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The Child Fatality Review Process: A Tennessee Profile

Charity Sue Smith

To the Graduate Council:

I am submitting herewith a dissertation written by Charity Sue Smith entitled "The Child Fatality Review Process: A Tennessee Profile." I have examined the final electronic copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Human Ecology.

Susan Madison Smith, Major Professor

We have read this dissertation and recommend its acceptance:

June Gorski, Gregory Petty, Paula Carney, Priscilla Blanton

Accepted for the Council:
Dixie L. Thompson

Vice Provost and Dean of the Graduate School

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Anne Mayhew

Vice Chancellor and
Dean of Graduate Studies

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THE CHILD FATALITY REVIEW PROCESS: A TENNESSEE PROFILE

A Dissertation
Presented for the
Doctor of Philosophy
Degree
The University of Tennessee, Knoxville

Charity Sue Smith
August 2006

DEDICATION

This dissertation is dedicated to my husband, daughter, and son. Will, you have helped me succeed, even at times when I did not believe I could continue. My 6-year-old daughter, Alexandria, has sat reading books while I was working on this project. Finally, I dedicate this project to Houston, my 5-month-old son.

ACKNOWLEDGEMENTS

Many people have helped with this project that I would like to thank, including: Dr. Susan M. Smith for guiding me through this endeavor with patience and understanding; Dr. June Gorski for providing me with guidance through my Master's degree, and now she has helped me return to my first academic love, community health; Dr. Paula Carney has provided support and patience to ensure that I have understood piloting methodology; Dr. Greg Petty helped with the conceptualization of this project; and, Dr. Priscilla Blanton has been extremely supportive of my academic endeavors both in Community Health and in Child and Family Studies. Each of you has strengthened this research study by your cognitive challenges to ensure my understanding of the research process.

Dr. Joy Cook advocated for completion of this project, while working as the state coordinator of child fatality review. I thank Dr. Theodora Pinnock, Director of Maternal Child Health at the Tennessee Department of Health, for her support of this research study and commitment to the child fatality review teams. Cary Springer helped bring life to statistical data, and to make sense of what the numbers mean to the child fatality review process.

ABSTRACT

The Child Fatality Review Process: A Tennessee Profile examines the perceptions of Tennessee's judicial district child fatality review team members concerning the team members' participation in child fatality review, the preventability of specific causes of childhood fatalities, the effectiveness of the Tennessee child fatality review process, and current educational initiatives used to prevent childhood fatalities. The study was completed using the new instrument entitled "Tennessee Child Fatality Review Team Members: Role in the review process."

The research study was designed to 1) develop a valid and reliable survey instrument to assess Tennessee judicial district child fatality review team members' perceptions of the process used to review childhood fatalities in Tennessee and 2) establish an initial profile of information concerning Tennessee's child fatality review team members' perceptions of the review process and program effectiveness. The Community Capacity Theory was used as theoretical framework for the design of this research.

Data were analyzed using descriptive statistics, MANOVA, ANOVA, cross tabulation analysis, Chi-square, Adjusted Residuals, and Tukey's Honestly Significant Difference.

Two major conclusions were drawn from this research study:

1) Significant differences were found between a team member's occupation and selection of preventability of vehicular, strangulation or

suffocation, and firearm deaths. Physicians serving on the child fatality review team perceive vehicular deaths as preventable more often than team members from other occupations. First responders (fire, police, and EMS personnel) serving on the child fatality review team perceive vehicular deaths as less preventable more often than team members from other occupations. Court personnel serving on the child fatality review team perceive suffocation or strangulation deaths as preventable more often than team members from other occupations.

2) Significant differences were found between a team member's occupation and perceptions of parental educational programs. First responders (police, fire, and EMS personnel) were most supportive of educational campaigns addressing the dangers of parental alcohol abuse, parental knowledge about community resources, and the dangers of alcohol, tobacco, and over-the-counter drug use during pregnancy.

Further studies should be conducted to further investigate differences in perceptions when compared to different occupational categories that were found to exist in Tennessee's child fatality review team members.

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Formulation and Definition of the Problem

Purpose of the Research Study

The research study was designed to 1) develop a valid and reliable survey instrument to assess Tennessee judicial district child fatality review team members' perceptions of the process used to review childhood fatalities in Tennessee and 2) establish an initial profile of information concerning Tennessee's child fatality review team members' perceptions of the review process and program effectiveness.

Introduction to the Research Study

The following research study examines the perceptions of Tennessee's judicial district child fatality review team members concerning the team members' participation in child fatality review, the preventability of specific causes of childhood fatalities, the effectiveness of the Tennessee child fatality review process, and the current educational initiatives used to prevent childhood fatalities.

In 1995, the Tennessee legislature proposed and passed the *Child Fatality Review and Prevention Act of 1995* to mandate the surveillance and review of childhood fatalities occurring in Tennessee's 31 judicial districts (*Child Fatality Review and Prevention Act of 1995*, 1995). To comply with this legislation, 34 judicial district child fatality review teams were formed. Each team reviews the deaths of Tennessee children whose address at the

time of death is within the judicial district. In addition to judicial district review since 1995, the Tennessee Department of Health has compiled all of the individual child fatality reviews completed by each judicial district child fatality review team and published summarized information from these individual reviews in yearly annual reports.

Tennessee judicial district child fatality review teams are composed of professionals employed by community and state agencies working with families, law enforcement, and the medical community. Each team is coordinated by an employee of the appropriate Tennessee regional or metropolitan health department serving that district (State of Tennessee, 2004).

In a 2002 review article of the child fatality review movement, Durfee et al. stated that the child fatality review process in the United States needed further evaluation because there was a lack of published evaluation studies in professional journals. No published research studies addressing judicial district child fatality review team members' perceptions concerning the team members' participation in child fatality review, preventability of specific causes of childhood fatalities, effectiveness of the Tennessee child fatality review process, and current educational initiatives used to prevent childhood fatalities were found by the researcher for studies focusing on either the United States as a whole or the State of Tennessee. Prior to May 2005, only two unpublished state-level studies were available. These studies evaluated

judicial district child fatality review teams in the states of Washington and Nevada (Personal Communication with Sara Rich, 2005; Personal Communication with Diane Pilkey, 2004).

The lack of published research and the lack of an available instrument to assess the child fatality review process necessitated the development of a new instrument. To implement this research, the first step was to design, validate, and pilot the new survey instrument entitled "Tennessee Child Fatality Review Team Members: Role in the review process." During instrument development, the study researcher established content validity, internal consistency reliability, and test-retest reliability. Following additional pilot testing, the instrument was then used to gather data from members of the Tennessee judicial district child fatality review teams during the period of February to May 2005. The survey was used to generate baseline data concerning each child fatality review team member's perceptions of 1) the self-reported team member's participation in child fatality review, 2) the preventability of specific causes of childhood fatalities, 3) the effectiveness of the Tennessee child fatality review process, and 4) the current educational initiatives used to prevent childhood fatalities.

The Statement of the Problem

The need to assess the current child fatality review team process and the lack of published research studies concerning the child fatality review process in Tennessee and across the United States demonstrated the need

for the evaluation of the child fatality review team process conducted by this research study

Research Objectives

The research objectives for this study were as follows.

1. Develop and validate a survey instrument to assess the perceptions of Tennessee judicial district child fatality review team members concerning the team members' participation in child fatality review, the preventability of specific causes of childhood fatalities, the effectiveness of the Tennessee child fatality review process, and the current educational initiatives used to prevent childhood fatalities.
2. Use a valid and reliable instrument to assess the perceptions of Tennessee child fatality review team members concerning the team members' participation in child fatality review, the preventability of specific causes of childhood fatalities, the effectiveness of the Tennessee child fatality review process, and the current educational initiatives used to prevent childhood fatalities.

The null hypotheses to the research study were as follows.

$H_0$1: There is no significant difference between the perceptions of judicial district child fatality review team members representing rural and urban judicial districts and their self-reported opinions

of the effectiveness of the Tennessee child fatality review process.

$H_0$2: There is no significant difference between members' self-reported perceptions of the effectiveness of the Tennessee child fatality review process based upon a member's occupation.

$H_0$3: There is no significant difference between judicial district child fatality review team members representing rural and urban judicial districts and their self-reported perceptions of team members' participation in child fatality review.

$H_0$4: There is no significant association between the judicial district child fatality review team members from different occupations and their self-reported perceptions of natural and injury-related fatalities selected as the most preventable.

$H_0$5: There is no significant difference between judicial district child fatality review team members and their self-reported perceptions related to a member's urban/rural location regarding current educational initiatives used to reduce childhood fatalities.

$H_0$6: There is no significant difference in perceptions of judicial district child fatality review team members from different occupations and the member's recommendations of current educational initiatives used to reduce childhood fatalities.

Theoretical Framework

Community Capacity Theory

The Community Capacity theory was used in the conceptual design of the research study because the theory examines how community resources (called *capacity* in the theoretical structure) can be utilized to make health-promoting changes within a community. The Community Capacity theory is a multidisciplinary, community asset-based theory and is frequently utilized by foundations to evaluate requests for grant monies, thereby enhancing project sustainability (Norton, McLeroy, Burdine, Felix, & Dorsey, 2002). The community's investment, involvement, and levying of resources help ensure sustainability of health initiatives. As a result, the Community Capacity theory is frequently utilized to evaluate a community's ability to make lasting change within its borders to address health issues (McNeely, 1996).

Communities possessing the human resources, money, and other resources necessary to complete a project are more likely to be able to successfully address the risk factors associated with childhood fatalities. Judicial district child fatality review teams are composed of community members representing diverse occupations, as outlined by the state (*Child Fatality Review and Prevention Act of 1995,* 1995). Additionally, participation on a judicial district child fatality review team may increase the member's awareness of community deficits and assets and enable the member to

strengthen the community's capacity for program implementation and initiate policy changes to better address risk factors for childhood fatalities.

Assumptions

The basic assumptions of this research study were as follows.

- All surveys were completed and returned by current members of local judicial district child fatality review teams.
- All survey respondents responded truthfully to questions on the survey.

Delimitations of the Research Study

For the purpose of this research study, the following delimitations were made.

- The population for this research study was delimited to Tennessee judicial district child fatality review team members serving in one of the 31 judicial districts (34 teams) during 2005. No members of the Tennessee state-level team were included in this research study.
- The focus and generalizations of this research study were delimited to Tennessee because of the specialized nature of the process and the lack of consistency between the process and terminology used to define causes of death in Tennessee and in other states in the United States.

Limitations of the Research Study

The research study was limited in the following ways.

- Responses were limited to Tennessee judicial district child fatality review team members during February to May 2005.
- Survey results were limited by terminology and operational definitions currently used on Tennessee child fatality data sheets. Thus, the study can only be generalized to states that utilize the same manner and cause of fatality definitions and the same process for child fatality review. Members' responses were limited to the following causes of death, which are listed on the child fatality review form: sudden infant death syndrome (SIDS), lack of adequate care, prematurity, illness, drowning, suffocation or strangulation, vehicular, firearm, inflicted injury, poisoning, and fire or burn. Across the nation, the classifications of specific causes of death as "natural" or "injury" vary. The classifications reduce generalization and limit specificity of responses.

Definitions

The following terms are operationally defined as used in this research.

- Accidental injury—These injuries occur suddenly and are attributed to an unintentional cause of fatality. Common causes of accidental fatality include motor vehicle crashes, firearms, or suffocations.

- Child fatality or child death—This term refers to fatality of a child aged 17-years-old or younger whose death is from natural causes, accidental injuries, or intentional injuries. (Each of these terms—natural causes, accidental injuries, or intentional injuries—is defined within this section.)
- Judicial district child fatality review teams—These teams were established in each of Tennessee's judicial districts as a result of a legislative change that mandated the review of all childhood fatalities in order to evaluate the community's response to the family prior to the fatality and suggest changes to better promote community collaboration. The team is composed of representatives from law enforcement, health care, the judicial, and community agencies, as well as the medical examiner.
- Community advocacy—This is defined as voluntary involvement in an organization that works to facilitate community change by addressing a social or community problem.
- Community Capacity theory—A theory that addresses the ability of a community to work together to mobilize human resources, finances, and other resources to create lasting community change.
- Intentional injury—These injuries may chronically occur over a long period of time (child abuse), may be considered for a period of time before occurring (suicide and murder), or may occur suddenly

(gang homicide). This category of inflicted injuries, with the exception of suicide, may be prosecuted as a crime in the legal system.

