CHILD DEATH REVIEW REPORT 2022

Metro Public Health Dept
Nashville/Davidson County
Protecting, Improving, and Sustaining Health

Davidson County Child Death Review Report, 2022

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Participating Agencies

Metro Public Health Department
Metro Nashville Police Department
Metro Nashville Public Schools
Metro Office of Family Safety
Metro Social Services
Office of the District Attorney
Juvenile Court
Nashville Fire Department
Medical Examiner's Office
Department of Children's Services
Monroe Carrell Jr. Children's Hospital at Vanderbilt
Vanderbilt University Medical Center
St. Thomas Midtown Hospital
Nurses for Newborns
Nashville Children's Alliance
Youth Villages

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Vision & Mission

VISION

Our vision is a community where all children can live healthy, thriving lives free from preventable injury, illness, and death.

MISSION

Our mission is to provide a better understanding of how and why children die in our community to find ways to reduce the number of preventable deaths.

How We **Work**

The Child Death Review Team (CDRT) is empowered by state statute (T.C.A. 68-42-101) and Mayoral executive order to review deaths of Davidson County children under the age of 18 years in order to achieve the following goals:

- Ensure an accurate inventory of child deaths.
- Support adequate child death investigations.
- Enable multi-agency collaboration and communication at both the state and local levels.
- Analyze patterns and trends in mortality.
- Enhance community awareness of how and why children die.
- Develop recommendations to reduce preventable deaths.

The review process is used to identify modifiable risk factors, gaps in systems and services, and opportunities for strategic prevention initiatives with the goal of building a community where all children have an equal chance to survive and thrive into adulthood.

Report Highlights

- In 2022, the CDRT reviewed 92 deaths. 54% happened to infants.
- Nearly half (48%) of reviewed deaths were preventable.
- Non-Hispanic Black (NHB) children were two times more likely to die than Non-Hispanic White (NHW) children. Hispanic children were 66% more likely to die than NHW children.
- NHB infants were 2.6 times more likely to die than NHW infants.
- In 2022, the NHB infant mortality rate decreased 22% from the rate measured in 2018.
- 34% of infant deaths were sleep-related. Of those, 88% occurred when the infant was placed to sleep somewhere other than in a crib or other safe space.
- 53% of school-aged children who died faced challenges in school.
- 12% of deaths were the result of accidents including suffocation, motor vehicle crashes, poisonings, and drownings.
- 15% of deaths were the result of homicide or suicide.
- 25% of deaths showed some evidence of maltreatment such as abuse, neglect, lack of supervision, or negligence.
- 54% of the families who experienced the loss of a child were engaged with some type of social service.

Introduction

The Child Death Review process brings together a multidisciplinary team to examine child deaths in the community. The goal is to understand why children die and how such tragedies can be prevented.

This report provides the data and findings of the CDRT for deaths occurring in 2022. For the current analysis, the death was reviewed if:

- The child resided in Davidson County at the time of death;
- The child was between 0 and 17 years old; and
- The death occurred in Tennessee.

Infant deaths were reviewed if they were born on or after 23 weeks gestation or at a weight equal to or greater than 500 grams.

Approximately 82% of all child deaths among Davidson County residents met review criteria and were reviewed. As such, data presented in this report may be slightly different from other published reports based on different data sources.

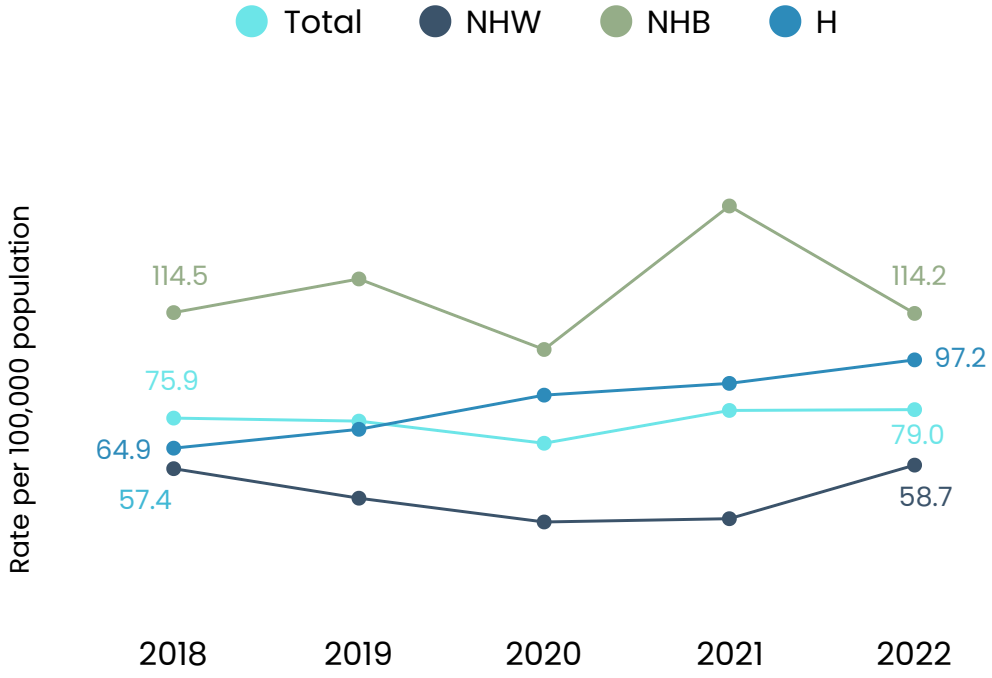
The report presents population level data to provide context, followed by review data grouped by cause of death. Demographic data is supported with social context information where applicable. Findings of the review team and related work in the community are also highlighted.

Technical notes about the analysis are included at the end of the report.

