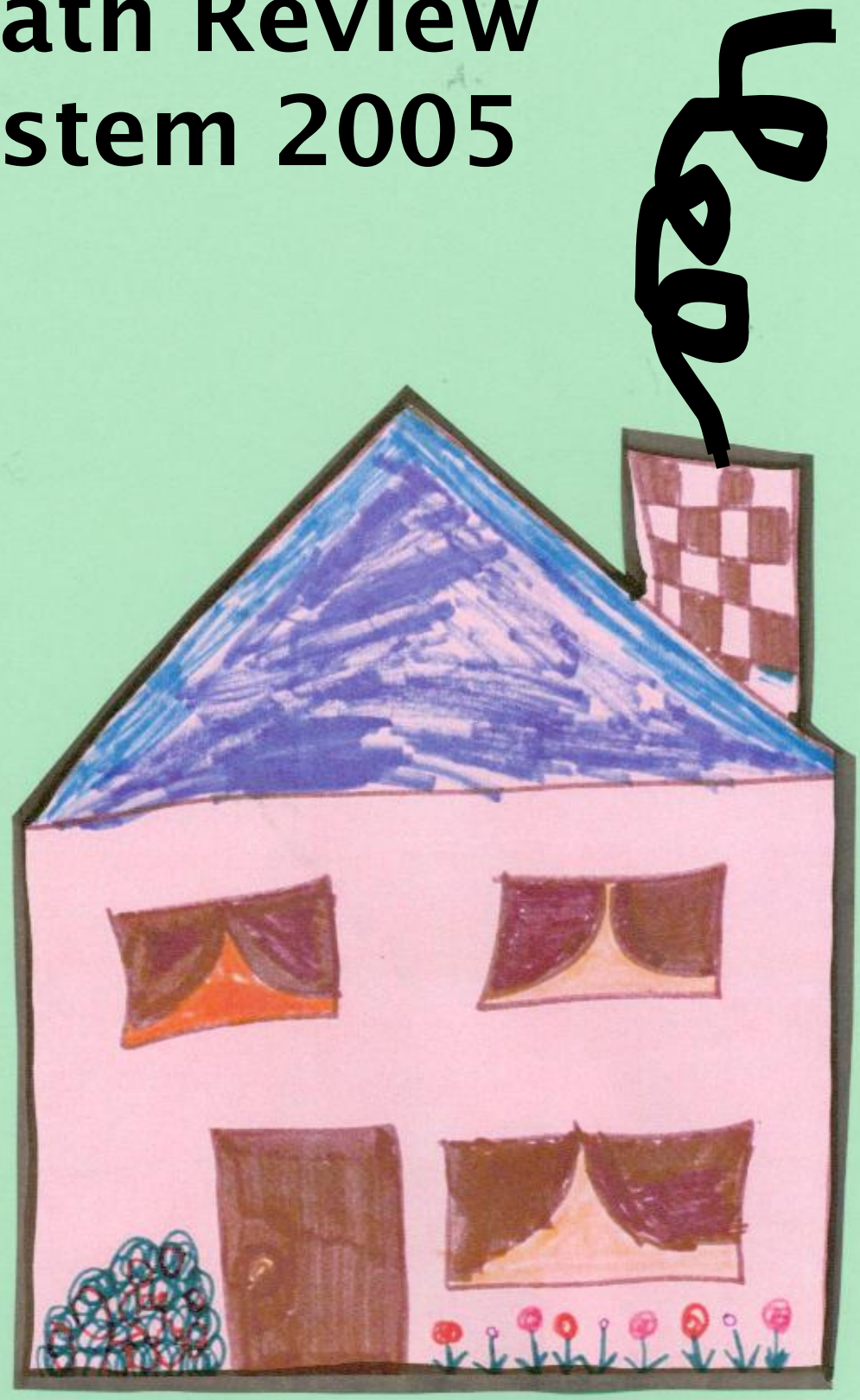
Nashville Child Death Review System 2005