- Rural judicial district—A team member's self-report of a rural or urban judicial district was used for this study.
- Natural fatalities—A natural fatality is one that may or may not be preventable. These fatalities are classified as occurring from SIDS, prematurity of birth, or illness.
- Team coordinator—A person recognized by the state (usually employed by a regional or metropolitan health department within the judicial district) to coordinate and facilitate judicial district child fatality review team meetings. The team coordinator is the only member of the child fatality review team that is required to attend meetings. Other community team members participate on a volunteer basis.
- Urban judicial district—A team member's self report of a rural or urban judicial district was used for this study.
- Tennessee resident—A person who is living within the state's geographic boundaries at the time of the fatality.

Summary

The purpose of this chapter was to provide an outline for the creation, piloting, and administration of a survey to examine Tennessee judicial district

child fatality review team members' self-reported perceptions of their participation in child fatality review, the preventability of specific causes of childhood fatalities, the effectiveness of the Tennessee child fatality review process, and the current educational initiatives used to prevent childhood fatalities in Tennessee.

Literature pertaining to childhood fatalities was thoroughly examined. The literature review revealed major gaps in research pertaining to judicial district child fatality review team members' perceptions regarding childhood fatalities, and no published information was found regarding Tennessee's child fatality review process. This lack of research illustrates the crucial need for this project, which will add to the existing knowledge base about judicial district child fatality review team members' perceptions of their participation in child fatality review, the preventability of specific causes of childhood fatalities, the effectiveness of the Tennessee child fatality review process, and the current educational initiatives used to prevent childhood fatalities in Tennessee.

The results of this research study can be utilized by the Tennessee Department of Health to help guide future training of Tennessee's judicial district child fatality review teams. The results can also provide local communities with direction to increase a community's capacity to address risk factors for childhood fatality. Additionally, the results of this study will add to

the knowledge base of published literature in a population that has not been examined by previously published research.

This chapter has outlined the problem, purposes, need, and theoretical framework for the research study. The assumptions, limitations, delimitations, and definitions of key terms have also been provided to further promote understanding of the research study constructs.

Chapter Organization

The remaining chapters in this research study are as follows.

Chapter II: Review of the Literature

Chapter III: Methodology

Chapter IV: Analysis and Interpretation of Data

Chapter V: Summary, Findings, Conclusions, and Recommendations

Chapter VI: The Study in Retrospect

CHAPTER II

Review of the Literature

Introduction to the Chapter

The purpose of this chapter is to provide the necessary background and framework to support the research study. The literature review is organized into the following sections:

1. Literature related in content,
2. Literature related in methodology, and
3. Literature related in content and methodology.

Literature Related in Content

Introduction

"A simple child, that lightly draws its breath, And feels its life in every limb, What should it know of death?" William Wordsworth, 1798, written after his two youngest children died." (Field & Berhman, 2003, p. 41)

Childhood death is not as commonplace as it was in 1900. In 1900, approximately one-third of all fatalities in America occurred to children under the age of 5. In 1999, the childhood death rate had dropped to only 1.4% of deaths occurring in children under the age of 5. Many advances in public health occurred during the twentieth century, including improved hygiene, vaccinations, antibiotic development, medical advances, and improved technology. Children who would have died in 1900 are now able to live due to these advances. As a result of public health improvements, the average

life expectancy has risen by 50%, from 50 years in 1900 to 76 years in 1999 (Field & Berhman, 2003).

Pneumonia, influenza, tuberculosis, and diarrhea were historically the leading causes of pediatric deaths in the United States. Children under the age of 5 accounted for approximately 40% of these fatalities. In 1999, pneumonia as a complication of influenza was the only disease that still remained a major cause of adult or child deaths (Field & Berhman, 2003).

Children die from different causes than do adults. In 2003, congenital anomalies, prematurity, and sudden infant death syndrome (SIDS) were major causes of death in infants. The majority of these fatalities occurred before the child's first birthday, with two-thirds of these deaths occurring during the neonatal period—more than in all of the other age categories combined. For older children and adolescents, accidental and intentional injuries increase in prevalence as a cause of death. The top ten causes of death for all children, from infancy to age 24, are illustrated in Table 2.1. Adults experience fewer accidental and intentional injuries. However, they have higher rates of death from heart disease and other chronic medical conditions.

Risk of Childhood Fatalities Based upon Gender, Race, and Maternal Factors

Boys are at greater risk of death from all causes. In teenage males this difference increases, with older males 130% more likely to die than older

Table 2.1: Top Ten Causes of Fatality, Numbers of Fatalities by Cause, and Total Fatality Rates by Age Group (1999)

Rank	**Age Infant (under 1)**	**Age 1-4**	**Age 4-14**	**Age 15-24**
1	Congenital anomalies (5,473)	Accidents (1,898)	Accidents (3,091)	Accidents (13,656)
2	Short gestation and low birth weight (4,392)	Congenital anomalies (549)	Malignant neoplasms (1,012)	Homicide (4,998)
3	SIDS (2,548)	Malignant neoplasms (418)	Homicide (432)	Suicide (3,901)
4	Complications of pregnancy (1,399)	Homicide (376)	Congenital anomalies (428)	Malignant neoplasms (1,724)
5	Respiratory distress syndrome (1,110)	Diseases of the heart (183)	Diseases of the heart (277)	Diseases of the heart (1,069)
6	Placental cord membranes (1,025)	Pneumonia and influenza (130)	Suicide (242)	Congenital anomalies (434)
7	Accidents (845)	Perinatal period conditions (92)	Chronic lower respiratory diseases (139)	Chronic lower respiratory diseases (209)
8	Newborn sepsis (691)	Septicemia (63)	Benign neoplasms (101)	HIV (198)
9	Diseases of circulatory system (667)	Benign neoplasms (63)	Pneumonia and influenza (93)	Stroke (182)
10	Atelectasis (647)	Chronic lower respiratory diseases (54)	Septicemia (77)	Pneumonia and influenza (179)
Total	27,937	5,249	7,595	30,656
Fatality Rate per 100,000 (all causes)	705.8	34.7	19.2	81.2

(Field & Berhman, 2003, pgs 44-45)

females. Males are also more likely to be homicide victims than are girls. Differences in death rates exist when race is examined, with black children being more likely to die from all causes of death than Hispanic or white children.

Research has suggested that differences in death rates are related to maternal age and education, prenatal care received, marital status, and maternal smoking. These differences in death rates are present even after statistically adjusting for other factors correlated with pediatric deaths, such as gestational age, birth weight, and age at the time of death. Low birth weight is a strong predictor for black infant fatalities, with a rate of 280.9 per 100,000 compared to 72 per 100,000 for white infants (Field & Berhman, 2003).

Sociological factors are a strong contributor to differences in death rates for black children. Black children are more likely to live in a female-headed household, in the inner city, and in poverty. The strongest correlation of all of these factors is the maternal educational level. Mothers with low educational levels are more likely to have children at higher risk for childhood death. Additionally, black adolescents are six times more likely to die from homicide than are white adolescents. However, suicide and death due to motor vehicle accident were half as likely in black adolescents when compared to white adolescents (Field & Behrman, 2003).

Hospital Inpatient, Emergency Room, and Home Deaths

The vast majority of children (56%) die in a hospital inpatient environment. Approximately 5% of children were dead upon arrival at an emergency department, and 11% died in the child's home. The location of fatality is unknown in approximately 11% of child fatalities (Field & Behrman, 2003).

Rural versus Urban

In 1874, the Census Bureau first defined a rural area as one in which 8,000 or fewer people lived in a single county. This definition was changed in 1910 to 2,500 people residing in a single county. For the purposes of this research study, a common demographic definition of low population density for rural areas and high population density for urban areas will be utilized. According to the Census Bureau, an urban area is defined as a "continuously built-up area with a population of 50,000 or more" (McKibben & Faust, 2004). In contrast, a rural area is a place that is geographically located outside of an urban area. Defining what the term "rural" means is problematic. For example, neither researchers nor the federal government has agreed upon what constitutes a rural area. Metropolitan areas are not clearly defined, but most definitions are based upon size of place, population, or political boundaries. The numerous systems for rural/urban designation make comparisons between different data sources difficult and in some cases impossible (McKibben & Faust, 2004).

For the purposes of this research study, comprehensive definitions of a rural or urban area as cited in the United States Department of Agriculture's Economic Research Service Standards will be used. This source examines a county's population estimates, political jurisdictions, importance at the national and state levels, and social factors such as employment or economic resources before defining a location as rural or urban (Economic Research Service, 2005).

Rural Health Care

Health care is becoming more globalized. Differences exist in the availability of health care for people living in rural and urban environments. Obtaining health care in a rural area is not the same as obtaining health care in an urban city. Rural areas are known for wide expanses of land and sparsely populated areas. In contrast, urban areas are known for their densely concentrated population with a similarly densely populated availability of resources to facilitate easy access of services to the most people (Rosenblatt, 2001). In rural areas, obtaining the most basic resources can be a challenge due to cost effectiveness and logistical problems (McKibben & Faust, 2004).

The quality of an individual's health is more closely related to demographic factors such as lifestyle, age, gender, race, education, marital status, and occupation than it is to geographic proximity to a physician or a hospital (Rosenblatt, 2001). Education appears to have the strongest

association in explaining health status differences between rural and urban populations. Confounding this, individuals who obtain a higher education frequently leave rural areas to permanently reside in more urbanized areas. This migration to urbanized areas leaves some less educated individuals to live in poverty in the rural areas, further confounding the issues of health and poverty (Rosenblatt, 2001).

Research has indicated that individuals living in rural areas are generally no sicker or healthier than are individuals residing in urbanized areas. The major difference between the health care systems in these two areas is the number and type of health care providers. In a rural area, a person may have only a few, or even a single, health provider from which to choose. When the complexities of insurance coverage and preferred physician status for insurance plans are superimposed, the choice of physician is even further limited for these individuals. Many individuals residing in a rural community are left no choice but to seek medical care outside of their local community. Due to financial, transportation, and other logistical issues, other individuals are not given the opportunity to seek medical care from areas other than their community of residence (Rosenblatt, 2001).

Major Causes of Death

Natural Causes of Death

Congenital Anomalies. A congenital birth defect can affect any part of an infant. The Merck Manual defines these anomalies as "structural defects present at birth" (Merck, 2005). Some anomalies are easily visible after birth, whereas some birth defects require the use of more invasive testing, such as blood work, cardiac testing, or lung function testing, to be diagnosed.

The causes of congenital anomalies are not completely understood, but they are thought to be an interaction between fetal environmental causes (such as poor maternal nutrition, smoking, or drug use) and/or either spontaneous or inherited chromosomal abnormalities. Most anomalies do not cause the child's death. In fact, many do not have any physiological effect on the child. However, more lethal anomalies tend to be internal defects within the heart, lungs, or brain that are not as easily diagnosed. Of these, congenital heart disease accounts for the highest numbers of fatalities, but occurs in less than 1% of all live births (Field & Berhman, 2003).

Patent Ductus Arteriosis (failure of the fetal duct that shunts the blood to the lungs to close at birth) is a common cause of many deaths during the neonatal period. Under these circumstances, the child does not have adequate oxygen in its blood; and subsequently, the child's cells, tissues, and organs begin to die quickly. Other fatal anomalies include anencephaly (born

without a brain) and severe spina bifida (presence of a spinal cord open to the outside of the body) (Field & Berhman, 2003).

Chromosomal anomalies include conditions such as trisomy 13 (Pateau syndrome), trisomy 18 (Edward's syndrome), and trisomy 21 (Down's syndrome) (Field & Berhman, 2003). In each of these conditions, an extra chromosome is present on the chromosome number included in the name. For example with Down's syndrome, a child has three copies of the 21st chromosome.

Prematurity. Prematurity is the leading cause of disability by handicap and the leading cause of neonatal mortality. Infants having a birth weight of less than 5 pounds or 2,500 grams, or those who are born prior to the end of the 37th gestational week are considered premature. Low birth weight is associated with prematurity and only 20% of infants whose birth weight is less than 500-600 grams survive (Allen & Lynch, 2004). In contrast, 85-90% of infants whose birth weight is 1,250-1,500 grams survive (Vessey, 2004). With medical advances, the gestational age at which a fetus is able to live is decreasing. Fetuses with a gestational age of 22 weeks now have the potential to survive. Several years ago the age of minimal viability was listed as around 26 weeks (Field & Berhman, 2003). The age of viability, with good chances of survival, is now 25-26 weeks, with a weight of 500 grams.