Child Mortality

Children
0- 17 years

TOTAL CHILD MORTALITY RATES BY RACE/ETHNICITY, DAVIDSON COUNTY

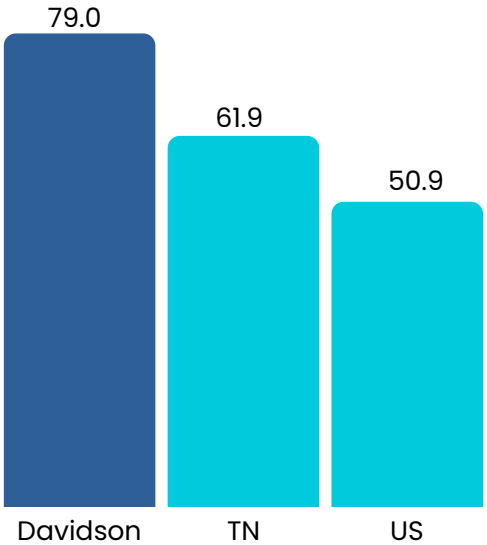


Non-Hispanic Black children are **two times more likely to die** than Non-Hispanic White children.

Hispanic children are **66% more likely to die** than Non-Hispanic White children.

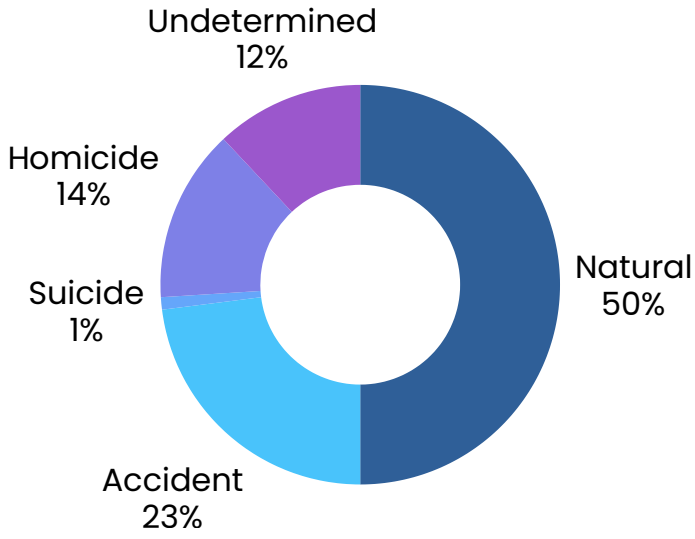
Source: TDH Vital Records; 2022 Davidson County estimates from CDC WONDER; ACS 1-year estimates, Census. 2020 uses bridged-race population estimates from NCHS.

TOTAL CHILD MORTALITY RATES, 2022



Source: CDC WONDER.

MANNER OF DEATH, REVIEWED CASES (N=92), 2022

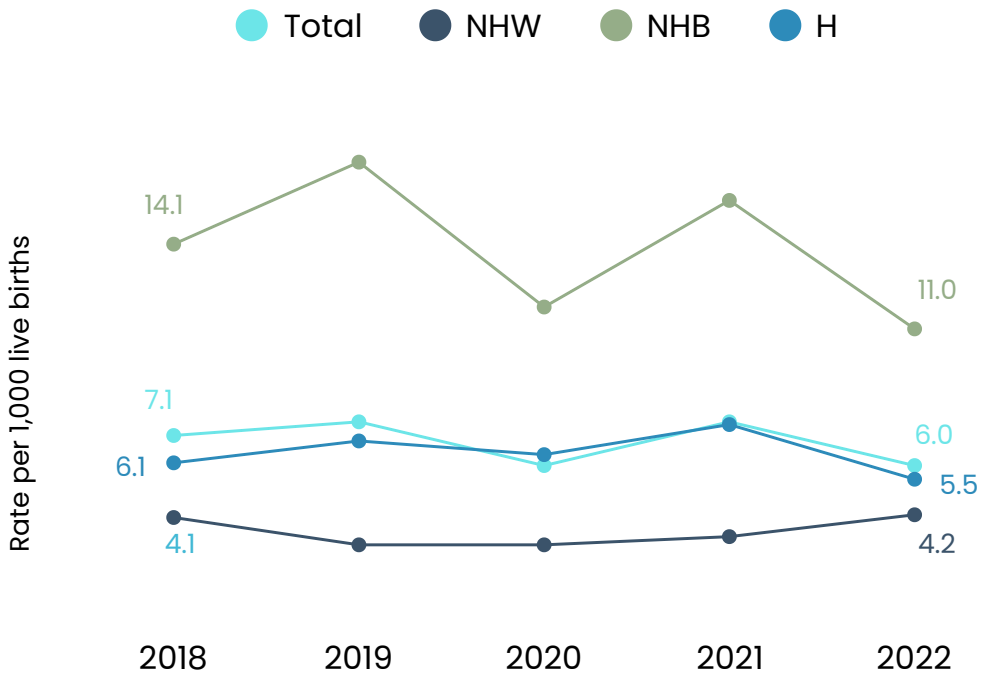


Source: CDR, 2022.

Infant Mortality

Infants <1 year

TOTAL INFANT MORTALITY RATES BY RACE/ETHNICITY, DAVIDSON COUNTY

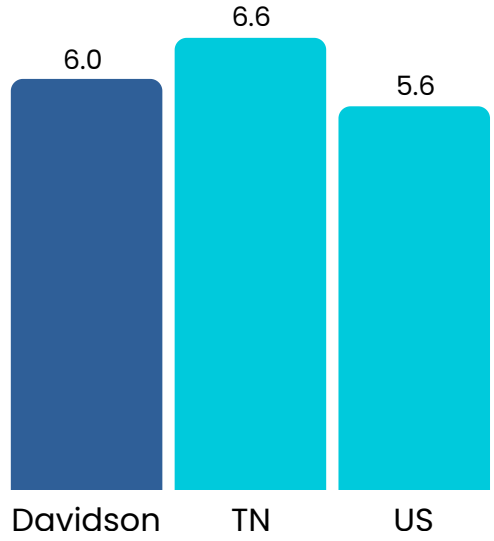


Source: TDH Vital Records; 2022 Davidson County estimates from CDC WONDER.