Davidson County
Child Death Review Team Report, 2005

Annual Report

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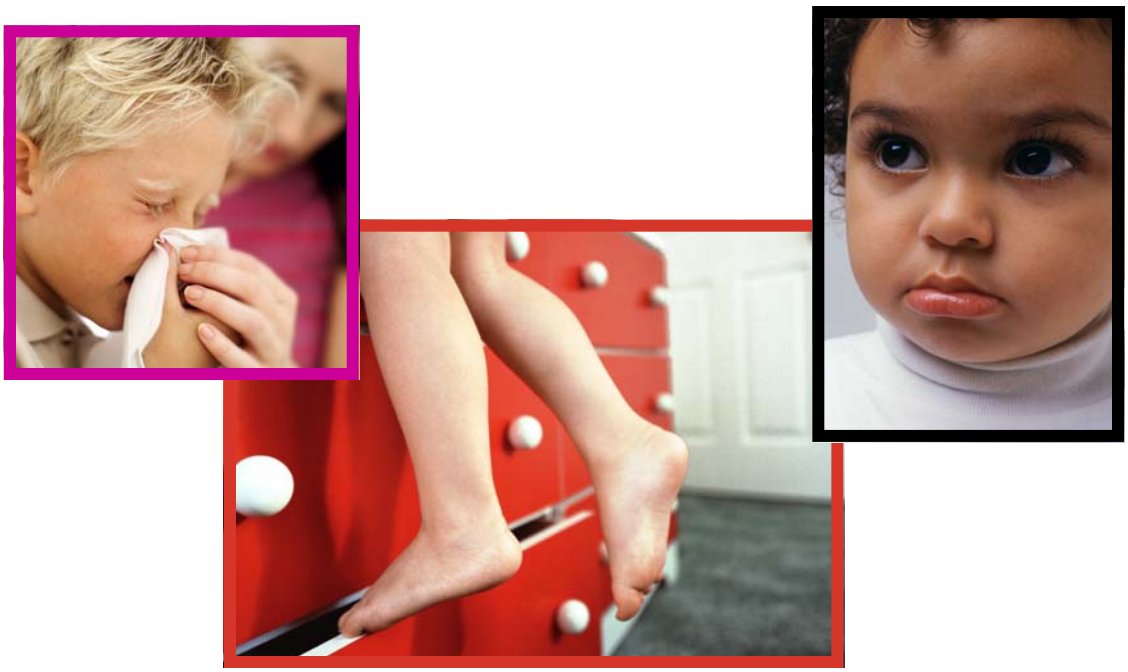


Preface

There were 117 children under the age of 18 who died in Davidson County in 2005. Of those deaths, 115 were reviewed by the Davidson County Child Death Review Team (CDRT); the remaining two died out of state and records were not available for the team to review. To better understand how and why these children died, the CDRT has been empowered by Mayoral Executive Order to review every death to a child under the age of 18 that occurs to a resident of Davidson County with the following goals in mind:

1. Identify factors that put a child at risk of injury or death.
2. Share information among agencies that provide services to children and families or that investigate child deaths.
3. Improve local investigations of unexpected/unexplained child deaths by participating agencies.
4. Improve existing services and service delivery systems and identify areas in the community that require additional services.
5. Identify trends relevant to child injury and death.
6. Educate the public about the causes of child injury and death while also defining the public's role in helping to prevent such tragedies.

This report presents key findings from the CDRT and makes recommendations to help prevent the deaths of children in Davidson County.

Executive Summary

KEY FINDINGS

- In 2005, 117 resident children of Davidson County died.
- Two deaths occurred out of state. Due to an inability to retrieve a copy of the death certificate, these two deaths were not reviewed by the CDRT.
- The CDRT determined the manner of death of the 115 cases reviewed as follows:
  - 86 deaths (74.8%) were due to natural causes
  - 13 deaths (11.3%) were due to unintentional injuries
  - 12 deaths (10.4%) were due to homicide
  - The manner of 3 deaths (2.6%) could not be determined
  - 1 death (0.9%) was undetermined due to suspicious circumstances
- 72 deaths (62.6%) occurred to children less than one year old and, of those, 29 deaths (25.2%) survived less than one day after birth.
- Among children less than a year old, 66 deaths (91.7%) were due to natural causes.
- 21 deaths (18.3%) occurred to children aged 13 – 17.

Each year, the CDRT makes recommendations for policy and service changes based on the results of child death investigations in an effort to prevent future childhood mortality. For 2005, the CDRT recommends:

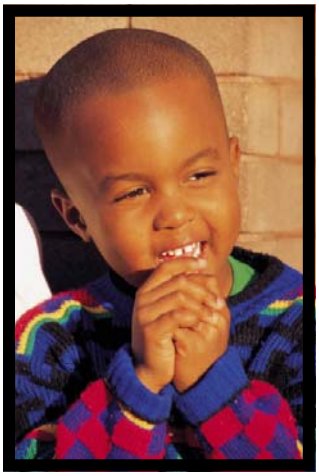
1. The Metro Nashville School System teach young people the value of seat belt usage and safe transport.
2. Principals and other school personnel be prepared to deal with the peers of a child who has died by working with the police chaplain in establishing a method that would notify a designated point of contact within the school system whenever a death of a child occurs.
3. Metro schools develop a systemic approach for dealing with situations where parents discontinue or terminate the educational services for homebound children. This systemic approach should safeguard the best interest of the child.