One of the biggest problems with premature infants is the immaturity of organ development, which, in conjunction with a weak immune system,

leaves the infant susceptible to many infections (Vessey, 2004). The lungs are the last organs in prenatal development to mature, so these babies frequently experience periods of apnea and decreased respiratory drive (Novak & Broom, 1999).

Premature birth is the leading cause of neonatal death in the United States. Due to medical advances, babies who at one time would have died are now living. Population estimates for prematurity average 7% for the general American population and 10-11% for the African-American population (Novak & Broom, 1999).

The true causes of prematurity are still debated. However, research has consistently demonstrated that low-income, low-educated mothers are at greater risk of having a child born prematurely than are their higher educated counterparts. Maternal age appears to play an important role as well, with teenage mothers having a higher risk of premature delivery. Finally, exposure to tobacco smoke, either by actively smoking or by passively inhaling secondhand smoke, is correlated with an increase in premature delivery rates and a decrease in the baby's birth weight. Lack of prenatal care is also associated with an increase in premature delivery rates.

The black and Hispanic cultures believe that pregnancy is a time of health, and these cultures may not be as compliant to prenatal health care treatments as the Caucasian culture (Novak & Broom, 1999). The erroneous belief that prenatal care is unnecessary due to the health of the mother leads

some black and Hispanic mothers to forego prenatal care (Novak & Broom, 1999).

Babies who are born prematurely appear to be small and wrinkly and are covered with fine protective body hair called lanugo. The baby's head and abdomen are the largest parts of its body. Premature birth deprives infants of antibodies that help protect them from infections (Novak & Broom, 1999). These factors make the increase of neonatal fatalities due to prematurity easily explainable. Prevention of these fatalities, however, is much more problematic.

Sudden Infant Death Syndrome (SIDS). One mother reported,

> "…I ran downstairs…out into the pouring rain… 'For God's sake, where is the ambulance?'… [At the hospital,] Dr. Stillman came back looking devastated and utterly drained…He said that Alexander had died of SIDS…the whole thing was sick. I would know if Alexander was dead. Wasn't I his mother?" Esmeralda Williamson-Noble, parent, no date (Field & Behrman, 2003, p. 72)

Experts in the field have debated the definition of a SIDS death. In 1969, the first attempt was made to define SIDS as "the sudden death of an infant who had appeared well, or whose death remains unexplained after a postmortem investigation" (Valdes-Dapena, 1991, p. 3). In 1989, the National Institute of Child Health and Human Development instituted a requirement that a thorough investigation of the fatality scene must be conducted before a diagnosis of SIDS can be made. Additionally, the definition of SIDS created by this committee was:

> The sudden fatality of an infant under one year of age which remains unexplained after a thorough case investigation, including performance of a complete autopsy, examination of the fatality scene and review of the clinical history. (Rognum, 2001, p. 11)

SIDS occurs to babies of all races and ethnicities, in both developed and developing nations. However, babies of Asian descent die at lower rates than do children of other nationalities. Little research attention is given to SIDS in developing nations due to the increased rates of other lethal diseases such as diarrhea (Valdes-Dapena, 1991). In the United States, SIDS is the most common cause of death for infants older than 1 month and younger than one year (Field and Behrman, 2003). Risk to die from SIDS is highest during the second, third, and fourth months of life.

SIDS is likely an interaction between an infant's development, environment, and physiologic responses. Infants are at greatest risk to die from SIDS between the hours of midnight and 6:00 AM. Physiologic responses such as respiration rate or heart-rate-increases occur at different rates in individual children and these rates change at different times of the day. Children with stronger respiratory and cardiac responses, evidenced by increasing breathing or pulse rates, may be better able to adjust and adapt to environmental changes (Keens & Davidson Ward, 2001).

Infants who have died from SIDS are generally found on their stomach, and their blood settles due to gravity. If blood is found in the mouth or nose, this suggests that the child died from suffocation instead of

SIDS (Rognum, 2001). Suffocation is the true cause of death in up to 5% of all SIDS fatalities (Field & Berhman, 2003).

Autopsy of the infant is the only way in which SIDS can be differentiated from intentional suffocation (Field & Behrman, 2003). Autopsy findings in SIDS cases include petechial hemorrhages on the thymus, lungs, and heart. Some researchers have established an association between infants having cold symptoms and fever immediately prior to the SIDS death (Rognum, 2001).

There are several maternal factors associated with SIDS fatalities, including income and unemployment, increased parity levels, education levels, marital status, race (particularly Native American and African-American), age, tobacco use, premature delivery of baby, and inadequate prenatal care. Maternal alcohol use, when controlled for collinearity with tobacco use, has not been associated with SIDS. Factors associated with the infant include sleeping on the side or in a prone position, sleeping on soft surfaces (i.e., pillows, blankets, or comforters), health status, prematurity, and gender, with male infants more prone to SIDS deaths than female infants (Rognum, 2001).

Research is not conclusive regarding physiologic causes of SIDS; current theories under investigation are preexisting respiratory conditions such as bronchiospasm, decreased levels of surfactant in the lungs initiating alveolar collapse (Hillman, 1991), hypoxia, presence of a prolonged QT

interval on an electrocardiogram, rebreathing of exhaled air, exposure to bacteria or fungi, or brain abnormalities (Rognum, 2001). Additional causes under investigation include the baby's sleeping position and exposure to cigarette smoke. However, despite the lack of conclusive evidence about the causes of SIDS, the rate of SIDS deaths decreased by almost one-third from 1992 to 1996 due in part to educational initiatives such as the "Back to Sleep" campaign. SIDS remained the third leading cause of infant death in this country when 1999 statistics are examined (Field & Behrman, 2003).

Cancer. Cancer is the leading disease-related cause of mortality for children over 1 year of age. Most common cancers that occur in children under the age of 20 are leukemia and brain or spinal cord cancers. Malignant cancers are the second leading cause of fatality in 10-14 year olds and the fourth leading cause of fatality in 15-19 year olds (Field & Berhman, 2003).

Unintentional Causes of Death

Unintentional injuries are the leading cause of death for children ages 1-9, causing 36% of all fatalities in the 1-4 year-old age bracket and 42% of fatalities in the 5-9 year-old age bracket (Field & Behrman, 2003). Other common causes of death from unintentional injury are drowning, burns, airway obstruction, and pedestrian injuries.

Many children's deaths are due to unintentional injuries, costing taxpaying citizens a large amount of money. The National Health Interview Survey was used to determine the cost and rate of unintentional injuries

occurring in a population of children up to the age of 21. Danseco found that 20.6 million unintentional injuries occur in individuals under the age of 21 each year, costing $347 billion annually in medical costs, future work loss, and changes in the quality of life (Agran, Winn, Anderson, Trent, & Walton-Haynes, 2001).

These fatalities have many factors in common, including maternal age, low educational attainment, and number of other children present in the home (Overpeck, Brenner, Cosgrove, Trumble, Kochanek, & MacDorman, 2002). British researchers suggest that death due to accidental injury is potentially preventable in up to 39% of individuals with immediate, adequate pre-hospital injury stabilization at the scene of the injury (Hussain & Redmond, 1994). Other British researchers have suggested that hospital stabilization after adequate pre-hospital care can potentially reduce mortality from accidental injury by an additional 16% (Roberts, Campbell, Hollis, & Yates, 1996). Unfortunately, rural communities may not have the resources of immediate pre-hospital care to treat injuries in the field.

Motor Vehicle Accidents. Motor vehicle accidents are the largest contributor to fatalities of children in the age group of 1-9 years old. Failure to wear seat belts or failure to be placed in a child restraint is the largest contributing factor to fatalities in this age group (National SAFE KIDS Campaign, 1999).

Motor vehicle collisions are the overall leading cause of mortality and disability in the pediatric population (Sweitzer, Rink, Corey, & Goldsmith, 2002). According to the National Safe Kids Coalition, 1,800 children are killed annually and approximately 280,000 children are injured annually in motor vehicle collisions (National SAFE KIDS Campaign, 1999). State laws in all fifty states mandate that children under the age of two years old be placed in child restraints. However, legislation on older children is not uniform in all states (National SAFE KIDS Campaign, 1999).

Non-compliance with restraint laws remains a problem. Research has demonstrated that 33% of the children in a Kentucky research study of child restraint use were not restrained when a collision occurred (Sweitzer, Rink, Corey, & Goldsmith, 2002). Other researchers have shown a more clear correlation between unrestrained children and vehicular deaths (Osberg and DiScala, 1992; Agran, Winn, & Anderson, 1997).

When properly used, child restraints decrease fatalities by approximately 70% for infants under one year old and by 47% for children ages 1 to 4 years old (Sweitzer, Rink, Corey, & Goldsmith, 2002). The safest location for a child in a vehicle is the back seat regardless of whether the child is restrained or unrestrained. The child fatality rate decreases by as much as 36% by having the child ride in the back seat (Sweitzer, Rink, Corey, & Goldsmith, 2002).

The rate of fatalities occurring in motor vehicles quadruples from 5.0 per 100,000 in children ages 10-14 to 26.3 per 100,000 in children ages 15-19. The majority of fatalities occur to teens riding in the vehicle as passengers. Alcohol (Voas, Fisher, & Tippetts, 2002) and speed (Bartle, Baldwin, Johnson, & King, 2003) are also major contributing factors in many teenage vehicular fatalities.

Adolescents aged 16-17 were at an increased risk for fatal vehicle crashes, compared to older adolescents. The risk for fatality increases with the number of individuals in the vehicle (Chen, Baker, Braver, & Guohua, 2000). As a result of this and other research, Tennessee has instituted a Graduated Driver's Licensure program that attempts to limit times during the evening and at night when a young person is allowed to drive a car. This program also limits the number or type of passengers (sibling vs. peer) at any time of day.

Falls. Pathological evidence of simple skull fractures may occur with short falls of less than four feet. More serious brain injuries, such as epidural hematomas or sub-arachnoid hematomas are relatively rare. Retinal hemorrhages are rarely seen in short falls of less than four feet (Reece & Sege, 2000). However, serious injuries may occur to children who experience short falls by tearing one of the medial meningial arteries causing an epidural hematoma (Reece & Sege, 2000). This is evidenced by a short period of lucidity after the trauma followed by nausea and vomiting. The bleeding in

the brain then causes unconsciousness (Reece & Sege, 2000). Bleeding in the brain is the most common cause of fall deaths.

Fire and Burns. In 1994, the nationwide childhood mortality rate from fires was 2.75 fatalities per 100,000 children. As a consequence, the document *Healthy Children 2000* included a goal of decreasing childhood mortality from fires (Scholer, Hickson, Mitchel, & Ray, 1998). Using a historical cohort design in Tennessee, Scholer et al. (1998) found that maternal education, age, and number of siblings in the home were all relevant in determining the risk of fatality by burns. Children living in families with multiple risk factors were 150 times more likely to die from a fire than were children living in families with only a few risk factors. The researchers hypothesized that this effect is mediated by environmental factors such as the presence of a working smoke detector, alcohol impaired adults, parental smoking, use of portable heaters, and living in a mobile home (Scholer et al., 1998).

Drowning. Major risk factors for drowning include a lack of adult supervision, a child under the age of four, ready access to pools or other large areas of water, lack of ability to swim, and lack of or improper use of flotation equipment. The size of the body of water in which children of different ages drown is proportional to their body size. A baby can easily drown in a bathtub or a 2-year-old can drown in a bucket, whereas an 8-year-old is unlikely to drown in either of these locations but is more likely to

drown in a swimming pool or lake (National Center for Child Fatality Review, 2004).

From birth to age 4, children are equally likely to drown in a bathtub, pool, and open water. After 5 years of age, children are most likely to drown (70%) in open water or in a pool (Quan & Cummings, 2005). Among 15-19 year old teenagers, 34% of drownings occurred while swimming and 31% occurred while boating (Quan & Cummings, 2005).