Non-Hispanic Black infants are **2.6 times more likely to die** than Non-Hispanic White infants.

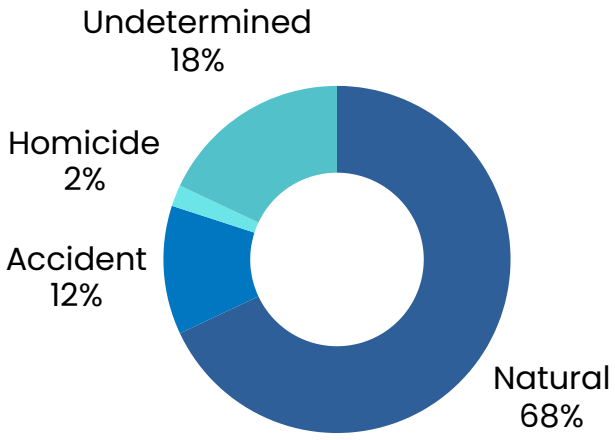
The Non-Hispanic Black infant mortality rate **decreased 22%** from 2018 to 2022.

TOTAL INFANT MORTALITY RATES, 2022



Source: CDC WONDER.

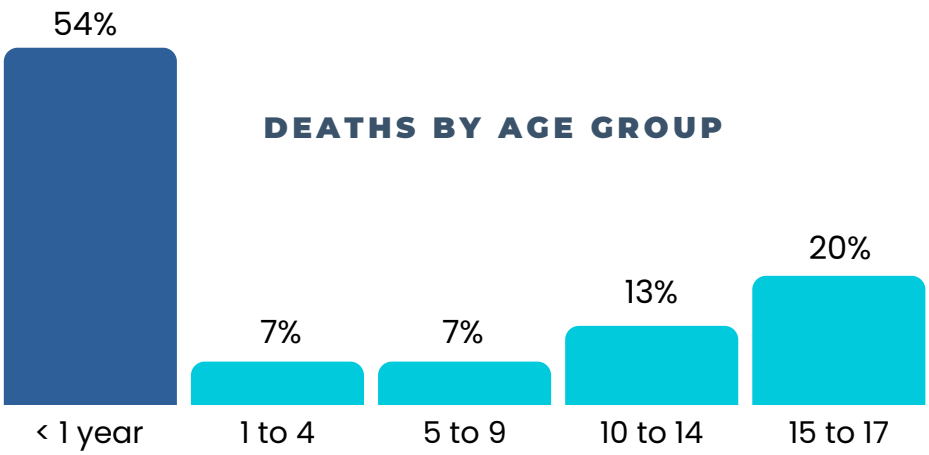
MANNER OF INFANT DEATH, REVIEWED CASES (N=92), 2022



Source: CDR, 2022.

Review Data **Summary**

The Child Death Review Team (CDRT) reviewed the deaths of **92 children** who died in 2022.

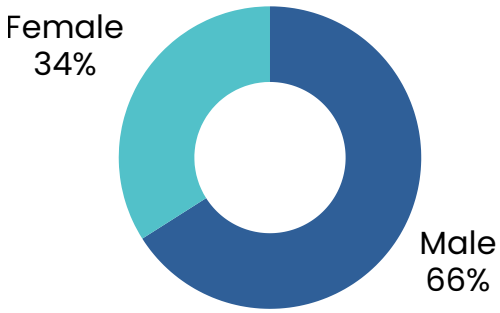


DEATHS BY AGE GROUP

Source: CDR, 2022.

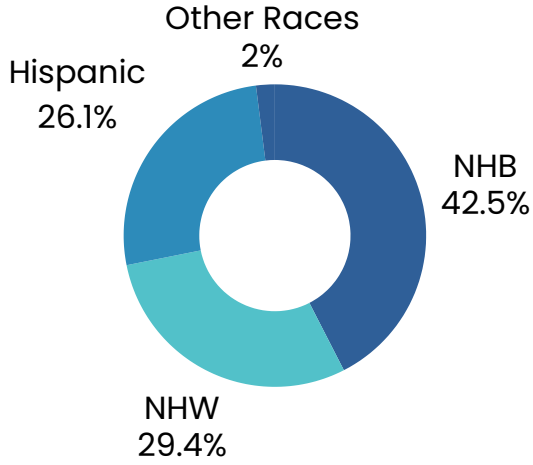
Nearly half (48%) of all reviewed deaths were determined to be **preventable**.

SEX



Source: CDR, 2022.

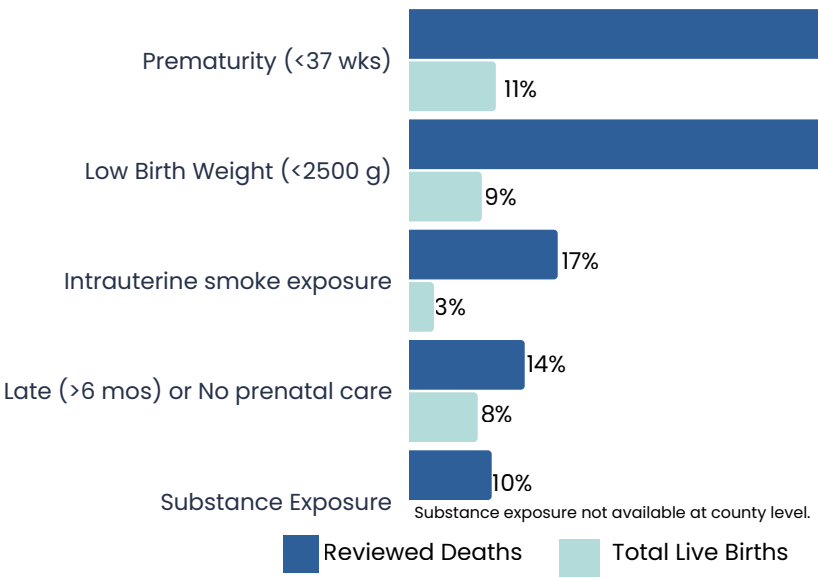
RACE/ETHNICITY



Source: CDR, 2022.