Overview

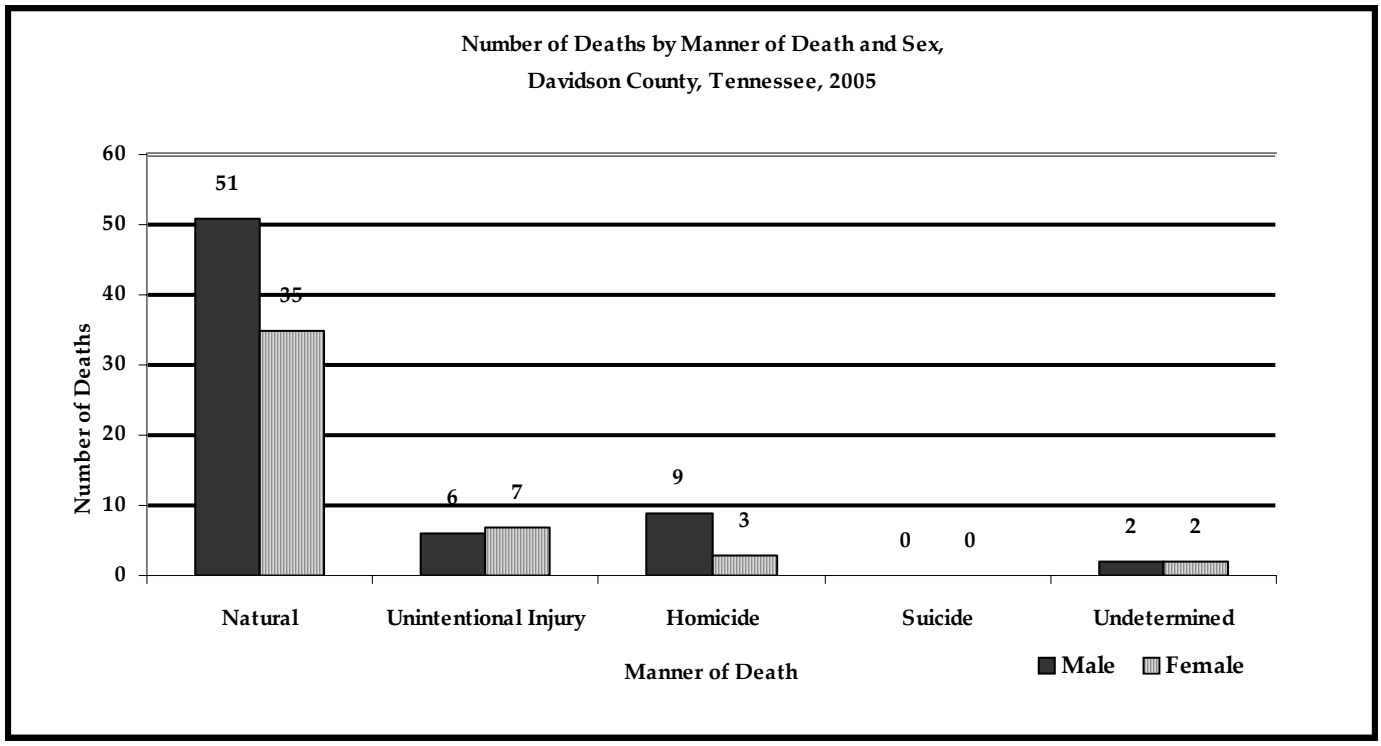
KEY FINDINGS

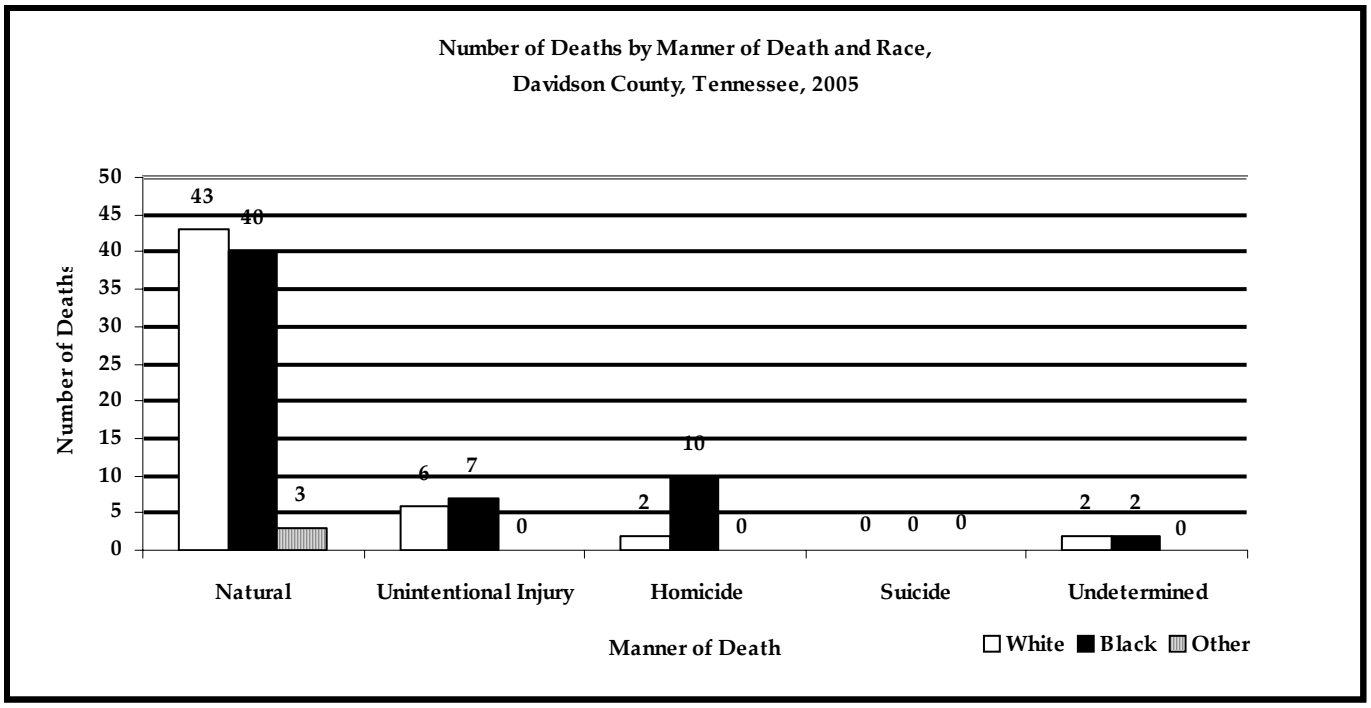
- In 2005, 117 resident children of Davidson County died.
- Two deaths occurred out of state. Due to an inability to retrieve a copy of the death certificate, these two deaths were not reviewed by the CDRT.
- The CDRT judged 21.7% (25) of the reviewed birth certificates and 38.3% (44) of the reviewed death certificates to be incomplete or inaccurate.
- The CDRT agreed with the manner of death indicated on the death certificate in 87.8% of the cases.
- Manner of death was not indicated on the death certificate for 11.3% (13) of the cases.
- The CDRT determined the manner of death of the 115 cases reviewed as follows:
  - 86 deaths (74.8%) were due to natural causes
  - 13 deaths (11.3%) were due to unintentional injuries
  - 12 deaths (10.4%) were due to homicide
  - The manner of 3 deaths (2.6%) could not be determined