Suffocation or Strangulation. Suffocation fatalities can be caused by many different mechanisms, including overlay by an adult during sleep, covering of the face (e.g., plastic bag) (Nakamura, Pollack-Nelson, & Chiedekel, 2003), choking on a foreign object or food, confinement (e.g., stuck in a refrigerator), or positional asphyxia (e.g., becoming trapped in soft bedding or pillows). A child is at the highest risk for suffocation when sleeping with adults or in a bed that is not appropriate for the child's age. Research has indicated that infants sleeping in adult beds are 20 times more likely to die of suffocation than are infants sleeping alone in cribs. For toddlers and older children, the risk of suffocation is greatest due to accidentally having a cord around their neck or from foreign objects becoming lodged in a child's small airway (National Center for Child Fatality Review, 2004). Suffocations and strangulation can be homicide related as well if intentionally caused, as evidenced in cases of child abuse.

Intentional Causes of Death

The rates of homicide and suicide are higher in the United States than in other industrialized nations. This fact is typically explained by the ease of handgun availability. Homicide and suicide rates have continued to increase despite decreases in the overall fatality rates. The most frequent cause of homicide and suicide fatality is by firearms, accounting for 5% of all pediatric emergency room visits. In older age brackets, the rates of both homicide and suicide increase with the child's age (Field & Berhman, 2003).

Other intentional causes of death include child abuse, shaken baby syndrome, and Munchausen syndrome by proxy. According to Federal Bureau of Investigation statistics, the majority (60%) of all child abusers are parents and 20% are stepparents or a boyfriend or girlfriend of the child's parent.

Homicide and Suicide. Nationally, homicides of children have decreased for the last seven years (MacDorman, Minino, Strobino, & Guyer, 2002). Frequency of homicides increased in each age group, ranging from 8% of all childhood fatalities ruled as homicides for children 1-4 years old to 81% of all fatalities ruled as homicides for adolescents 15-19 years old (MacDorman et al., 2002).

Many citizens consider gun ownership to be a fundamental constitutional right of the American people. Approximately 40% of all Americans report owning one or more firearms (Kellermann & Heron, 1999).

The presence of firearms does not increase the risk of violent behavior. Firearms cannot make a non-violent person become violent. However, firearms do inflict more serious injuries than do other types of weapons.

Firearms are a weapon of choice for both homicides and suicides, accounting for 46% of all homicides and 42% of all suicides (Kellermann & Heron, 1999). Research at this time does not show whether this is the case for attempted homicides and suicides.

Easy access to firearms, coupled with a lack of education about firearm safety, poses a formidable threat to our nation's children. Parents need to have safety mechanisms in place to prevent a child from acquiring a loaded firearm and accidentally firing the weapon, injuring himself or herself or another child. Research has illustrated several risk factors for intentional firearm fatalities, including mental illness, living alone, and accessibility of weapons in the home (Shephard & Klein-Schwartz, 1998).

The suicide rate showed a downward trend during the 1990s when compared to the 1980s. Adolescents who die from a suicide attempt are more frequently male. Females are more likely to attempt suicide by overdosing on medicines, whereas males are more likely to use firearms to attempt suicide (Shepherd & Klein-Schwartz, 1998). Racial differences also emerge in suicide attempts, as white adolescents are more likely to attempt suicide than are adolescents of other races (Shepherd & Klein-Schwartz, 1998).

Abuse and Neglect. Mortality in infants under one year of age may be misdiagnosed as SIDS due to the overlap in symptomology that occurs in both SIDS cases and cases of intentional suffocation. The American Academy of Pediatricians (AAP) suggests that the number of reported SIDS cases ruled as infanticide is increasing (Overpeck, et al, 2002). Additionally, judicial district child fatality review teams report significant (approximately 50%) erroneous reporting on fatality certificates of children who died as a result of maltreatment (Crume, DiGuiseppi, Byers, Sirotnak, & Garrett, 2002; Herman-Giddens, Brown, Verbiest & Carlson, 1999). Several factors increase the likelihood of authorities not recognizing child maltreatment, including abuse by a perpetrator other than a parent and residing in a rural geographic location (Crume, DiGuiseppi, Byers, Sirotnak, & Garrett, 2002). The perpetrators of child abuse are frequently a parent of the child or a parent's partner (Reece & Sege, 2000).

Children who experience abuse have higher mortality rates and experience more severe injuries than do children who are injured by accidental means (Reece & Sege, 2000). Mortality from child abuse may be caused by multiple mechanisms. A ten year retrospective research study of child abuse and unintentional injuries by DiScala, Sege, Li, & Reece (2000) revealed that a majority of fatalities of children aged 0-4 years old were caused by beatings (57%) or burnings (37%). Other common causes of death included shaken baby syndrome, brain contusions without external

contact, or injury or asphyxiation caused by drowning (DiScala et al., 2000). These children were more likely to have a history of medical problems, fractures in various stages of healing, and poor personal hygiene (DiScala et al., 2000).

Head injuries occurring in children may also be ruled as accidental when another person caused the injury (Reece & Sege, 2000; DiScala, Sege, Li, & Reece, 2000). However, research suggests that up to one-fifth of all brain injuries and two-thirds of serious, life-threatening brain injuries to children under the age of one were caused by an assault (Reece & Sege, 2000). Pathological findings suggest that major abuse includes subdural hematomas, sub-arachnoid hemorrhages, and retinal hemorrhages diagnostic of child abuse (Reece & Sege, 2000). Retinal hemorrhages and intracrainal injuries occurring in absence of a traumatic history should be considered to be a positive indicator of child abuse (DiScala et al., 2000).

Shaken Baby Syndrome. In 1974, Caffey first described shaken baby syndrome as "whiplash shaken infant syndrome" (Brooks & Weathers, 2001). Research has suggested that male infants and infants under 6 months of age are at the highest risk of being shaken. Infants of all races and ethnic groups have the potential to be shaken, but research suggests that Caucasian and African-American infants are at the highest risk (Riffenburgh & Sathyavagiswaran, 1991).

Research has indicated that parents who exhibit a higher risk of shaking an infant may expect the baby to nurture their emotional needs. The parent becomes frustrated when the child cannot meet his or her emotional needs and reacts by becoming angry with the baby. Parental environmental stressors have been associated with shaking, including financial problems, lack of social support systems, or sickness within the family.

Some researchers have suggested that infants with colic, handicaps, or who are born prematurely are at higher risk for shaking due to parental frustration that the infant does not develop as rapidly as expected. This is consistent with the post-shaking parental response that the caregiver did not intend to harm the child, they just wanted "to make the baby stop crying" (Swenson & Levitt, 1997). Other parents stated that the injuries occurred during horseplay. However, the objective injuries on the child are inconsistent with the type of play stated by the parents. Fathers of the child or boyfriends of the child's mother are the most common abusers, followed by babysitters (Brooks & Weathers, 2001).

Infants are at a higher risk of injuries from shaking than are older children due to weak musculature of the neck and back, larger size of the head, presence of open fontanels, and increased amounts of cerebral spinal fluid (Brooks & Weathers, 2001). Additionally, the infant's brain has more room to rotate within the cranial cavity (Jantzen, 2001). These factors place the child at increased risk of tearing cranial arteries causing subdural,

subarachnoid, epidural hemorrhages and/or cerebral edema. Fatalities are caused by the swelling of the base of the brain into the spinal cavity, exerting pressure on the respiratory and heart nerves of the brainstem (Jantzen, 2001). Additionally, retinal hemorrhages occur in 75-90% of shaken baby cases (Brooks & Weathers, 2001; Jantzen, 2001). Early studies by Warner (as cited in Brooks & Weathers, 2001) of shaken baby syndrome indicate that it is a significant cause of morbidity and mortality. with approximately 15% of children dying due to the shaking and a 50% morbidity rate. Shaking is a significant cause of mental retardation, blindness, deafness, hydrocephalus, and developmental delays due to permanent brain damage (Brooks & Weathers, 2001).

The infant who has been shaken may present to the emergency room in a coma due to seizures or failing to eat. A shaken baby is difficult to diagnose because the symptoms of shaken baby syndrome are similar to the symptoms of meningitis. Lumbar punctures are commonly performed to rule out bacterial or viral illnesses. The time between the acute shaking incident and the onset of symptoms is not readily understood due to the abuser's fabrication of an injury's history (Brooks & Weathers, 2001).

A fatality investigator trained to recognize child abuse should investigate shaken baby syndrome fatalities. Parental or caretaker stories may change frequently and are often inconsistent with the injuries seen on the child. An autopsy investigation is vital to ensure that all injures, including

internal injuries, are thoroughly documented. The brain needs to be examined within the cranial cavity before it is removed to determine if the corpus callosum is intact or if hematomas are present. Additional secondary injuries may be seen in shaken babies who die, including fractures or cranial suture separations (Jantzen, 2001). Additionally, if clinically indicated by postmortem examination, sexual assault investigators should be consulted to ensure proper custody of evidence.

Munchausen by Proxy. Munchausen by Proxy (MBP) is a type of child abuse and neglect where caretakers fabricate or induce a medical problem in a child who is under their care. It was first described by Meadow in 1977. Perpetrators of MBP are frequently motivated by a desire to control and manipulate others and may have personal needs met through attention drawn to them as a parent of a child with medical problems (Lasher & Sheridan, 2003).

Research has indicated that victims of MBP have been poisoned, experienced unnecessary surgeries, and undergone unnecessary diagnostic tests to rule out a physiological condition. A literature review by Sheridan (as cited in Lasher & Sheridan, 2003) indicated that approximately 6% of MBP victims died as a result of the fabrication of illnesses.

A caretaker may withhold medications from a child then seek help for the "resistant" condition, such as in asthma. Poisonings may occur with salt or medications prescribed for another person, or smothering and subsequent

resuscitation may occur. Regardless of the mechanism chosen by the perpetrator of MBP, frequently no objective evidence is present when seeking medical care, such as in breathing disorders, pain, or behavioral issues. For example, a child at risk for apnea will stop breathing only when not on the apnea monitor. Additionally, the symptoms reported have a dramatic quality (Lasher & Sheridan, 2003).

Child Fatality Review Teams

As a result of child abuse fatalities, the first child fatality review team was established in Los Angeles, California, in 1978. By 1982, the concept of child fatality review spread to several other communities in California that had voluntarily established child fatality review teams (Langstaff & Sleeper, 2001). These teams examined child fatalities to determine ways the system could be changed to help prevent future abuse and neglect fatalities. The teams then expanded their reviews to include all forms of preventable fatalities—natural, intentional, and unintentional (National Center on Child Fatality Review, 2000).

Currently, child fatality review teams have been established in each state of the United States, in Canada, and in Australia (Langstaff & Sleeper, 2001; National Center on Child Fatality Review, 2000). These teams were established in response to many factors. One factor was that technological advances now allowed easy access to multiple agency or medical records. A second factor was the pain caused by working with cases of child fatalities for

service providers. The goals of child fatality review teams were to create recommendations for system change, implement the changes, and, finally, continuously evaluate changes to ensure adequacy of recommendations to reduce childhood fatality (National Center on Child Fatality Review, 2000).

Establishment of these review teams has linked experts in a variety of disciplines, including medical examiners, public health workers, law enforcement personnel, judicial system personnel, child advocates, medical providers, and service agencies (Elster & Alcalde, 2003; Hutchins, Grason & Handler, 2004; National Center on Child Fatality Review, 2000). Larger teams may include representatives from the local emergency medical services system, school system, and clergy. These members assist in the development of prevention initiatives, including early recognition of and intervention with families at risk (Hutchins, Grason, & Handler, 2004; National Center on Child Fatality Review, 2000; Noland, Joly, & Liller, 2000). Community collaboration allows the collective pooling of information and creates an environment within the team and collaborating organizations that promotes system changes to decrease the rates of preventable childhood fatalities (Langstaff & Sleeper, 2001).

Issues of danger to children that have been identified through the child fatality review process and currently have prevention programs in place include the following: community education on the dangers of large buckets to toddlers, community donations of automobile safety seats to low income

parents, fencing around all sides of pools to help prevent unintentional drowning, and community donations of smoke detectors and media campaigns to ensure frequent changing of batteries in smoke detectors (Elster & Alcalde, 2003). Other communities have extended the work of the child fatality review team to establish domestic violence fatality review teams and child abuse review teams to examine non-fatal cases of child abuse or neglect (Elster & Alcalde, 2003; Hutchins, Grason, & Handler, 2004; National Center on Child Fatality Review, 2000).

Tennessee

Geographically, Tennessee is 41,217 square miles and includes 95 counties and four major cities (Memphis, Nashville, Knoxville, and Chattanooga). The 2003 United States Census estimates the total population of Tennessee to be 5,841,748. The census estimates 138.0 persons reside in each square mile of Tennessee. Tennessee has an interesting population on which to conduct this research study because of the state's combination of urban centers and rural areas that are located in close geographic proximity (US Census Bureau, http://quickfacts.census.gov/qfd/states/47000.html, 2004).