Infants < 1 year

Infant Deaths



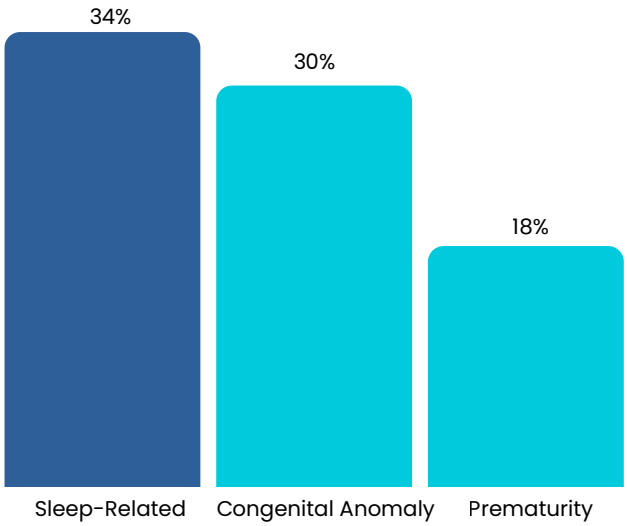
Source: CDR, 2022. Davidson county estimates from CDC WONDER.

RISK FACTORS FOR INFANTS

Risk factors associated with reviewed infant deaths were present at elevated rates as compared to those for all live births in Davidson County. **Increasing access to smoking cessation supports, substance use treatment, and prenatal care may help increase infant vitality.**

LEADING CAUSES OF INFANT DEATH

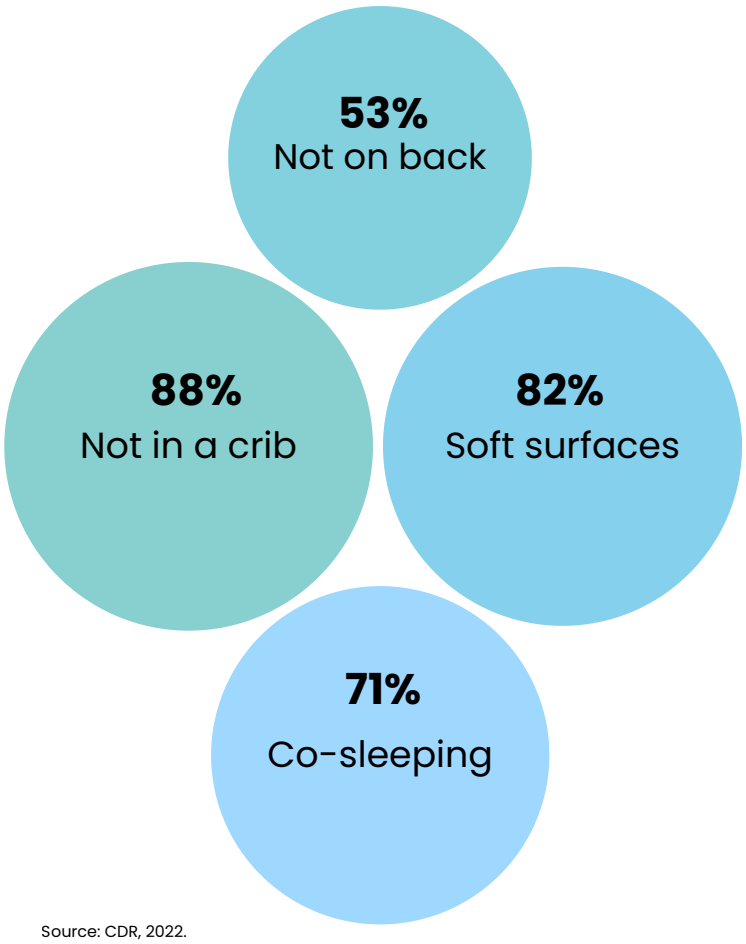
Nearly 68% of reviewed infant deaths were due to natural causes. The largest contributors were birth defects and complications of being born too early and too small. **The leading cause of preventable death was sleep-related suffocation,** accounting for approximately **one-third of all reviewed infant deaths**.



Source: CDR, 2022.

Sleep-Related Deaths

Infants < 1 year



Source: CDR, 2022.

SLEEP-RELATED RISK FACTORS

Unsafe sleeping environments are the leading causes of preventable death in infants. The safest place for infants to sleep is **Alone** on their sleep surface, on their **Back**, and in an empty **Crib**. This means no soft sleeping surfaces such as bumper pads, pillows, blankets, or stuffed animals, and no other objects such as toys, or baby supplies.

SOCIAL FACTORS

Housing instability and overcrowding may push caregivers to co-sleep when there is insufficient room for a crib. **Nearly half (47%) of sleep-related infant deaths occurred in overcrowded housing.** Addressing core problems like affordable housing and financial security can help families follow safe sleep guidelines effectively.

59%
Infants sleeping in an adult bed

82%
Homes with a crib or other safe sleeping space available

76%
Families receiving WIC services within 12 months prior to death

Children
0- 17 years

Accidental **Deaths**

5%
Fall

14%
Drowning

Nearly **23%** of reviewed deaths were caused by **accidents**.

33%
Suffocation

29%
Motor vehicle

19%
Poisoning

Motor vehicle crashes represented **29%** of accidental deaths.