  - 1 death (0.9%) was undetermined due to suspicious circumstances.
- 72 deaths (62.6%) occurred to children less than one year old and, of those, 29 deaths (25.2%) survived less than one day after birth.
- Among children less than a year old, 66 deaths (91.7%) were due to natural causes.
- 21 deaths (18.3%) occurred to children aged 13 – 17 and, of those, 38.0% were due to homicide, 33.3% were due to natural causes, and 28.6% were due to unintentional injury.
- 68 deaths (59.1%) were to male children.
- 59 deaths (51.3%) were to Black children.
- 16 deaths (13.9%) were reported as Hispanic.
- 53 deaths (46.1%) occurred to children born to mothers between the ages of 20 and 29.
- 20 deaths (17.4%) occurred to children born to mothers aged 13 to 19 years.

(See graphs on page 7)



Overview (cont.)

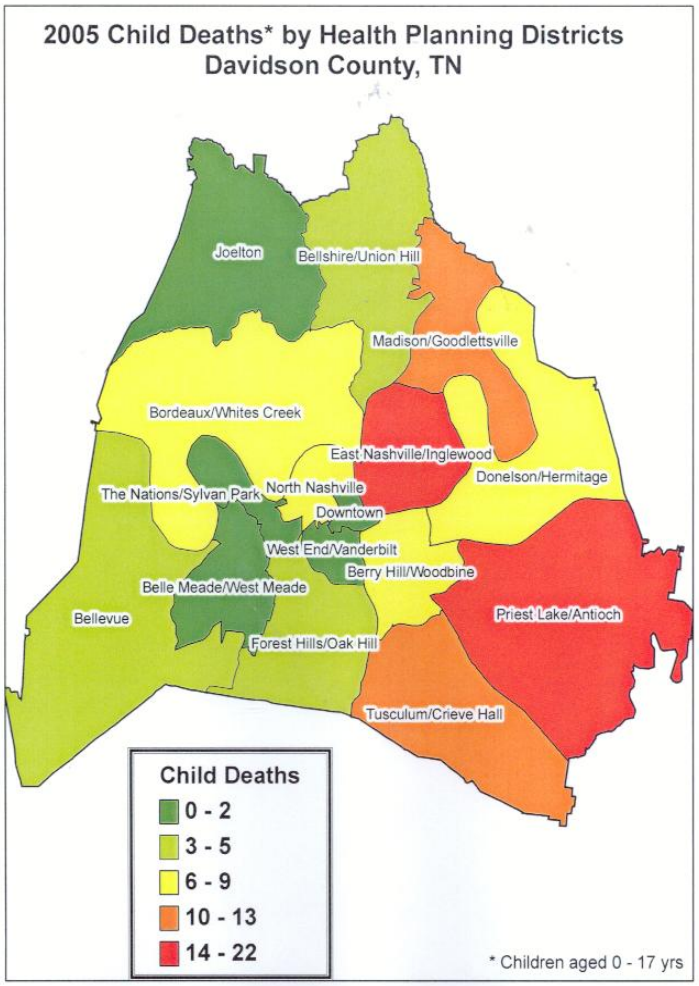




Overview (cont.)

KEY FINDINGS (cont.)