Tennessee's population is 51.3% female and 48.7% male. Almost a quarter of Tennessee residents are under the age of 18. Racial composition of the state's residents shows a majority of white residents (80.2%), followed

by black residents (16.4%), and Hispanic residents (2.2%) (US Census Bureau, http://quickfacts.census.gov/qfd/states/47000.html, 2004).

Tennessee's Child Fatality Review Teams. In 1995, Tennessee legislation mandated that fatalities of children (17 years old and younger) that occurred in Tennessee be reviewed by local child fatality review teams, primarily organized by judicial district (*Child Fatality Review and Prevention Act of 1995*, 1995). The law requires each judicial district to convene a judicial district child fatality review team to examine child fatalities and finalize information on both the cause and manner of fatality and to facilitate future policy development at the local or state level to more effectively prevent, when possible, similar child fatalities. In the legislation, child fatality review teams were initially referred to as child fatality prevention teams (*Child Fatality Review and Prevention Act of 1995,* 1995). A copy of this legislation is available in Appendix A.

In 2005, Tennessee utilized 34 local judicial district child fatality review teams located in the 31 judicial districts of Tennessee. Each judicial district or sub-judicial district team reviews fatalities of children who had geographical residence within their jurisdiction. Due to the size of the judicial districts, three densely populated judicial districts were divided into two judicial district child fatality review teams, each one to cover one-half of each judicial district. These three judicial districts are judicial district 19 (two teams: 1901 and 1902), judicial district 21 (two teams: 2101 and 2102), and

judicial district 22 (two teams: 2201 and 2202). Table 2.2 provides a list of Tennessee's counties and the corresponding judicial districts. Additionally, these teams are then categorized into Tennessee Department of Health regions illustrated on a map located in Appendix B.

Local teams provide several advantages, including close geographic proximity, understanding of the culture of the community, and access to local information necessary to increase the team's knowledge about the events surrounding a child's fatality. Examination of the issues surrounding child fatalities also allows teams to identify and rectify areas of weaknesses within the community, create policy change to protect Tennessee's children in the future, and help establish programs to prevent future fatalities (State of Tennessee, 2005). The relationship between the legislature, Tennessee Department of Health, state child fatality review teams, and judicial district child fatality review teams is depicted in Figure 2.1.

Child Fatality Review Data Forms. Each judicial district review team compiles information gathered from local agencies, the child's birth certificate, the child's fatality certificate, and the autopsy, if performed. Child and family information recorded by the team includes the following: the child's full name and birth date; the child's gender and race; the child's address at the time of fatality; and the mother's full name and birth date. The Tennessee Child Fatality Review Data form is available in Appendix A.

Table 2.2: Tennessee Judicial District Child Fatality Review Team by Tennessee Department of Health Region

Region	**Judicial district and Counties covered by the judicial district team**
Northeast	Judicial district 1: Carter, Johnson, Unicoi, and Washington Judicial district 3: Green, Hamblen, Hancock, and Hawkins
Sullivan	Judicial district 2: Sullivan
East	Judicial district 4: Cocke, Grainger, Jefferson, and Sevier Judicial district 5: Blount Judicial district 7: Anderson Judicial district 8: Campbell, Claiborne, Fentress, Scott, and Union Judicial district 9: Loudon, Meigs, Morgan, and Roane
Knox	Judicial district 6: Knox
Southeast	Judicial district 10: Bradley, McMinn, Monroe, and Polk Judicial district 12: Bledsoe, Franklin, Grundy, Marion, Rhea, and Sequatchie
Hamilton	Judicial district 11: Hamilton
Upper Cumberland	Judicial district 13: Clay, Cumberland, DeKalb, Overton, Pickett, Putnam, and White Judicial district 15: Jackson, Macon, Smith, Trousdale, and Wilson Judicial district 31: Van Buren and Warren
South Central	Judicial district 14: Coffee Judicial district 17: Bedford, Lincoln, Marshall, and Moore Judicial district 2101: Hickman, Lewis, and Perry Judicial district 2202: Maury
Mid-Cumberland	Judicial district 16: Cannon and Rutherford Judicial district 18: Sumner Judicial district 1901: Montgomery Judicial district 1902: Robertson Judicial district 2102: Williamson Judicial district 23: Cheatham, Dickson, Houston, Humphreys, and Stewart
Davidson	Judicial district 20: Davidson
West	Judicial district 24: Benton, Carroll, Decatur, Hardin, and Henry Judicial district 25: Fayette, Hardeman, Lauderdale, McNairy, and Tipton Judicial district 27: Obion and Weakley Judicial district 28: Crockett, Gibson, and Haywood Judicial district 29: Dyer and Lake
Madison	Judicial district 26: Chester, Henderson, and Madison
Shelby	Judicial district 30: Shelby

(State of Tennessee, www.tennessee.gov, retrieved 1/3/2004)

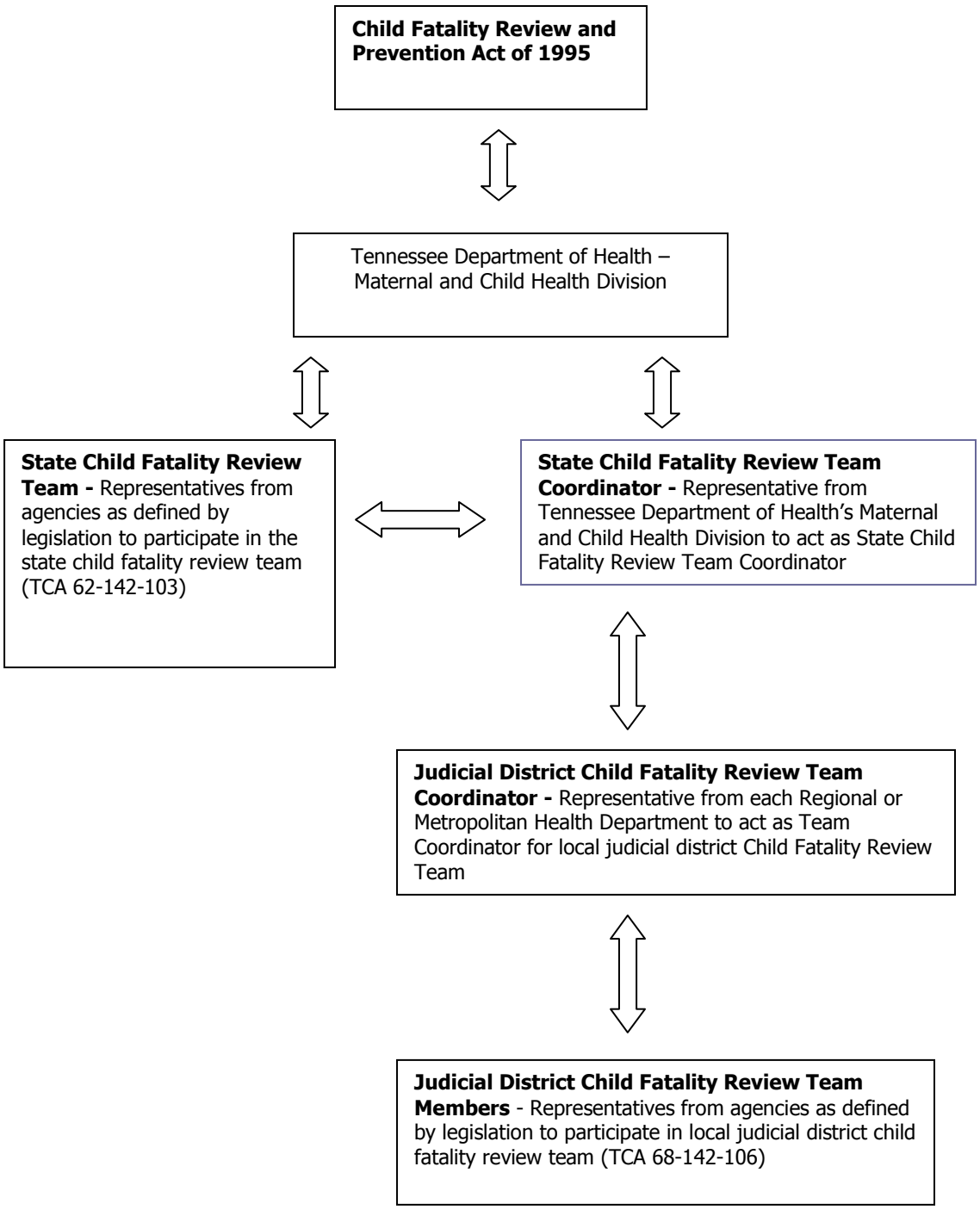

Figure 2.1: Tennessee Child Fatality Review Process

Additional information recorded from the birth certificate includes the child's birth weight in kilograms or pounds; an estimate of gestational weeks; abnormal conditions present at birth; congenital anomalies present at birth; number of prenatal visits and trimester in which prenatal care began; and, information about maternal tobacco use during pregnancy, alcohol use during pregnancy, or use of other chemical substances during pregnancy.

Information recorded from the death certificate includes the manner of death; location of death; and, if an autopsy was completed, location of autopsy and medical examiner completing autopsy. Autopsy results require teams to obtain a separate report from the medical examiner. The physician conducting a post-mortem exam of the patient determines the manner of fatality recorded on the fatality certificate. The following cause-of-death categories are provided on the child fatality data form used by judicial district child fatality review teams to expedite the review process: 1) Sudden infant death syndrome (SIDS), 2) Lack of adequate care, 3) Prematurity, 4) Illness/Natural cause, 5) Drowning, 6) Suffocation/Strangulation, 7) Vehicular, 8) Firearm, 9) Inflicted injury, 10) Poisoning/Overdose, 11) Fire/Burn, 12) Other cause not listed above, and 13) Unknown cause.

Additional questions on the child fatality data form allow team members to describe special circumstances that surround the child's fatality. These circumstances could include child abuse fatalities and inadequate investigations of the child's death. Manner of death as determined by the

judicial district child fatality review team may be different from the manner of death reported on the death certificate. Manner of death classifications provided on the child fatality data form include 1) Homicide, 2) Accidental, 3) Natural, 4) Suicide, 5) Could not be determined, or 6) Undetermined due to suspicious circumstances.

After the local judicial district review team has reviewed the child's fatality at a regular meeting, the team generates recommendations for system or policy changes to better address risk factors to prevent future fatalities.

Examination of Tennessee's Data

For the years 1997-1999, there were a total of 3,160 child fatalities occurring to children 17 years of age or younger in Tennessee. Of these, 69.5% (n=2,195) of child fatalities were due to natural causes. This was followed by unintentional injuries at 22.1% (n=697) and intentional violence-related fatalities at 6.4% (n=201). The remaining 2.1% (n=67) of fatalities were due to other causes that were not congruent with the listed causes of fatality on the review forms (Tennessee Department of Health, 2002a).

Gender differences were present in the data, with 58.3% (n=1,842) of all fatalities occurring to males and 41.7% (n=1,317) of all fatalities occurring to females. Racial differences are somewhat confusing, with a larger percentage of all fatalities occurring to white individuals (61.1% [n=1,930])

than to black individuals (35.9% [n=1,136]) or to individuals of other racial categories (3.0% [n=94]). However, these data do not present an accurate representation of risk applied to the population (Tennessee Department of Health, 2002a).

Child fatality data in 2001 present a different picture when rates are computed for each population. According to these data, black children were at highest risk of dying from most childhood injuries, with 122.4 black children dying out every of 100,000 in the population, followed by fatalities of white children, with 58.9 dying out of every 100,000 in the population. Children of other racial identifications were at the lowest risk of dying from childhood injuries, with 68.0 children dying out of every 100,000 in the population. Black male infants under 1 year of age were at the highest risk for fatality, with 1,770.7 fatalities out of every 100,000 in the population. A similarly elevated risk was illustrated for black female infants under the age of one, with 1,581.4 fatalities out of every 100,000 in the population. The rate for white infant males was 686.2 out of every 100,000 in the population and the rate for white infant females was 628.6 out of every 100,000 in the population (Tennessee Department of Health, 2002b).