Nearly all suffocation incidents were **sleep-related infant deaths.**

Source: CDR, 2022.

50%
Youth aged 15 to 17 who died from accidental causes

23%
Male youth who died from accidental causes

31%
Non-Hispanic Black youth who died from accidental causes

Children
0- 17 years

Accidental Deaths

POISONING DEATHS

All children of reviewed cases who died from accidental poisoning had traces of illicit fentanyl in their system. Among school-aged children, themes such as skipping school, behavioral challenges, and mental health issues emerged. **Properly storing medications and promoting resilience among children may help prevent unintentional poisonings.**[1]

SUFFOCATION DEATHS

Most of the reviewed suffocation deaths were sleep-related infant deaths, which are discussed elsewhere in this report. Key factors of non-infant deaths included mental health issues requiring prescription medication and seizures occurring during sleep.

DROWNING DEATHS

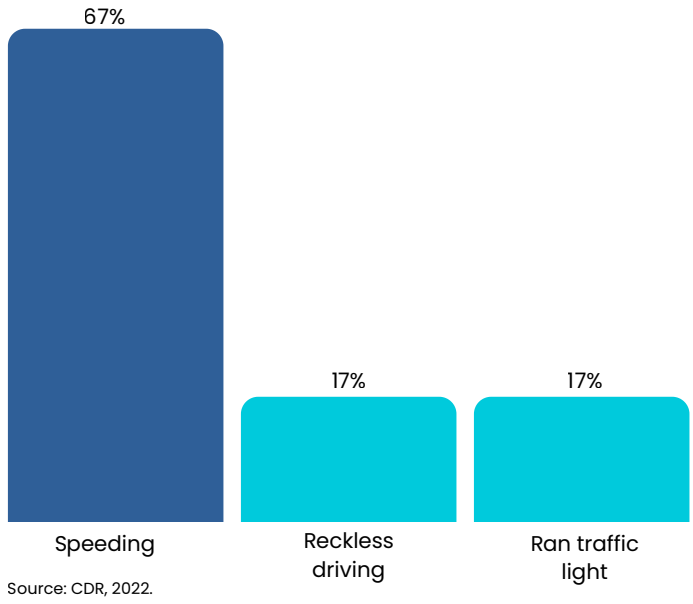
Unintentional drowning is a significant cause of death for children under 15 years old nationwide.[2] Among reviewed Davidson County cases, drownings occurred most commonly in pools, followed by natural bodies of water. **Key factors included insufficient supervision, lack of swimming ability, and failure to use swimming aids.**

FALL OR CRUSH DEATHS

Falls or crushing fatalities in children often occur because of external dangers like stairs, open windows, playground equipment, or unstable furniture. Children often struggle to evaluate risks accurately, possess insatiable curiosity, and tend to take risks.[3] These elements were major contributors to the tragic incident where a child was crushed by heavy construction equipment.

Motor Vehicle **Deaths**

Children
0- 17 years



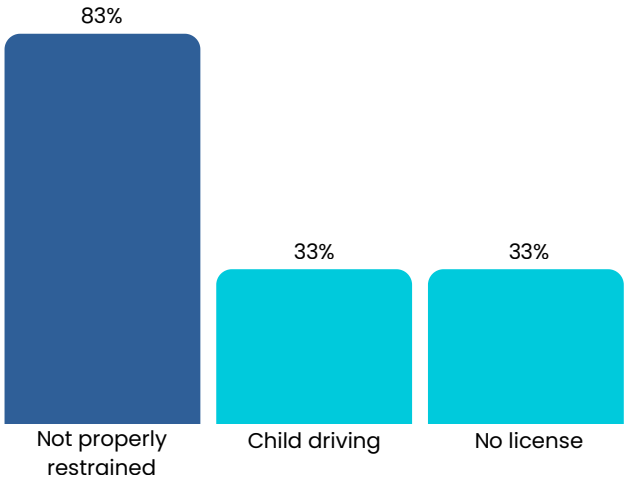
Source: CDR, 2022.

CAUSES OF MOTOR VEHICLE CRASHES

Speeding is a factor in 67% of child fatalities in motor vehicle accidents. In Davidson County, participation in driver education programs is voluntary, and can be acquired through commercial driving schools. Reasons why teenagers may hesitate to enroll in driver education classes can range from hectic schedules to financial constraints to a lack of awareness that these programs exist.[4]

OTHER FACTORS OF MOTOR VEHICLE DEATHS

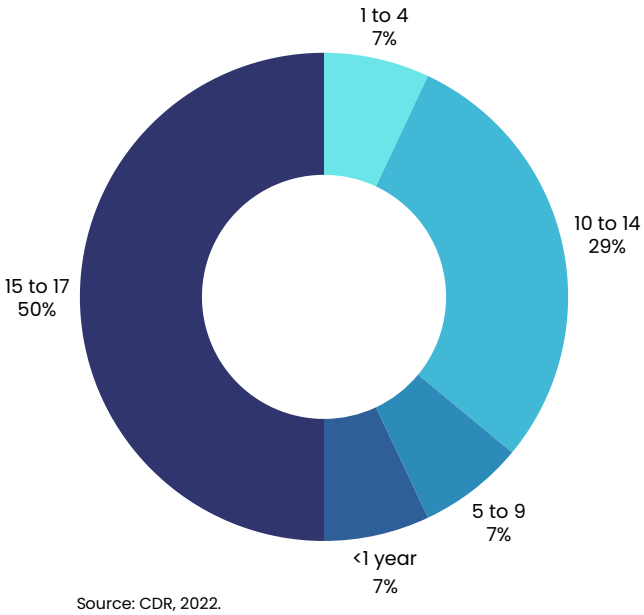
The child was driving the vehicle in 33% of cases, sometimes without a license or learner's permit. Graduated driver license (GDL) programs in Tennessee require parental or guardian involvement and emphasize the importance of a clean driving record to introduce young drivers gradually to full driving privileges.