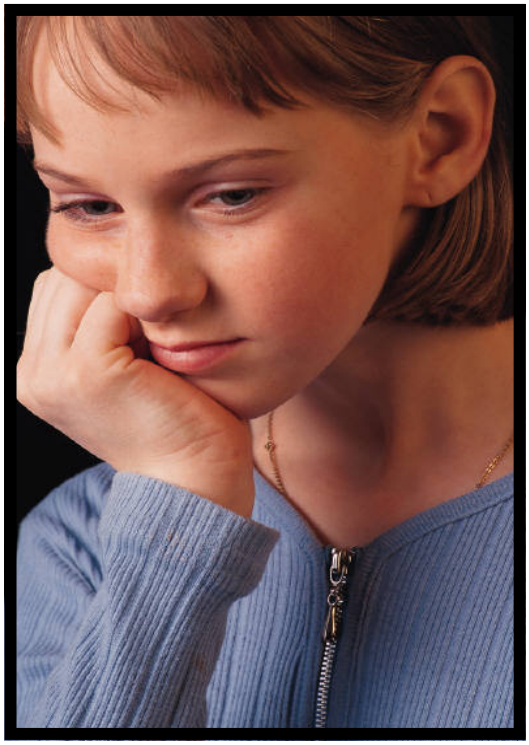
- 17 cases (14.8%) had prior involvement with child protective services.
- Child abuse and neglect were noted in 4 cases (3.5%).
- Delay in obtaining medical treatment was found to be a factor in 4 cases (3.5%).
- Of the 115 cases reviewed, 27 (23.5%) were judged to be preventable deaths.
- The two health planning districts with the highest frequency of child deaths in 2005 were East Nashville/Inglewood and the Priest Lake/Antioch areas with 14 to 22 deaths each.
- The two health planning districts with the 2nd highest frequency of child deaths were Madison/Goodlettsville and Tusculum/Crieve Hall with 10 to 13 deaths each.



The Child Death Review Process

When a child dies:

- The birth and death certificates are sent from the Metro Public Health Department (MPHD) Vital Statistics staff to the Child Death Review Team data coordinator.
- Copies of the birth and death records are sent to the Team members.
- All Team members search their agency/hospital files and bring either the records or case summaries to Team meetings. Available records are requested from programs within the MPHD (HUG, Healthy Start, WIC, etc.).
- The Team meets once a month. At these meetings, each case is reviewed and the State data collection form is completed.
- The data coordinator enters the data obtained from the meetings into a database and sends the completed data collection forms to the State Fatality Review Program.
- An annual report is produced. The purpose of the report is to disseminate findings and assist in the development of data-driven recommendations for the prevention of child deaths.



Deaths Due to Natural Causes

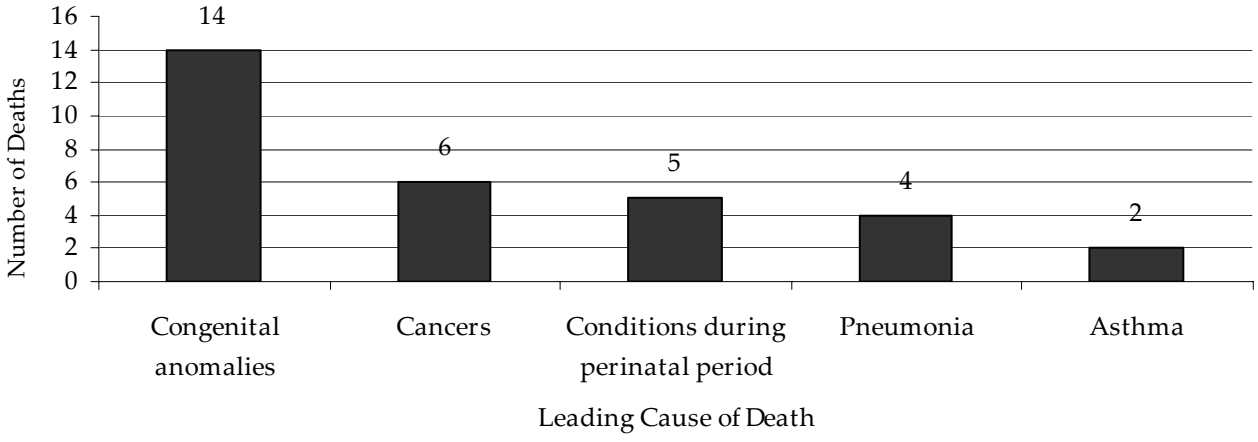
KEY FINDINGS

- In 2005, there were 86 child deaths due to natural causes, representing 74.8% of reviewed child deaths.
- 66 deaths (76.7%) occurred among children less than one year of age.
- Among the 66 infant deaths, 29 (43.9%) involved newborns less than one day old, 22 (33.3%) involved infants less than one month old, and 15 (22.7%) involved infants less than one year old.
- 51 (59.3%) natural deaths were male.
- 43 (50.0%) were White, 40 (46.5%) were Black, and 3 (3.5%) were reported as other races.

