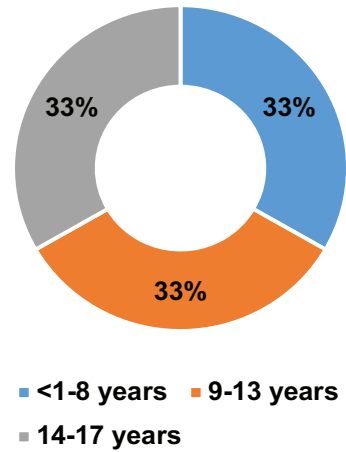


Northeast Team: Clay, Craighead, Greene, Lawrence, Mississippi, Poinsett and Randolph Counties

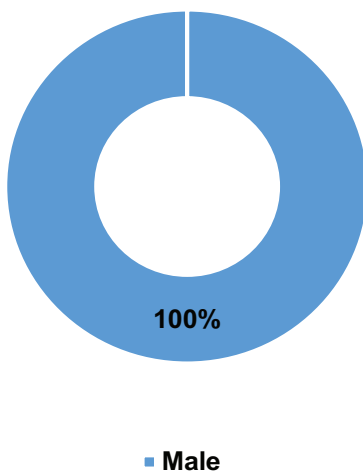
**2020 Reviewed Deaths:
Manner of Death
N=6**



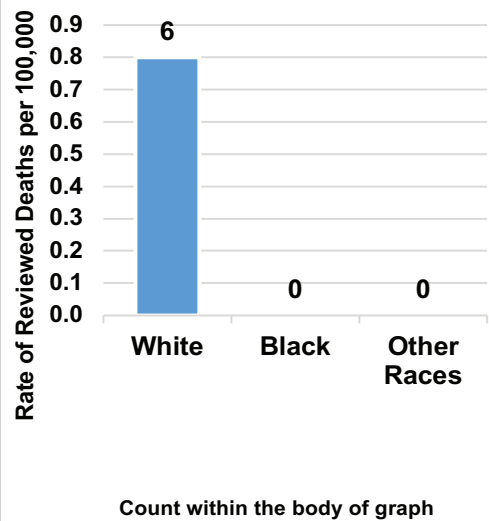
**2020 Reviewed Deaths:
Age Distribution
N=6**



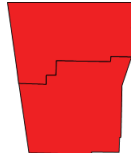
**2020 Reviewed Deaths:
Gender Distribution
N=6**



**2020 Reviewed Deaths:
Racial Distribution
N=6**

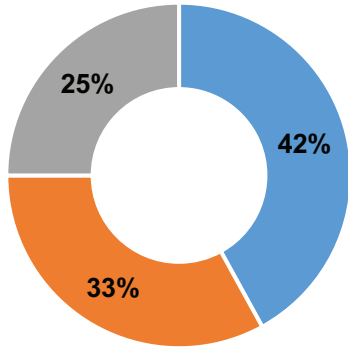


ICDR Team Data



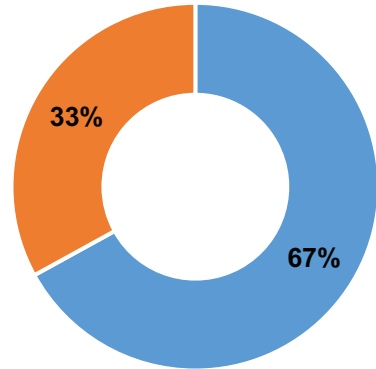
Northwest Team: Benton and Washington Counties