Source: CDR, 2022.

Children
0- 17 years

Violent Deaths



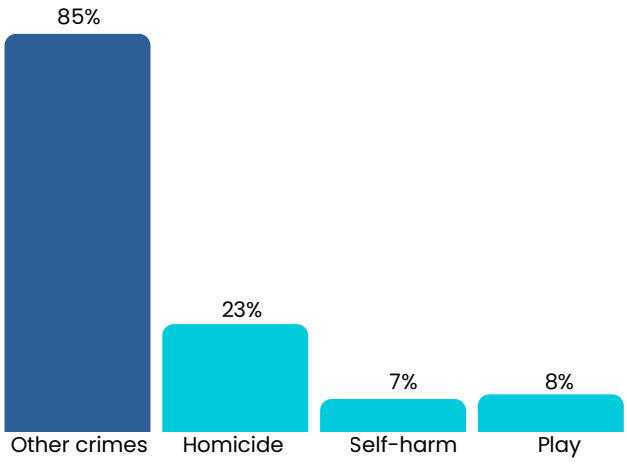
Source: CDR, 2022.

HOMICIDES AND SUICIDES BY AGE

In 2022, 15% of child deaths were caused by homicide or suicide. Of these, **64% involved firearms**. Although teens 10 years old and older comprised nearly 80% of deaths, homicide adversely impacts all age groups.

WEAPON USE AT INCIDENT

Approximately 23% of weapon incidents were driven by an intent to harm, while 85% were linked to the perpetration of various other crimes. These offenses included child abuse, drug trafficking, drive-by shootings, robbery, interpersonal violence, and assault. Weapons were also misused for self-harm and recreational purposes.

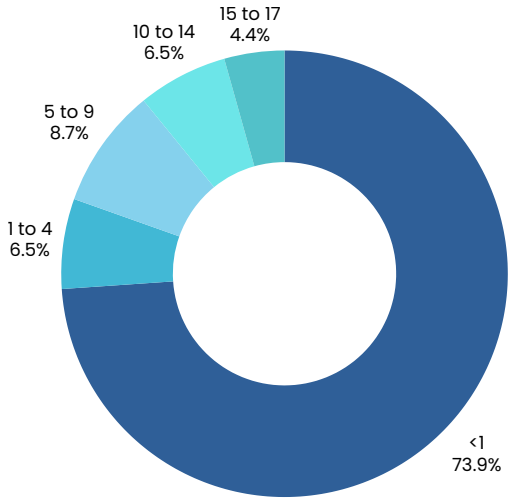


Source: CDR, 2022.

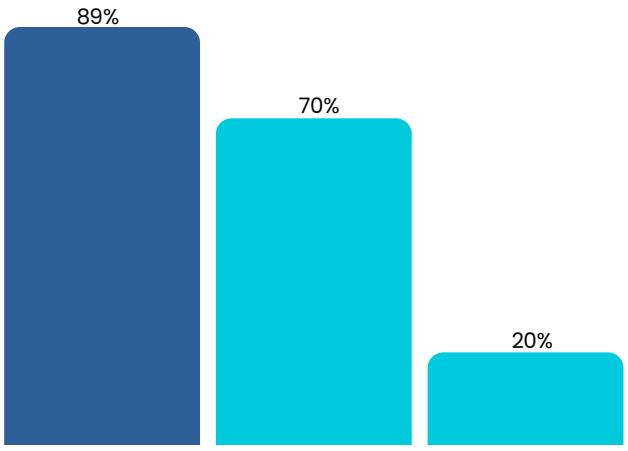
Natural Deaths

NATURAL DEATHS BY AGE GROUP

Nearly 75% of deaths due to natural causes occurred among infants with the leading causes being birth defects and medical complications from being born too early and too small. The remaining deaths encompassed a broad spectrum of causes including asthma, cancer, cardiovascular causes, and infections.



Source: CDR, 2022.



Source: CDR, 2022.

FACTORS AND BARRIERS TO CARE

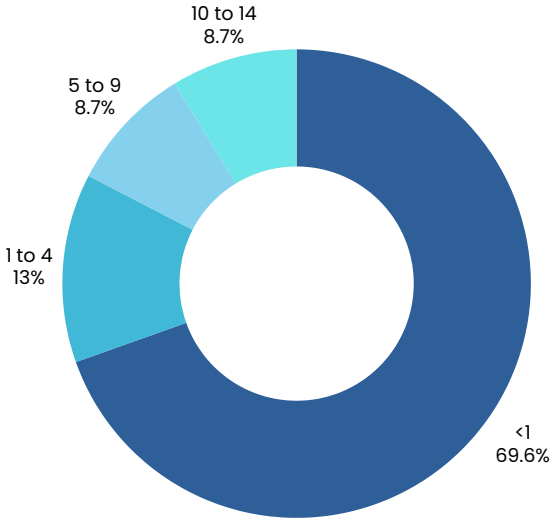
Case review showed that **20% of families faced obstacles in adhering to the care plan**. Challenges included transportation difficulties, acquiring and utilizing essential medical equipment at home, distrust of the healthcare system, and shortages in nursing staff hindering the full utilization of home health services.