Illness or Other Natural Causes

- There were 49 child deaths due to illness or other natural cause, representing 57.0% of child deaths due to natural causes, and 42.6% of all child deaths.
- 29 (59.2%) deaths occurred among children less than one year of age.
- 30 (61.2%) deaths were male.
- 25 (51.0%) were White, 22 (44.9%) were Black, and 2 (4.1%) were reported as other races.
- The leading causes of natural death were as follows:
  - 14 (28.6%) deaths were due to congenital anomalies
  - 6 (12.2%) deaths were due to cancer
  - 5 (10.2%) deaths were due to conditions that arose during the perinatal period
  - 4 (8.2%) deaths were due to pneumonia

Leading Causes of Death Due to Illness and Other Natural Causes, Davidson County, Tennessee, 2005



Deaths Due to Natural Causes (cont.)

Prematurity

- 34 infants died from complications due to prematurity, representing 39.5% of child deaths due to natural causes and 29.6% of all reviewed child deaths.
- 15 (44.1%) deaths due to prematurity were 22 weeks or less gestational age while 19 (55.9%) were between 23 and 37 weeks gestational age.
- Among deaths due to prematurity born at 22 weeks or less gestation, 13 (86.7%) died within the first 24 hours of birth and 12 (80.0%) weighed less than 500 grams.
- Among deaths born at 23 to 27 weeks gestational age, 9 (47.3%) died within the first month of life and 14 (73.7%) weighed between 500 and 1,499 grams.
- 17 (50.0%) of deaths due to prematurity were White and 16 (47.1%) were Black.

Sudden Infant Death Syndrome (SIDS)

- 3 children died as a result of SIDS representing 3.5% of deaths due to natural causes and 2.6% of all reviewed child deaths.
    - 1 child was put to sleep on his back, 1 child was put to sleep on his side, and 1 child was put to sleep face down
    - In 1 death the child was sleeping with another person
    - In 1 death, a smoker resided in the household with the child

Deaths Due to Unintentional Injury

KEY FINDINGS

- 13 children died due to unintentional injuries, representing 11.3% of all reviewed deaths during childhood.
- 6 (46.2%) deaths occurred to children 13 to 17 years of age and 5 (38.5%) deaths occurred to children aged 6 to 12 years.
- 7 (53.8%) deaths were Black and 6 (46.2%) deaths were White.
- 7 (53.8%) deaths were female.

Motor Vehicle Crashes

- 11 children died in motor vehicle crashes, representing 84.6% of child deaths due to unintentional injuries and 9.6% of all reviewed child deaths.
- 6 (54.5%) deaths were male.
- 6 (54.5%) deaths were Black, and 5 (45.5%) were White.
- 5 (45.5%) deaths occurred to children 13 to 17 years of age, and 5 (45.5%) deaths occurred to children aged 6 to 12 years.
- The victim was the passenger in 5 (45.5%) cases; a pedestrian in 4 cases (36.4%); on a bicycle in 1 (9.1%) case; and car surfing, or riding on the roof of a moving vehicle, in 1 case (9.1%).
- A car seat due to age of the victim was appropriate in 1 (9.1%) case, and in that case the car seat was used correctly.
- Neglect to wear a bicycle helmet was noted regarding the child who died while riding a bike.
- In the 5 (45.5%) instances where seatbelt use would have been appropriate (the child was a passenger or driver of the vehicle):
  - In 2 cases, the seatbelt was present in the vehicle but not used
  - In 2 cases, the seatbelt was used correctly
  - In 1 case, seatbelt use was unknown
- In reference to the vehicle that contained the victim at the time of the incident:
  - The driver was impaired in 1 case
  - Excess speed was indicated in 3 cases
  - Other violations were reported in 3 cases, including 1 case of the driver operating the vehicle with a suspended license, and 1 case of the child on a bicycle failing to yield at a stop sign

Deaths Due to Unintentional Injury (cont.)

Motor Vehicle Crashes (cont)

- In instances where another vehicle besides the one occupied by the victim was involved in the motor vehicle crash:
  - Driver impairment was reported in 2 cases
  - Excess speed was indicated in 2 cases
  - In 1 case, the driver was talking on a cell phone and impaired by marijuana use while operating the vehicle
- Wet road conditions contributed to 1 death. The remaining deaths occurred under normal road conditions.

Other Unintentional Injuries

- 1 death by suffocation was caused by overlying, where another person sleeping with a child rolls over on top of the child.
- 1 death by accidental poisoning was caused by a lethal mix of methadone and cocaine.