2020 Reviewed Deaths:
Manner of Death
N=12



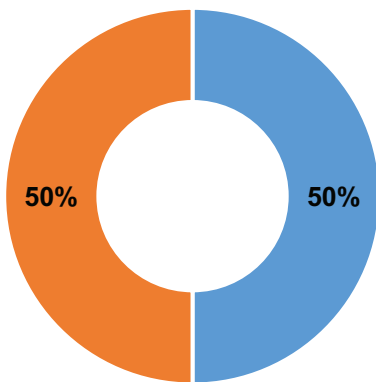
■ Accidents ■ Undetermined
■ Suicide

2020 Reviewed Deaths:
Age Distribution
N=12



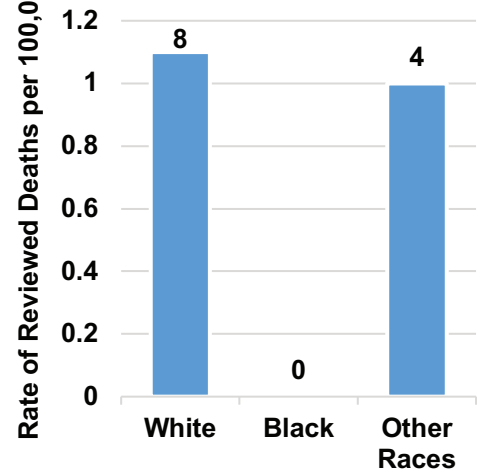
■ <1-8 years ■ 14-17 years

2020 Reviewed Deaths:
Gender Distribution
N=12



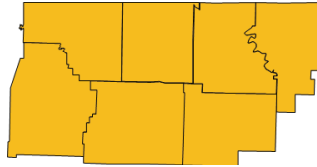
■ Male ■ Female

2020 Reviewed Deaths:
Racial Distribution
N=12



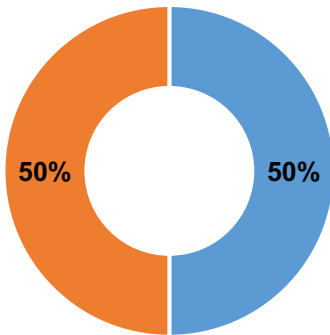
Count within body of graph

ICDR Team Data



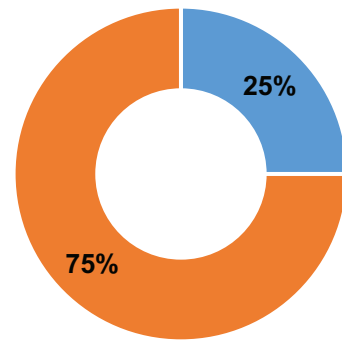
ICDR Ozark Mountain Team: Baxter, Boone, Carroll, Madison, Marion, Newton and Searcy Counties