Children
0- 17 years

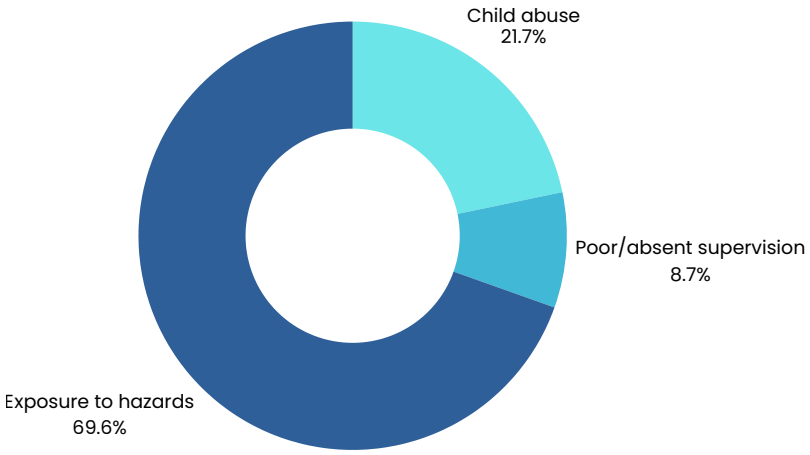
Child Maltreatment

MALTREATMENT DEATHS BY AGE

Roughly **25% of reviewed deaths showed evidence of abuse, neglect, or negligence**. Most cases occurred among infants. In 91% of cases, the perpetrator was the parent or primary caregiver.



Source: CDR, 2022.



Source: CDR, 2022.

MALTREATMENT BY TYPE

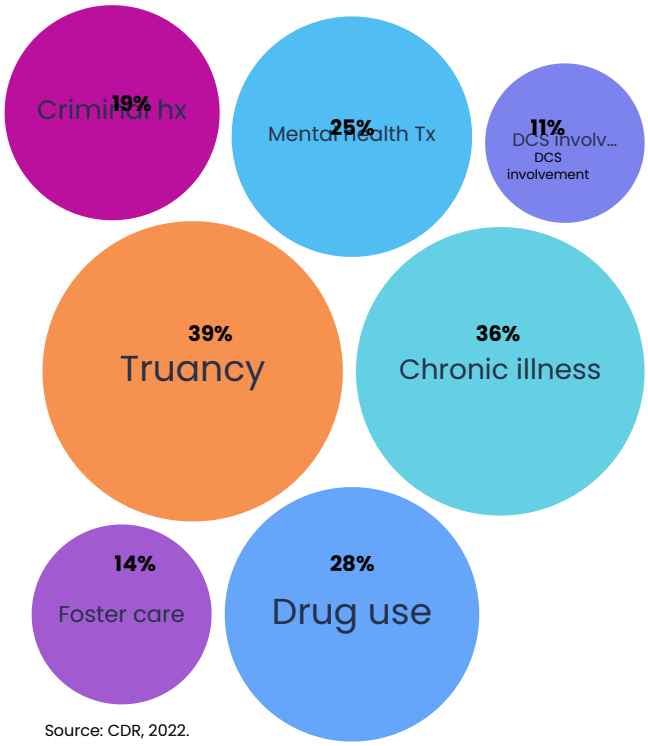
Unintentional exposure to hazards comprised **70% of these cases**. Hazards included improperly stored medication or firearms in the home, exposure to water or motor vehicle hazards, substance use during pregnancy, or unsafe infant bedding.

Children
5- 17 years

Addressing **Trauma**

TRAUMA-INFORMED CARE

In 2022, 39% of child deaths were among school-aged children. Schools play a crucial role in preventing such tragedies due to the frequent interaction with this age group. A trauma-informed school provides support to children and teenagers dealing with trauma or mental health issues that affect their behavior and learning. It creates a supportive network that allows teachers, school staff, students and their families, and the larger community to identify and address the impact of traumatic stress on behavior, relationships, and academics.[5] This is essential as **53% of school-aged children who died faced challenges in school.**



Source: CDR, 2022.

CHALLENGES BY TYPE

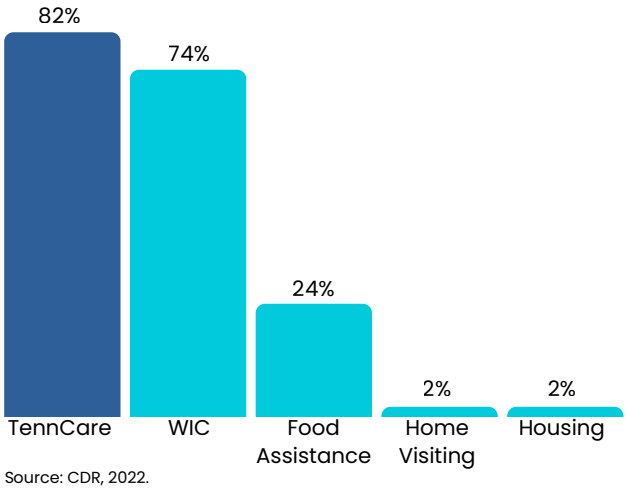
Truancy, defined as excessive absenteeism from school, is often a symptom of deeper challenges, and can be a signal that a student or family needs support.[6] **Nearly 40% of students who died in 2022 had a history of truancy**. Other challenges these students experienced included drug use, chronic illness or disability, and mental health needs.

Children
0- 17 years

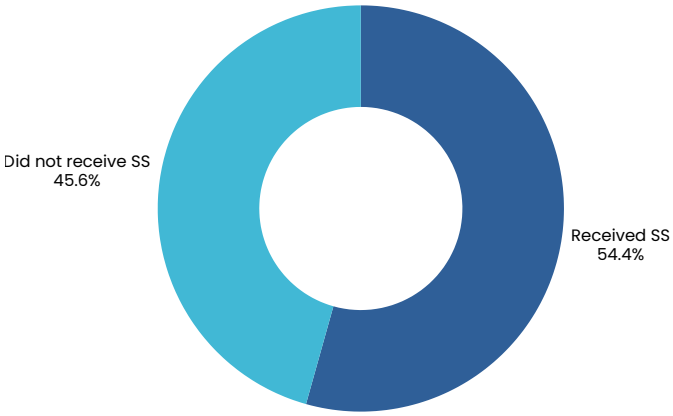
Social Services

SOCIAL SERVICE UTILIZATION

In 2022, **more than half of the families who faced the heartbreaking loss of a child were receiving social services at the time of the child's death**. These engagements create opportunities to offer assistance, address needs, and potentially avert child fatalities. The CDRT's efforts are crucial in pinpointing service shortcomings and obstacles.