Deaths Due to Violence: Homicide and Suicide

KEY FINDINGS

- There were 12 cases of homicide and 0 cases of suicide in 2005, representing 10.4% of all reviewed childhood deaths.
- 8 (66.7%) deaths by homicide occurred to children aged 13 to 17 years.
- 9 (75.0%) of homicide cases were male.
- 10 (83.3%) deaths were Black, and 2 (16.7%) deaths were White.
- 1 death by suffocation was caused by a person covering the nose and mouth with an object.
- The 1 death by inflicted injury involved a person slamming a child repeatedly upon the floor.
- 1 child died from intentional malnutrition and neglect.
- The remaining 9 cases of homicide involved firearms:
  - All 9 deaths involved the use of handguns
  - 1 death occurred when the victim played with a loaded handgun
  - 6 deaths involved a deliberate shooting of the victim by other parties
  - Of the remaining 2 deaths, 1 occurred during the commission of a crime and the other occurred when the victim attempted self-defense

Comparisons to Selected Counties

KEY FINDINGS

Infant Mortality Rates by Race of Mother for Selected Counties, 2005			
	Rate*		
County	All	White	Black
Davidson County, TN (Nashville)	7.9	6.3	11.9
Jefferson County, AL (Birmingham)	12.4	7.6	17.5
Tuscaloosa County, AL (Tuscaloosa)	8.9	4.3	16.0
Hamilton County, TN (Chattanooga)	9.3	8.0	14.0
Knox County, TN (Knoxville)	7.8	6.0	20.9
Madison County, TN (Jackson)	17.3	11.3	26.5
Shelby County, TN (Memphis)	11.5	5.5	15.5
Mecklenburg, NC (Charlotte)	8.4	5.6	13.5

*Infant mortality rates are per 1,000 live births

- Madison County, TN has the highest overall infant mortality rate of the Metro areas compared with 17.3 deaths per 1,000 live births and the highest Black infant mortality rate of 26.5.
- The Black infant mortality rate in Davidson County, TN (11.9) is nearly 2 times higher than the White rate (6.3).
- Davidson County, TN has the lowest Black infant mortality rate (11.9) of the areas compared, and Tuscaloosa County, AL has the lowest White infant mortality rate (4.3). Knox County, TN has the lowest infant mortality rate overall (7.8).

Comparisons to Selected Counties (cont.)

Number of Deaths, Population, and Age-Specific Mortality Rates for Children Aged 1 to 17 Years for Selected Counties, 2005			
County	**Number of Deaths**	**Population**	**Rate[2]**
Davidson County, TN (Nashville)*[1]	46	121,208	38.0
Mecklenburg County, NC (Charlotte)	158	193,759	81.5
Hamilton County, TN (Chattanooga)*	10	66,242	15.1
Knox County, TN (Knoxville)*	20	83,398	24.0
Madison County, TN (Jackson)*	6	23,023	26.1
Shelby County, TN (Memphis)*	68	241,050	28.2

*Data provided by the Tennessee Department of Health

[1]Number includes both out-of-State deaths not reviewed by Child Death Review Team and one death wrongly ascribed to Davidson County

[2]Age-specific mortality rates are per 100,000 population

- Of the metropolitan counties compared, Hamilton County, TN has the lowest mortality rate (15.1) for children aged 1 to 17 years per 100,000 population, while Mecklenburg County, NC has the highest (81.5).
- The mortality rate for children aged 1 to 17 years in Davidson County, TN in 2005 is 38.0 per 100,000 population.

Team Accomplishments and Recommendations

Mayor Purcell met with CDRT on March 16, 2006. The Team presented its data and recommendations to the Mayor at this meeting. Mayor Purcell pledged his support to the efforts of the CDRT and specifically stated that he would continue to look for ways to gain access to current data. He also stressed the need for real time data in the decision-making process.

In light of the number of childhood deaths resulting from motor vehicle crashes in which the child is often unrestrained or due to the result of foolhardy stunts, the CDRT encourages the school system to teach its students about the value of seat belt usage and other basic safety issues related to transportation.

The CDRT has identified a gap in communication between the school system and those who are aware of the death of child. Such information is important to the school so that it can provide grief counseling services to the peers of the dead child and deal with other fallout resulting from the event. To that end, the Team recommends the police chaplain work with the school system to establish a method that would notify a designated point of contact within the school system whenever a death of a child occurs.

The Team also identified a gap in educational services being provided to children who utilize homebound teachers. The Team recommends that Metro Schools develop a systematic approach that identifies and intervenes if necessary in situations where parents fire or discontinue the services of homebound teachers.

Team members routinely share findings and compare information. This sharing improves local investigation of child deaths and strengthens legal proceedings when legal action is indicated.

Child Death Review Team Members For 2005

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Child Death Review Team, Chair

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Bonnie Beneke
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Appendix

Number and Percentage of Deaths by Manner of Death and Age, Race, and Sex, Davidson County, Tennessee, 2005

	Total		Age							Sex		Race		
			Detail of Cases < 1 year			All Cases								
Manner of Death	N	%	<1 day	1-28 days	29-364 days	< 1 year	1-5 years	6-12 years	13-17 years	Male	Female	White	Black	Other
Natural	86	74.8	29	22	15	66	5	8	7	51	35	43	40	3
Unintentional Injury	13	11.3	0	1	0	1	1	5	6	6	7	6	7	0
Homicide	12	10.4	0	0	1	1	2	1	8	9	3	2	10	0
Suicide	0	0.0	0	0	0	0	0	0	0	0	0	0	0	0
Undetermined[1]	1	0.9	0	0	1	1	0	0	0	1	0	0	1	0
Not Determined[2]	3	2.6	0	0	3	3	0	0	0	1	2	2	1	0
Total	115	100	29	23	20	72	8	14	21	68	47	53	59	3
Percentage*	100		25.2	20.0	17.4	62.6	7.0	12.2	18.3	59.1	40.9	46.1	51.3	2.6