The number of females under the age of 18 who die from unintentional injuries rose during the years 1997-1999. In 1997, 48 females died in motor vehicle crashes. This number remained relatively constant, with 49 dying in 1998. However, in 1999, 66 females died as the result of

motor vehicle accidents. Additionally, this trend is also reflected in the data for fatalities that occur as a result of fire. In 1997, 7 females died in fires, followed by 9 females who died in fires during 1998. In 1999, 17 females died as the result of fires (Tennessee Department of Health, 2002a).

During the years 1997-1999, 64.2% (n=129) of all violent fatalities were homicides and 35.8% (n=72) of violent fatalities were suicides. Suicides in the 16-17 year-old age range were responsible for 56.9% (n=41) of all suicide deaths. Homicides in the 16-17 year-old age range were responsible for 41.1% (n=53) of all homicide fatalities (Tennessee Department of Health, 2002a).

Literature and Research Similar in Methodology or Theory

Community Building

> "Capacity building…describes activity to enhance leadership skills, group problem solving, collaborative methods, and substantive understanding of community assets, problems and opportunities among organized, participating community residents." (McNeely, 1996, p. 87)

Communities with high amounts of social capital have the ability to successfully identify and respond to problems within the community. The ideas of social capital and community capacity are related. A community must have social capital within its borders to have the resources necessary to address community problems. The definition of a community can be either broad or narrow depending on the focus of the research study.

The lines between physiological origins of disease and social origins of disease have become blurred with recent research and a variety of educational interventions. Diseases highlighted by social concerns, such as tobacco use, alcohol use, or violence, are a preventable source of mortality for young people (Freudenberg, Eng, Flay, Parcel, Rogers, & Wallerstein, 1995). Community recognition of a problem is necessary to mobilize resources to address the problem. Additionally, a community must be motivated, flexible, and possess leaders willing to tackle difficult issues.

A history of community collaboration and a history of previous success in addressing community issues help to facilitate future collaborative initiatives. Community groups that include representatives from diverse interests in the community are more likely to succeed because more viewpoints are represented. Additionally, competition needs to be kept to a minimum, and the group needs to communicate effectively—both within the group and within the community at large. Communities that begin with small projects and progress to larger initiatives are more likely to succeed because project completion is more likely.

Finally, a community must have enough financial resources, in-kind donations, and human resources within its borders to enable the successful planning and implementation of the community initiative. According to the Amherst Wilder Foundation, the capacity of a community is best defined as "the extent to which members of a community can work together"

(Mattessich & Monsey, 1997). The ability to work together requires that the group have the ability to make and sustain relationships among the agencies and individuals working together, make group decisions, and effectively collaborative to successfully complete projects (Mattessich & Monsey, 1997).

Theoretical Framework

Community Capacity Theory

The term *community* has several definitions that have not been agreed upon by either practitioners or researchers. However, many of the definitions of *community* contain several common facets, including shared history, shared identity, use of common symbols and language, and dependence upon other aspects of the community (Norton, McLeroy, Burdine, Felix, and Dorsey, 2002).

The capacity of a community to address public health issues has become of increased interest to researchers since the Institute of Medicine's 1988 report, *Future of Public Health*. The multidisciplinary Community Capacity theory is based on the idea that since a community is responsible for risk factors for social problems, only through mobilization of the community's social relationships and resources can these social ills be successfully addressed. If this approach is utilized, a community's capacity could be assessed during project planning and additional interventions could be initiated to strengthen the community's capacity before project implementation. Networking of community resources would facilitate

community ownership of the project and enhance sustainability through increased resources available to the project (Clark & McLeroy, 1995; Goodman, Speers, McLeroy, Fawcett, Kegler, Parker, Smith, Sterling, & Wallerstein, 1998; Lelieveldt, 2004). Community capacity can be viewed within the process of community functioning, or it can be viewed as an outcome. Capacity of a community has been used by foundations to evaluate the future sustainability of grant-funded programs (Norton, McLeroy, Burdine, Felix, and Dorsey, 2002).

According to Norton et al. (2002), the basic tenets of community capacity can be described by examining each of the following facets of the community under a research study: value systems, level of analysis, approach, community composition, definitions of boundaries, stability of social systems, point of view, and issue focus. Each of these facets is visually depicted in Table 2.3.

Goodman et al. (1998) examined a CDC workgroup that convened to determine the attributes that are necessary for a community to have adequate capacity for educational interventions. The Goodman article asserts that community participation and leadership are vital to ensure community ownership of a project. Other attributes that are necessary for project success include skills, resources, social and interorganizational networks, collaboration, and common history.

Table 2.3: Contrasting Theoretical Perspectives on Community Capacity

Liberal Extreme	**Perspective**	**Conservative Extreme**
Value-free----------	Value System----------	Value-based
Individual----------	Level of Analysis---------	Social Organization
Conscious-Driven--	Approach----------	Open to conflict/risk-driven
Homogenous-------	Community Composition	Heterogeneous
Locational----------	Boundary Definitions---	Relational
Emic----------	Point of View----------	Etic
Specific----------	Issue Focus----------	Generalized

(Norton et al., 2002, pg 199)

Use of a community's own capacity to address health problems has been shown to have measurable successes in altering risk factors for disease in the areas of prenatal screenings, governmental policy changes, and public awareness. As the community increases its ownership of problems, the community is more likely to invest time and resources aimed at decreasing the risk factors that contribute to the problem (Clark & McLeroy, 1995).

Literature and Research Similar in Content and Methodology

This section addresses literature that is similar to the proposed research study in both content and methodology. There is limited published literature about the perceptions of judicial district child fatality review teams,

and the published literature does not address perceptions of community capacity to implement educational initiatives. Previously published articles strictly analyzed the fatality data that were reviewed by the judicial district child fatality review teams in Orange County, California (Gellert, Maxwell, Durfee, & Wagner, 1995) and Philadelphia, Pennsylvania (Onwauchi-Saunders, Forjuoh, West, & Brooks, 1999), and all fatalities occurring in Arizona (Rimsza, Schackner, Bowen, & Marshall, 2002). Additionally, an open-ended survey was conducted nationally by the National Center on Child Fatality Review to determine whether Child Fatality Review exists in each state, examine state legislation regarding Child Fatality Review, and examine the types of fatalities reviewed by individual teams. Results of the survey conducted by the National Center on Child Fatality Review indicated that teams exists in all 50 states, that they frequently broaden the scope of fatalities reviewed, and that the number of people from diverse occupations who are involved with the team increases with the length of time that the team has been in existence (Durfee, Durfee, & West, 2002).

During 2003, Nevada and Washington State surveyed their judicial district child fatality review teams. However, neither of the survey instruments used in these studies had validity or reliability established before the research projects were conducted. These projects were primarily reflective of individual teams' daily functioning and did not have a theoretical background. Their findings will be discussed briefly.

Washington State's Child Fatality Review Research Study

Washington State's child fatality review research study utilized an unpublished research study instrument that did not have instrument validity or reliability established. Washington State's Child Fatality Review Program was designed to use 30 community-based teams representing either a single county or multiple counties. The teams review approximately 375 fatalities annually.

Information was submitted to the state in a manner similar to Tennessee's process for integration of information into a state-level database. Teams were then asked to develop prevention strategies that could be implemented at the local level, and determine what changes in policy, if any, would prevent future fatalities. This research endeavor utilized the Center for Disease Control's Evaluation Framework as a guide (Personal Communication, Diane Pilkey, 2004).

The goal established by the child fatality review teams was "to reduce preventable child death in Washington State." The objectives for the project were to review each unexpected childhood fatality in the state, improve communication among agencies, enhance service delivery in response to child fatality, and report directly to the legislature about ways policy could be changed to more comprehensively address childhood fatality. The purposes of the Washington research study were to examine how the review process functions locally, to explore outcomes of child fatality review, and to

encourage "buy-in" of local community stakeholders in the child fatality review process (Personal Communication, Diane Pilkey, 2004).

Responses to the survey were generally positive, with a majority of participants reporting overall satisfaction with the child fatality review system and increased interagency communication as a result of child fatality review. Perceptions of the child fatality review process ranged from extremely positive to negative, as illustrated in the following quotes obtained from the Washington State child fatality review research study:

- Being a member of CFR [Child Fatality Review] is a definite highlight of my professional career. We have a cohesive group, discuss numerous options, and always respect each other's opinions. It is the only committee of many that I am on that I feel is truly productive and turning out a positive result from a very negative subject matter. (Personal Communication, Diane Pilkey, 2004)

This indicates that some child fatality review members are professionally enriched by participating in the judicial district child fatality review process and perceive the process to be vital to decreasing future childhood fatalities.

Another team member offered this feedback:

- This has been a worthless bureaucratic process. The politically correct answers are found – All fatalities are found in some way to be preventable, and then the process ends. No follow through. No changes, no significant public education. Intellectually satisfying but has no impact in the community. I calculate the cost in salaries to be thousands of dollars per meeting…. (Personal Communication, Diane Pilkey, 2004)

This team member has a much more negative perception of the process, considering it a waste of valuable time and resources since, in the team member's perception, no change occurs as a result of the review. As the Washington State survey illustrates, concrete answers about the child fatality review process have not been found.

Nevada's Child Fatality Review Research Study

Nevada's child fatality review research study utilized an unpublished research study instrument that did not have instrument validity or reliability established. The Nevada child fatality review survey only superficially addresses the child fatality review process from the perspective of team leadership and functioning. Information regarding the outcomes of the survey was not available as of May 2005. The survey instrument was provided to the researcher for review, but it was not adequate to address the research questions proposed for this project (Personal Communication with Sara Rich, 2005).

The National Center on Childhood Deaths reports that Washington State and Nevada are the only states that have surveyed judicial district child fatality review team members as of 2005 (Personal Communication with Sara Rich, 2005). No published literature and/or instruments with established validity and reliability have been documented to assess Tennessee's child death review process. This lack of documented research studies and

instruments is related to the short time period that child fatality review has been conducted, both in Tennessee and across the nation.

Summary of the Literature Review

Causes of pediatric fatalities have changed over the years, from predominantly natural causes of death at the turn of the century to predominantly accidental causes of death in 1999 (Field & Berhman, 2003). Fatalities occur regardless of rural or urban geographic location of the child.

Many researchers have examined specific causes of childhood deaths, such as SIDS and prematurity. Yet, comprehensive prevention or etiologies of these causes of death remain elusive. Societal factors are associated with many causes of death, including SIDS, prematurity, fatalities due to fire, vehicular fatalities, and homicides. Specific factors include maternal age, income, education, employment, marital status, number of other children in home, and many more.

Child abuse fatalities may occur from failure to adequately care for a child, Munchausen syndrome by proxy, shaken baby syndrome, or physical abuse of a child. Child fatality review teams were established to examine ways the social service and law enforcement systems could be changed to prevent future child abuse fatalities. The teams unite individuals from many different occupations to ensure that multiple viewpoints are available to examine the mediating factors of a child's fatality.

Child fatality review in Tennessee has been a mandate of the state legislature since 1995. Tennessee has generated annual reports about child fatalities since 1996. Tennessee's child fatality review process is unique in that local judicial district teams review fatalities, while a statewide team examines policy and legislative issues pertaining to childhood fatalities.

Child fatality review has been active in Tennessee for the past decade. Yet, perceptions of active team members about the child fatality review process have not been studied. Obtaining perceptions of these team members is vital to ensure that the child fatality review process continues to move forward in child fatality prevention. Reduction in child fatalities requires child fatality review team members to have a diverse personal knowledge base, good communication skills, access to personal health information about the deceased child, and active use of problem-solving skills. Despite the challenges, child fatality review was a public health success of the 1990s, as evidenced by the fact that multiple groups (domestic violence fatality review, maternal/child fatality review, etc.) follow this process model.

CHAPTER III

Methodology

Chapter III describes the research design, the survey instrument, the research methodology, and the data analysis procedures used in this research study. The population for the research study was Tennessee child fatality review team members during 2005.

Purpose of the Study

The research study was designed to 1) develop a valid and reliable survey instrument to assess Tennessee judicial district child fatality review team members' perceptions of the process used to review childhood fatalities in Tennessee and 2) establish an initial profile of information concerning Tennessee's child fatality review team members' perceptions of the review process and program effectiveness.

Research Objectives

The research objectives were as follows.

1. Develop and validate a survey instrument to assess the perceptions of Tennessee judicial district child fatality review team members concerning the team members' participation in child fatality review, the preventability of specific causes of childhood fatalities, the effectiveness of the Tennessee child fatality review process, and the current educational initiatives used to prevent childhood fatalities.