2020 Reviewed Deaths:
Manner of Death
N=4



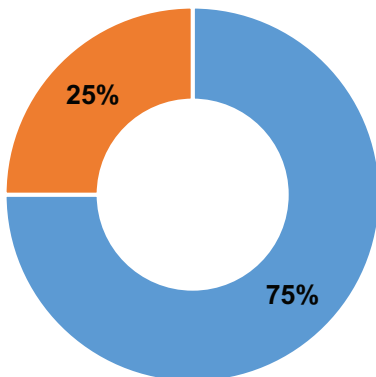
■ Accidents ■ Undetermined

2020 Reviewed Deaths:
Age Distribution
N=4



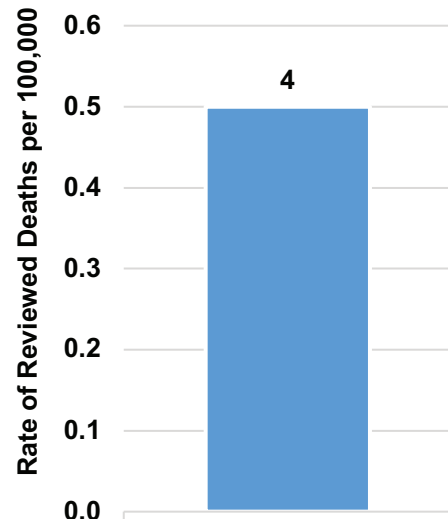
■ 10-14 years ■ 15-17 years

2020 Reviewed Deaths:
Gender Distribution
N=4



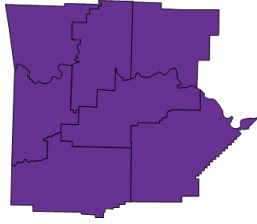
■ Male ■ Female

2020 Reviewed Deaths:
Racial Distribution
N=4

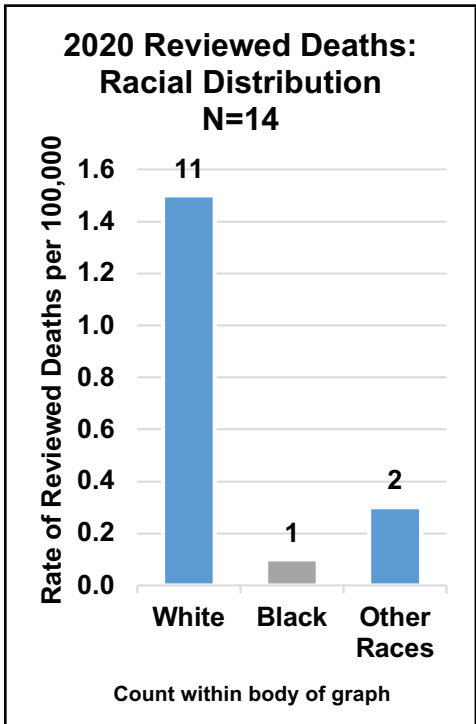
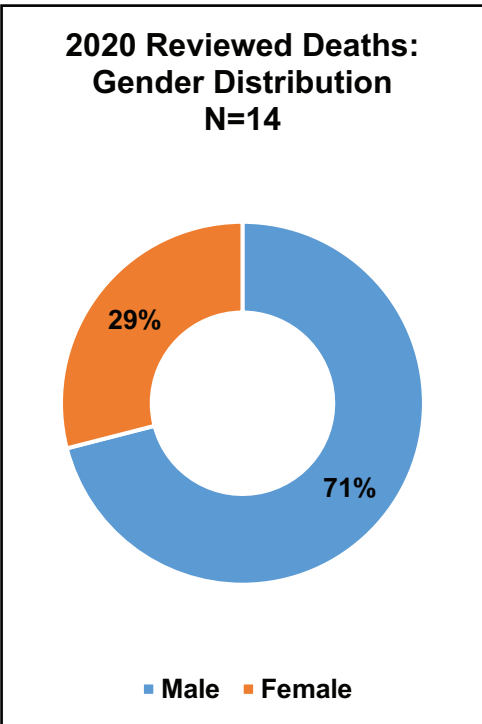
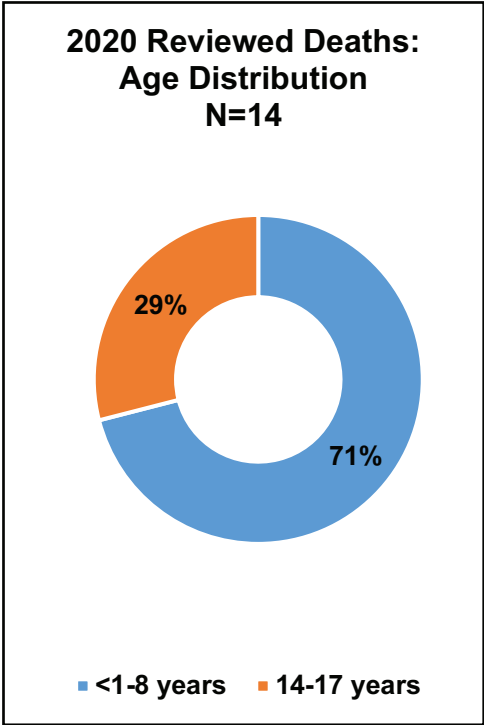
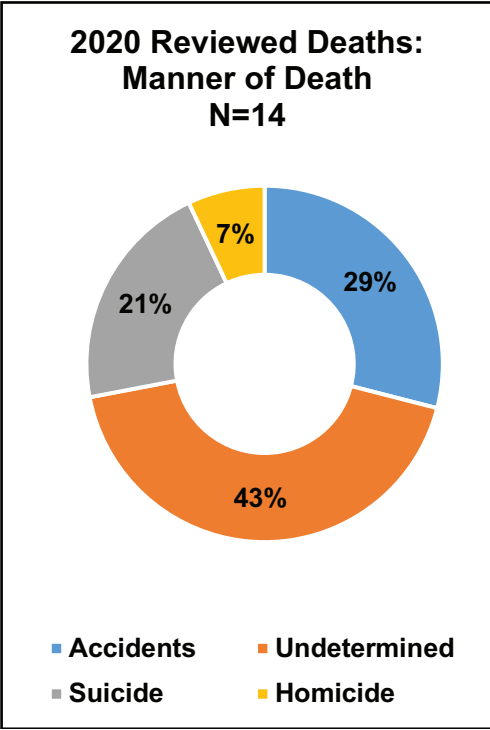


White
Count within body of graph

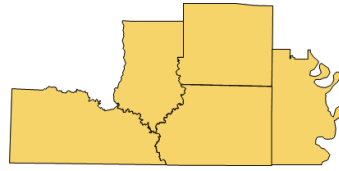
ICDR Team Data



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

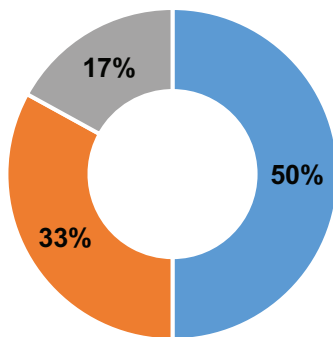


ICDR Team Data



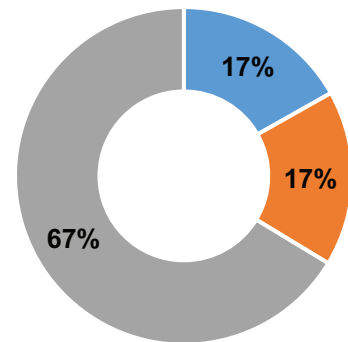
Southeast Team: Ashley, Bradley, Chicot, Drew and Union Counties