*Percentage of total reviewed deaths

[1]Undetermined due to suspicious circumstances

[2]Could not be determined

Number and Percentage of Deaths by Manner of Death and Maternal Age, Davidson County, Tennessee, 2005

	Total		Maternal Age					
Manner of Death	N	%	13-14	15-17	18-19	20-29	30-39	40+
Natural	81	77.1	1	2	8	42	27	1
Unintentional Injury	9	8.6	0	2	2	3	2	0
Homicide	11	10.5	0	1	3	5	2	0
Suicide	0	0.0	0	0	0	0	0	0
Undetermined[1]	1	1.0	0	0	0	1	0	0
Not Determined[2]	3	2.9	1	0	0	2	0	0
Total[3]	105	100	2	5	13	53	31	1
Percentage*	100		1.9	4.8	12.4	50.5	29.5	1.0

*Percentage of total deaths

[1]Undetermined due to suspicious circumstances

[2]Could not be determined

[3]Maternal age was not reported for 10 deaths. These deaths are excluded from this portion of the analysis.

Appendix (cont.)

Number and Percentage of Deaths Due to Natural Causes by Age, Sex, and Race, Davidson County, Tennessee, 2005

	Total		Age							Sex		Race		
			Detail of Cases < 1 year			All Cases								
Cause of Death	N	%	<1 day	1-28 days	29-364 days	< 1 year	1-5 years	6-12 years	13-17 years	M	F	White	Black	Other
Illness or Other Natural Cause	49	57.0	7	11	11	29	5	8	7	30	19	25	22	2
Prematurity	34	39.5	22	11	1	34	0	0	0	19	15	17	16	1
SIDS	3	3.5	0	0	3	3	0	0	0	2	1	1	2	0
Total	86	100	29	22	15	66	5	8	7	51	35	43	40	3
Percentage*	100		33.7	25.6	17.4	76.7	5.8	9.3	8.1	59.3	40.7	50.0	46.5	3.5

*Percentage of total reviewed deaths

Number and percentage of Deaths Due to Prematurity by Gestational Age, Age at Death, Birth Weight, Sex, and Race, Davidson County, Tennessee, 2005

	Total		Age			Birth weight in grams[1]				Sex		Race		
Gestational Age	N	%	<1 day	1-28 days	29-364 days	< 500	500-1499	1500-2499	2500+	M	F	White	Black	Other
22 weeks or less	15	44.1	13	2	0	12	1	0	0	11	4	5	10	0
23 - 37 weeks	19	55.9	9	9	1	4	14	0	0	8	11	12	6	1
Total[1]	34	100	22	11	1	16	15	0	0	19	15	17	16	1
Percentage[2]	100		64.7	32.4	2.9	47.1	44.1	0.0	0.0	55.9	44.1	50.0	47.1	2.9

[1]Birth Weight was not reported for 3 deaths. These deaths were excluded from this part of the analysis.

[2]Percentage of total deaths

Number and Percentage of Deaths Due to Unintentional Injury by Age, Sex, and Race, Davidson County, Tennessee, 2005

	Total		Age				Sex		Race		
Cause of Death	N	%	< 1 year	1-5 years	6-12 years	13-17 years	Male	Female	White	Black	Other
Vehicular	11	84.6	0	1	5	5	6	5	5	6	0
Firearm	0	0.0	0	0	0	0	0	0	0	0	0
Drowning	0	0.0	0	0	0	0	0	0	0	0	0
Suffocation	1	7.7	1	0	0	0	0	1	0	1	0
Fire/Burn	0	0.0	0	0	0	0	0	0	0	0	0
Poisoning	1	7.7	0	0	0	1	0	1	1	0	0
Total	13	100	1	1	5	6	6	7	6	7	0
Percentage*	100		7.7	7.7	38.5	46.2	46.2	53.8	46.2	53.8	0.0

*Percentage of total deaths

Appendix (cont.)

Table 8: Number and Percentage of Deaths Due to Violence by Age, Sex, and Race, Davidson County, Tennessee, 2005

		Total		Age All Cases				Sex		Race		
Manner of Death	**Cause of Death**	**N**	**%**	**< 1 year**	**1-5 years**	**6-12 years**	**13-17 years**	**Male**	**Female**	**White**	**Black**	**Other**
Homicide	Lack of adequate care	1	8.3	1	0	0	0	0	1	0	1	0
	Firearm	9	75.0	0	0	1	8	8	1	1	8	0
	Inflicted Injury	1	8.3	0	1	0	0	1	0	0	1	0
	Suffocation	1	8.3	0	1	0	0	0	1	1	0	0
	Total	12	100	1	2	1	8	9	3	2	10	0
	Percentage[1]	100		8.3	16.7	8.3	66.7	75.0	25.0	16.7	83.3	0.0

[1]Percentage of total deaths