2. Use a valid and reliable instrument to assess the perceptions of Tennessee child fatality review team members concerning the team members' participation in child fatality review, the preventability of specific causes of childhood fatalities, the effectiveness of the Tennessee child fatality review process, and the current educational initiatives used to prevent childhood fatalities.

Null Hypotheses to Research Study

The null hypotheses to this research study were as follows.

$H_0$1: There is no significant difference between the perceptions of judicial district child fatality review team members representing rural and urban judicial districts and their self-reported opinions of the effectiveness of the Tennessee child fatality review process.

$H_0$2: There is no significant difference between members' self-reported perceptions of the effectiveness of the Tennessee child fatality review process based upon a member's occupation.

$H_0$3: There is no significant difference between judicial district child fatality review team members representing rural and urban judicial districts and their self-reported perceptions of team members' participation in child fatality review.

$H_0$4: There is no significant association between the judicial district child fatality review team members from different occupations and their self-reported perceptions of natural and injury-related fatalities selected as the most preventable.

$H_0$5: There is no significant difference between judicial district child fatality review team members and their self-reported perceptions related to a member's urban/rural location regarding current educational initiatives used to reduce childhood fatalities.

$H_0$6: There is no significant difference in perceptions of judicial district child fatality review team members from different occupations and the member's recommendations of current educational initiatives used to reduce childhood fatalities.

Population under Study

The participants selected to serve as the population for this research study were members of Tennessee judicial district child fatality review teams. Tennessee judicial district child fatality review team members represent a diverse group of professional occupations. These teams examine circumstances surrounding a child's death to determine whether the final designated cause of death on the death certificate is accurate. Team members also decide whether policy changes or educational initiatives should be recommended to prevent future deaths.

Instrumentation

A thorough literature review indicated that no valid and/or reliable instrument existed to assess the perceptions of Tennessee judicial district child fatality review team members concerning the team members' participation in child fatality review, the preventability of specific causes of childhood fatalities, the effectiveness of the Tennessee child fatality review process, and the current educational initiatives used to prevent childhood fatalities.

The first objective of this research study was to develop a valid and reliable survey instrument to use in a statewide process of assessing Tennessee child fatality review team members. The second objective of this research study was to use the newly established instrument to assess the perceptions of Tennessee child fatality review team members.

Survey Instrument Development

The instrument, entitled "Tennessee Child Fatality Review Team Members: Role in the review process," was created after reviewing existing state-level surveys that had been used. These existing surveys lacked established validity and reliability. The surveys were utilized in the states of Washington and Nevada. The author developed questions for the instrument after a literature review to examine current research about the child fatality review process. The process to develop the instrument is described in Figure 3.1.

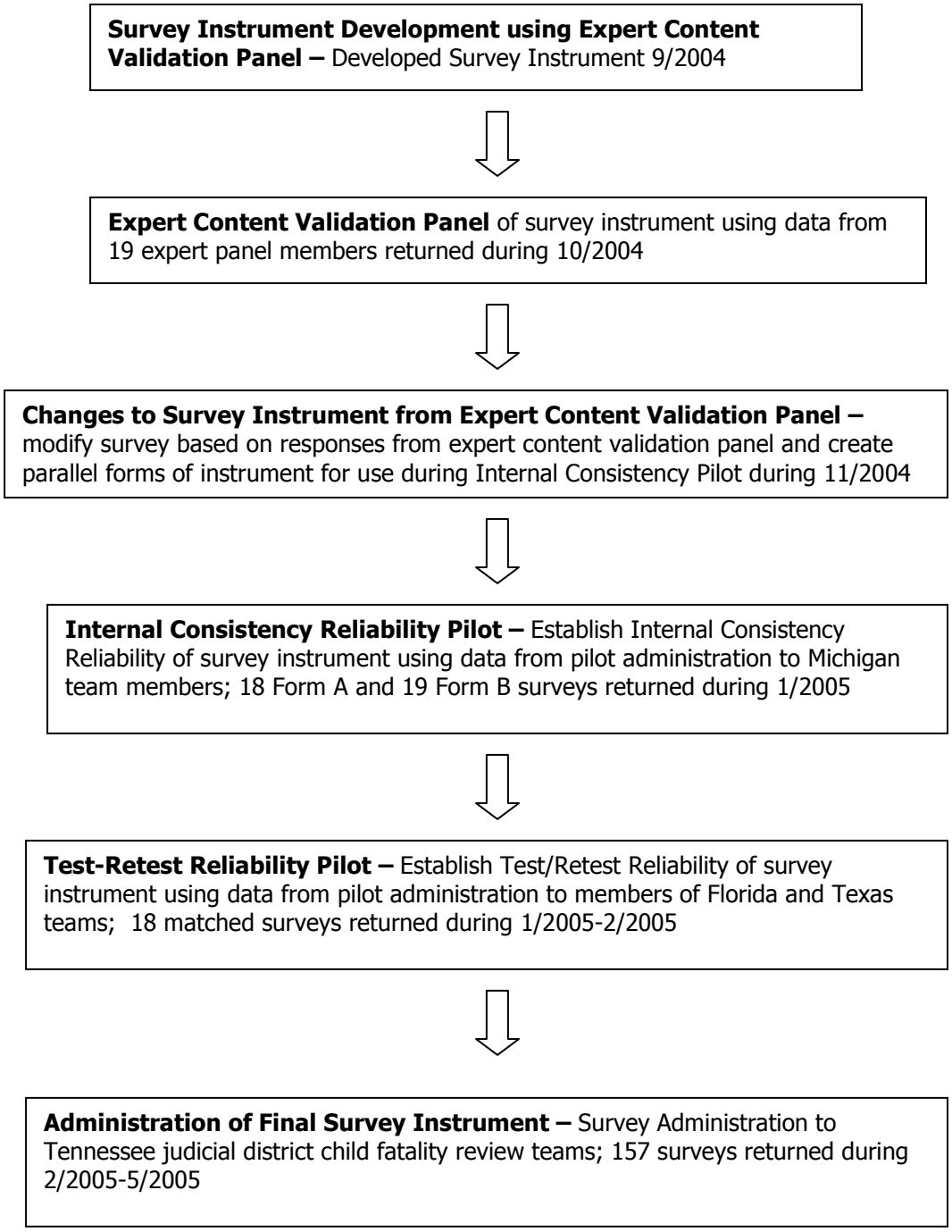

Figure 3.1: Creation, Validation, and Reliability of Tennessee Child Fatality Review Team Member Survey Instrument

Expert Content Validation Panel

The first step in survey development was to create and consult an expert panel about questions to include in the survey instrument. The panel included the following individuals: the state coordinator of child fatality review for Tennessee; the state coordinator of child fatality review for Alabama; 19 Alabama judicial district team coordinators; the Executive Director for the *National MCH Center for Child Death Review*; an emergency room trauma nurse; a Knoxville, Tennessee, Emergency Medical Services paramedic; and a university health education faculty member with expertise in community health education and injury reduction. Members of the expert content validation panel were chosen for field-testing based on their areas of work expertise, similarity to the Tennessee's child fatality review team members, and willingness to participate. The panel members were asked to review the draft instrument to determine whether it was easy to understand, would obtain information relevant to the child fatality review process, and was appropriate for use with Tennessee's judicial district child fatality review team members.

Members of the expert content validation panel were asked to complete a review of the draft survey instrument and return it to the researcher for analysis and establishment of content validity. The draft survey instrument, entitled "Tennessee Child Fatality Review Team Members: Role in the review process," is available for review in Appendix D.

As a result of the researcher's personal contact and communication with the Alabama state child fatality review coordinator, a total of 19 Alabama child fatality review team coordinators provided feedback as part of the expert panel.

Information obtained from the expert content review panel was collected and analyzed. Next, a new draft survey was created to conduct pilots to obtain data for the establishment of internal consistency reliability and test-retest reliability.

Changes to Survey Instrument from Expert Content Validation Panel

Pilot research study data were analyzed to determine if changes should be made to survey questions, data collection methods, or methodologies used for statistical analysis. The pilot data were analyzed using the Statistical Package for Social Sciences (SPSS), version 13.1. Pilot survey participants were asked to complete a written review of the survey instrument addressing question clarity, readability, and administration issues of the survey. Several modifications were made to the survey based upon pilot participants' written responses to the survey instrument. Changes made to the survey instrument based upon this pilot analysis are listed below.

One respondent reported concerns regarding the question, "Inadequate investigation precluded having enough information for review during CFR meetings affects the review process." The suggestion was made to drop the phrase "affects the review process." In the final survey the

question was rephrased as follows: "Inadequate investigation precluded having enough information for review during child fatality review meetings."

Seven respondents reported that the following two questions were problematic: "Records or information was needed from another locality in state," and "Records or information was needed from another state." Respondents self-reported that these questions were unclear. In the final survey instrument the questions were changed as follows: "Obtaining records or information from another locality in state affects the review process," and "Obtaining records or information from another state affects the review process."

Two respondents noticed some inconsistency in the wording of questions examining the effectiveness of the education of specific groups to reduce childhood fatalities. The questions were revised to be more consistent by using the following sentence pattern: "Educating [group of people] is an effective way to prevent childhood fatalities."

Two respondents suggested that a question should be added in the demographic section asking, "How often does your team meet?" with the responses including "monthly, every other month, quarterly, every 6 months, yearly." This question was added.

One respondent self-reported that the question "What is your role on the team?" should include the response "Team Coordinator" as an option, along with the existing responses of "Team Leader" and "Team Member."

This question was modified in the final survey to reflect the suggested change.

Three respondents noted that the question, "Check the years that you have been involved in the child fatality review process," did not include squares for respondents to use to check the year categories. This question was revised to omit the check boxes, and asked respondents instead to "List the years you have participated in Tennessee's child fatality review process." In the final survey instrument, this question is followed by a blank, prompting respondents to write in the number of years they have participated in Tennessee's child fatality review process.

One respondent self-reported that a category of "not applicable" or "does not have children" needed to be added to this question: "Participating in the child fatality review team has increased my awareness of health and safety behaviors of my child(ren) or grandchildren." This question was modified to ensure that all participants could respond to the question. The revised question is, "Participating in the child fatality review team has increased my awareness of health and safety behaviors of my child(ren), grandchildren, or other children in my life." Possible responses to this question included "Strongly Agree, Agree, Not Sure, Disagree, Strongly Disagree."

Reliability

Internal Consistency Reliability Pilot. Reliability of the survey instrument was established by the researcher using two methods: a split halves reliability test of a group of Michigan judicial district child fatality review team members using parallel instruments, and a test-retest of members of Florida and Texas judicial district child fatality review teams. Initially, the coordinator of the Michigan Public Health Institute was contacted in December 2004 to request assistance in distributing the survey to child fatality review team members in Michigan. The Michigan Public Health Institute (MPHI) is a non-profit agency created in 1990 to facilitate the state's public health initiatives. Major partners of the MPHI are Michigan State University, the University of Michigan, Wayne State University, and the Michigan Department of Community Health (Michigan Public Health Institute, 2004). The coordinator agreed to send the test-retest surveys to the teams in Michigan in early January 2005. However, due to administrative constraints, the test-retest procedure was changed to a parallel forms reliability procedure. Sample participants for the split halves reliability testing were team members attending a mandatory training, making the ability to test a large group of judicial district child fatality review team members in a single setting with parallel forms of the instrument possible.

Split halves reliability, or internal consistency reliability, was utilized to examine the parallel survey instruments to determine whether responses

differed on the basis of the item's position within sections of the survey instrument. A parallel instrument was created by randomly changing the order of the questions within individual sections of the survey instrument.

The returned survey instruments were then entered, analyzed, and interpreted utilizing Cronbach's Alpha reliability coefficient. Cronbach's Alpha measures the extent to which survey questions correlate with other questions in the same section. Cronbach's Alpha is not a measure of unidimensionality, but a measure of correlation between responses to different questions (Carmines, 1974; Cronbach, 2004; Cronbach, 1971; Robinson & Shaver, 1991).

For an item to be considered reliable, a minimum alpha value of .70 is required, but most researchers prefer a Cronbach's Alpha value higher than .80 to retain the item (Cronbach, 2004; Cronbach, 1971; Litwin, 2002). If the value obtained for Cronbach's Alpha is negative, data should be examined for appropriate coding in the same conceptual direction (Litwin, 2002). For the results of this test to be valid, items must have been completed at the same point in time.