**2020 Reviewed Deaths:
Manner of Death
N=6**



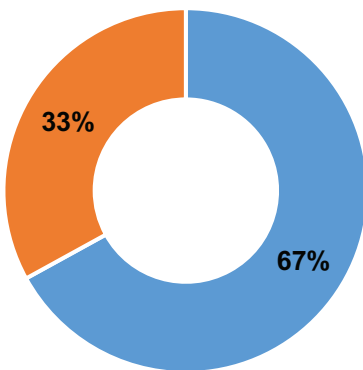
- Accidents
- Undetermined
- Homicide

**2020 Reviewed Deaths:
Age Distribution
N=6**



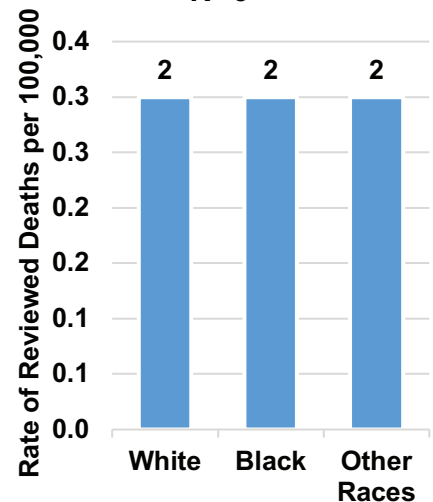
- <1-8 years
- 9-13 years
- 14-17 years

**2020 Reviewed Deaths:
Gender Distribution
N=6**



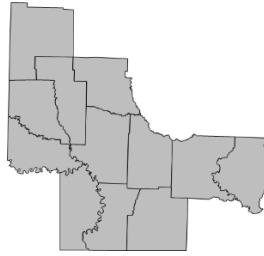
- Male
- Female

**2020 Reviewed Deaths:
Racial Distribution
N=6**



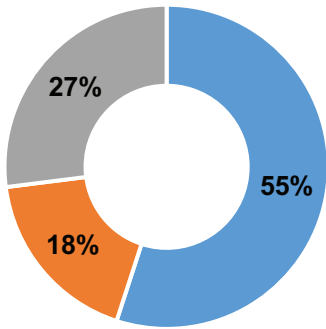
Count within body of graph

ICDR Team Data



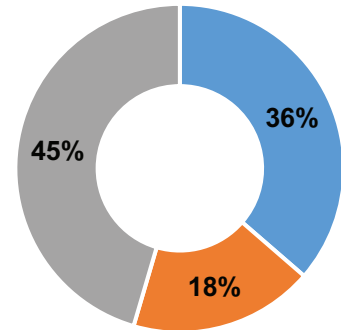
Southwest Team: Calhoun, Columbia, Hempstead, Howard, Lafayette, Little River, Miller, Nevada, Ouachita, Pike, Polk, and Sevier Counties

**2020 Reviewed Deaths:
Manner of Death
N=11**



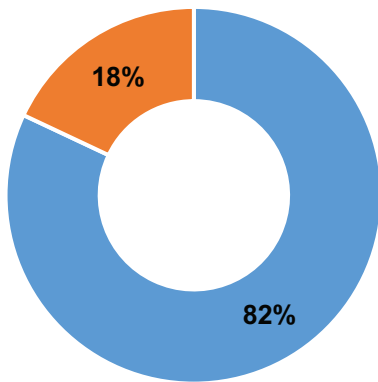
■ Accidents ■ Undetermined ■ Suicide

**2020 Reviewed Deaths:
Age Distribution
N=11**



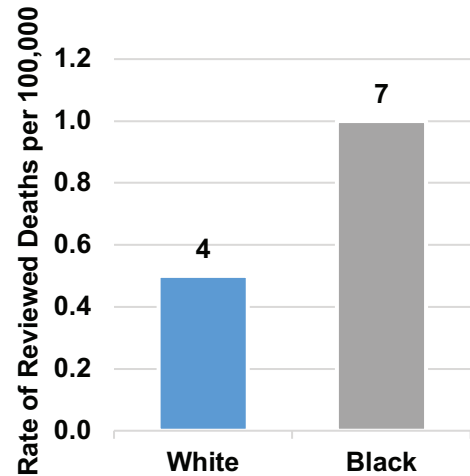
■ <1-8 years ■ 9-13 years
■ 14-17 years

**2020 Reviewed Deaths:
Gender Distribution
N=11**



■ Male ■ Female

**2020 Reviewed Deaths:
Racial Distribution
N=11**



Count within body of graph

Notes

For more information or questions about
this report, please contact:

ICDR Program Coordinator

501-364-3400

ACH-IPC@archildrens.org



**Arkansas
Children's**

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