Source: CDR, 2022.



Source: CDR, 2022.

SOCIAL SERVICE TYPE

Families who made use of services mainly benefitted from TennCare and WIC, while **home visiting and housing assistance were the least utilized services.** Voluntary home visiting programs play a crucial role in enhancing infant and maternal health, fostering positive child development and parent-child relationships, promoting early learning and future academic success, and providing referrals and coordinating services.

Team **Findings**

Our mission is to understand why children die and use that understanding to prevent future losses. **This report section highlights recurring patterns observed in reviewed fatalities, which can guide the development of new safety protocols, collaborations, and policy focuses.** Items in **green** indicate current or ongoing work to address an identified system issue.

1

Gaps in documentation of services

Agency records can be incomplete and may not adequately document the services and referrals a family received, particularly after the death of a child. Such information is vital in assessing the adequacy of system supports after a loss.

2

Unfamiliarity with emergency services

Immigrant families may be unfamiliar with our medical system and how to access medical services. Establishing a program to inform newly arrived immigrants about our emergency response network could potentially save lives.

3

Inadequate childcare options

Access to affordable, accessible, high-quality childcare remains limited in the community. This gap must be addressed to protect infants and children from potential harm, and to provide supporting stability for vulnerable households.

Team **Findings**

4

Lack of affordable housing

Housing instability and challenges in accessing available resources may result in overcrowding, which can create obstacles to providing safe sleeping environments for infants.

5

Lack of reliable transportation

Those facing challenges with affording a vehicle or accessing public transit may struggle to attend routine medical or mental health appointments. Removing barriers and expanding services could improve access to preventive and ongoing care.

6

Safe sleep resources for WIC

An assessment of safe sleep education by WIC staff highlighted the need for more resources, staff training, and changes to the charting system. Collaboration with the local FIMR program and the state helped address these issues.

7

Domestic violence supports at night court

Findings revealed a deficiency in support and advocacy services for individuals seeking an order of protection in night court. Consequently, the Metro Office of Family Safety assigned staff to provide supports and notify DCS of any child protection issues.

Team **Findings**

8

Continuing car seat education

Reviews highlighted car seat misuse and the need for strengthened equitable education. Strategic partnerships can facilitate investment in car seat installation checkpoints, multi-lingual instructional videos, and distribution programs.

9

Shortage of home health nursing staff

Several medically fragile children did not receive recommended home health nursing services due to staffing shortages. This poses risks for children with technologic dependencies or chronic conditions, as well as hardships for families.

10

Distrust of the medical system

Negative experiences with healthcare may make parents hesitant to seek care for their child. Rebuilding trust is crucial for ensuring timely and apprehension-free medical services for both parents and their children.

11

Medical Examiner access to information

The Medical Examiner noted challenges accessing sealed records in cases involving remote child abuse. The CDRT recommended updating statutes to allow access to all pertinent materials needed to accurately establish manner of death.

Team **Findings**

12

Shortage of foster parents

The Department of Children's Services highlighted a lack of foster parents for child placement, particularly when it comes to finding homes for medically fragile children.

13

Shortage of mental health practitioners

Reviews highlighted an ongoing lack of mental health professionals within the community, especially those specialized in family therapy. Such shortages can lead to care delays or hinder access to necessary services.

14

Delays in insurance coverage

Delays in obtaining insurance coverage can lead to late or no prenatal care, with immigrants being especially at risk. Collaborating with organizations that support immigrants could expedite the insurance process.

15

Missed child abuse or medical neglect cases

Work is ongoing to build better relationships between DCS and child abuse experts. Such collaborative efforts can help address case worker challenges such as large caseloads and limited experience in identifying medical neglect.

Team **Findings**

16

Inefficiencies in home visiting referral system

The Central Referral system for home visits is being evaluated to address capacity, delays, inefficiencies, and missed referrals. Enhancements aim to expedite connections between families and appropriate home visiting programs.

17

Barriers to autopsy services

Parents requesting a non-legally required autopsy may face challenges like lack of information on options, unclear costs, and discomfort among physicians in discussing the matter.

18

Unsafe gun storage

Improperly stored firearms pose a higher risk of firearm-related deaths for children. The State has partnered with Be SMART, a program advocating responsible gun ownership and providing easy steps to secure all firearms at home and in vehicles.

Technical **Notes**

Data collected by the CDRT highlight extreme outcomes in children and youth, and it is important to exercise caution when applying these findings to the general population. Nonetheless, these findings shed light on areas where community systems, policies, and practices may fall short in safeguarding children effectively. This valuable information serves as evidence to advocate for systemic changes.

The data in this report are sourced from various agency records and discrepancies are occasionally rectified during the child death review process. Therefore, the results presented here may differ from those in other publications.

AI was used to gauge language appropriateness for this report.

Information from the review process is compiled into a standardized data collection form and then input into a database managed by The National Center for Fatality Review and Prevention.

National and state data are gathered from the National Vital Statistics System Database, CDC WONDER, and reports from the Tennessee Child Fatality Review Team.

Child and infant mortality rates were computed using Davidson County vital records, except for 2022, which was gathered from CDC WONDER. These calculations account for deaths not reviewed by CDRT. Population estimates are sourced from the American Community Survey (ACS), with single-year estimates utilized for child mortality rate calculations. In 2020, ACS estimates were unavailable, so bridged-race population estimates from the National Center for Health Statistics (NCHS) were used.

References

1. Children's Safety Network. (n.d.). Poisoning Prevention. Retrieved from https://childrenssafetynetwork.org/child-safety-topics/poison-prevention.

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