Pilot data analysis indicated that survey questions within defined sections of the instrument correlated well with other questions in the section, because the Cronbach's Alpha was above .80 for each category. Table 3.1 illustrates individual question categories and the associated Cronbach's Alpha.

Table 3.1: Sections of Survey Instrument, Cronbach's Alpha Values, and Bonferronni's Adjusted Alpha Values

Section of Survey	Cronbach's Alpha	Bonferroni's Adjusted Alpha	# of Items
Section I: Demographic Information	*	*	*
Section II: Self-reported Team Member's Participation in Child Fatality Review a) Increased personal awareness of health and safety behaviors b) Increased awareness of health and safety behaviors of children, grandchildren, or other children in the member's life c) Increased personal actions in child fatality prevention initiatives as part of the member's job d) Increased personal volunteer actions in child fatality prevention initiatives e) Substantial personal contributions to child fatality review f) The importance of serving on the child fatality review team as part of the member's job g) The importance of child fatality review to Tennessee's public health programs.	.901	.007	7
Section III: Preventability of Childhood Fatalities	*	*	*
Section IV: Current Educational Initiatives to Prevent Child Fatalities a) Confidentiality issues among team members, b) Health Insurability Portability and Accountability Act (HIPAA) regulations preventing access to or exchange of information, c) Team members not bringing enough information to meetings, d) Delays in receiving autopsy reports, e) Obtaining records from another locality in state, f) Obtaining records from another locality out of state, g) Team disagreement on circumstances of a child's fatality, h) Benefit of receiving written communication about the review process from the Tennessee Department of Health, i) Benefit of receiving articles published in professional journals on child fatalities, and j) Benefit of using the internet to access information about child fatalities.	.806	.003	17
Section V: Self-reported Effectiveness of the Tennessee Child Fatality Review Process a) Promoting folic acid supplementation for women of childbearing age, b) Continuing the "Back to Sleep" campaign, c) Educating about dangers of parental alcohol abuse, d) Educating about dangers of parental drug use, e) Educating about dangers of alcohol use during pregnancy, f) Educating about dangers of over-the-counter drug use during pregnancy, g) Educating school children, h) Educating medical providers, i) Educating law enforcement providers, j) Educating people working in the legal system, k) Giving parents information about community resources, l) Making available safety equipment, m) Providing supervised after school programs, n) Educating parents, o) Educating parents about risk factors for premature birth, and p) Educating about dangers of tobacco use during pregnancy.	.844	.005	10

Test-retest Reliability Pilot. To establish the consistency of the instrument over time, Florida and Texas judicial district child fatality review team coordinators were contacted to invite participation in a test-retest procedure. A group of twenty judicial district child fatality review team members agreed to complete the initial reliability survey instrument. A re-test was conducted four weeks later to examine reliability and stability of survey responses over time.

Participants in the test-retest procedure were matched to the initial survey by using the participant's county name and birth date self-reported by the team members on both the test instrument and the retest instrument. No other personally identifying information was requested or obtained on the survey instrument. This methodology was chosen for several reasons: to match the test and retest instruments while maintaining the participant's anonymity to the researcher, and because the participants could easily recall their responses. This methodology ensured that the participants recorded the same information on both the initial and follow-up surveys to allow for matching of participants on the test and retest instruments. Eighteen judicial district child fatality review team members completed and returned both the test and re-test forms of the instrument.

Test-retest reliability was conducted on the instrument to assess reliability of the instrument over time. The amount of time chosen between administrations was related to the stability of the measures that were being

examined. A month's time difference between the test administration and the retest administration was chosen. A month is enough time to decrease participants' memory of the survey, but not so much time that other variables were likely to have changed the responses of the participants (Litwin, 2002).

Analysis of the test-retest pilot data indicated no significant differences in survey responses for the team members participating in the test-retest group. Respondents answered questions in a similar manner on both the administrations of the survey, indicating that the instrument is stable over time.

Use of multiple comparisons testing during the reliability testing required the use of the Bonferroni adjustment to ensure that significance did not occur due to chance alone. The Bonferroni adjustment occurs in one of two ways. The first way to calculate Bonferroni's adjustment is by changing the alpha to a smaller level that is used to determine significance. The second way to calculate the adjustment is by taking the value for the alpha and dividing it by the number of groups in the analysis (Gill, 2001).

The method chosen for use in this research study was to change the value of alpha by dividing .05 by the number of groups in the analysis by survey section. After applying this adjustment, no significant values occurred by statistical chance alone. Bonferroni adjusted alphas for each section of the survey instrument are illustrated in Table 3.1.

Administration of the Final Survey Instrument

The final survey instrument, titled "Tennessee Child Fatality Review Team Members: Role in the review process," was administered to the survey population. A copy of this final survey instrument is available in Appendix F for review. An approved Form A certificate for exemption from IRB review is on file in the Department of Instructional Technology, Health, and Education Studies at the University of Tennessee, Knoxville. The population selected for this research study was child fatality review team members in Tennessee. The method used was the blanket survey sampling technique that included members actively involved in the Tennessee child fatality review process during February-May 2005.

Survey Questions. The survey instrument, "Tennessee Child Fatality Review Team Members: Role in the review process," consisted of 51 items. The nine-page self-administered survey instrument was divided into five sections examining the self-reported team member's perceptions of the following: a) member's demographic information; b) member's participation in child fatality review; c) preventability of specific causes of childhood fatalities; d) effectiveness of the Tennessee child fatality review process; and e) current educational initiatives used to prevent childhood fatalities. Items pertaining to the research included background information, constructs related to a team member's participation in child fatality review, preventability of specific causes of childhood deaths, effectiveness of the Tennessee child

fatality review process, and current educational initiatives to prevent child fatalities. Sections will be discussed in more depth in the following categories: demographic information, team member's participation in child fatality review, preventability of specific causes of childhood fatalities, effectiveness of the Tennessee child fatality review process, and current educational initiatives used to prevent childhood fatalities. The survey instrument is available for review in Appendix F.

Section I: Demographic Information. Eleven demographic questions were included in Section I. Child fatality review team members were asked to indicate their location as either "rural" or "urban" and to write in the county name of the child fatality review team represented. Team members were also asked to self-report their occupation (attorney, child advocate, Department of Children's Services, court personnel, fire, education, EMS, Health care other than listed:_____, hospital record staff, law enforcement, medical examiner/coroner, mental health, physician, prosecutor/judicial district attorney, public health, substance abuse, or other:____).

Questions in "Section I: Demographic Information" asked for the length of time of participation in the Tennessee child fatality review process (in years); the amount of time committed each month (in hours); the frequency of team meetings (monthly, every other month, quarterly, every six months, or yearly); the frequency of attending regularly scheduled child fatality review team meetings (regularly, occasionally, when asked, or never);

and the role on the child fatality review team (team leader, team member, or team coordinator).

Child fatality review team members were instructed to self-report educational background (less than high school degree, high school graduate, technical or vocational certificate, some college, Bachelor's Degree, Master's Degree, or degree beyond Master's Degree); race (Asian/Pacific Islander, Black, Native American Indian, White, or Other:____, and Hispanic ethnicity [yes, no, don't know]).

Section II: Team Member's Participation in the Child Fatality Review Process. Seven items were incorporated to address a team member's participation in the child fatality review process. Child fatality review team members were asked to respond to statements if participation in the child fatality review process had affected the following: Increased personal awareness of health and safety behaviors; increased awareness of health and safety behaviors of children, grandchildren, or other children in the member's life; increased personal actions in child fatality prevention initiatives as part of the member's job; increased personal volunteer actions in child fatality prevention initiatives; substantial personal contributions to child fatality review; the importance of serving on the child fatality review team as part of the member's job; and the importance of child fatality review to Tennessee's public health programs. Participants were asked to indicate agreement or

disagreement by choosing responses ranging from strong agreement to strong disagreement with the statement on a five-point Likert scale.

Section III: Preventability of Childhood Fatalities. Section III directed respondents to select two causes of death perceived as most preventable from a list provided under each of the following four categories: most preventable natural, most preventable injury, least preventable natural and least preventable injury. The list under "natural causes of death" included as options "Sudden Infant Death Syndrome," "Lack of Adequate Care," "Prematurity of Birth," "Chronic and Infectious Diseases," "Smoke Inhalation from Fire," and "Burn Infection Caused from Fire." Injury causes of death included the following options: "Drowning," "Suffocation or Strangulation," "Inflicted Injury," "Vehicular," "Firearm," and "Chemical Poisoning."

Section IV: Current Educational Child Fatality Initiatives. The survey incorporated sixteen questions about current educational child fatality prevention initiatives. The child fatality review team members were instructed to self-report agreement or disagreement with the following items: a) Promoting folic acid supplementation for women of childbearing age; b) Continuing the "Back to Sleep" campaign; c) Educating about dangers of parental alcohol abuse; d) Educating about dangers of parental drug use; e) Educating about dangers of alcohol use during pregnancy; f) Educating about dangers of over-the-counter drug use during pregnancy; g) Educating school children; h) Educating medical providers; i) Educating law enforcement

providers; j) Educating people working in the legal system; k) Giving parents information about community resources; l) Making available safety equipment; m) Providing supervised after school programs; n) Educating parents; o) Educating parents about risk factors for premature birth; and p) Educating parents about dangers of tobacco use during pregnancy. Each of these items included the five-point Likert scale, ranging from strong agreement to strong disagreement with the statement.

Section V: The Effectiveness of the Tennessee Child Fatality Review Process. The survey included ten questions about the effectiveness of the Tennessee child fatality review process under Section V. Child fatality review team members were asked to self-report agreement or disagreement with the following items: a) Confidentiality issues among team members; b) Health Insurability Portability and Accountability Act (HIPAA) regulations preventing access to or exchange of information; c) Team members not bringing enough information to meetings; d) Delays in receiving autopsy reports; e) Obtaining records from another locality in state; f) Obtaining records from another locality out of state; g) Team disagreement on circumstances of a child's fatality; h) Benefit of receiving written communication about the review process from the Tennessee Department of Health; i) Benefit of receiving articles published in professional journals on child fatalities; and j) Benefit of using the internet to access information about child fatalities. Each of these

items included the five-point Likert scale, ranging from strong agreement to strong disagreement with the statement.

Survey Distribution and Collection

To maintain the confidentiality of individual team members, the researcher did not have contact information for individual team members, nor were individual team members contacted directly by the researcher. Instead, the Tennessee Department of Health (TDH) provided names and addresses of judicial district child fatality review team coordinators employed by regional or metropolitan health departments representing each judicial district child fatality review team in Tennessee. The team coordinator receives communications from the TDH child fatality review coordinator, schedules meeting times/locations, prepares agendas for the meetings, and facilitates local judicial district child fatality review team meetings. Table 3.2 illustrates the number of packets distributed to team coordinators, the number of surveys sent out to local judicial district team members, and the number of surveys received by TDH region, judicial district, and county.

Information provided by the TDH estimated that Tennessee included a total of 440 local, individual judicial district child fatality review team members. Each of the 14 team coordinators received the number of survey packets indicated by the State of Tennessee. These packets included survey instruments and self-addressed stamped envelopes to distribute to the

Table 3.2: Number of Surveys Distributed to and Returned by Tennessee Department of Health Region, Judicial District, and County

Region	Judicial District and Counties	# Surveys Sent/Distributed by Region	# Surveys Returned by Judicial District
Northeast	Judicial District 1: Carter, Johnson, Unicoi, and Washington	40/32	5
	Judicial District 3: Green, Hamblen, Hancock, and Hawkins		3
Sullivan	Judicial District 2: Sullivan	20/15	7
East	Judicial District 4: Cocke, Grainger, Jefferson, and Sevier	80/50	3
	Judicial District 5: Blount		9
	Judicial District 7: Anderson		5
	Judicial District 8: Campbell, Claiborne, Fentress, Scott, and Union		7
	Judicial District 9: Loudon, Meigs, Morgan, and Roane		6
Knox	Judicial District 6: Knox	20/15	12
Southeast	Judicial District 10: Bradley, McMinn, Monroe, and Polk	50/35	8
	Judicial District 12: Bledsoe, Franklin, Grundy, Marion, Rhea, and Sequatchie		6
Hamilton	Judicial District 11: Hamilton	20/20	5
Upper Cumberland	Judicial District 13: Clay, Cumberland, DeKalb, Overton, Pickett, Putnam and White	30/18	8
	Judicial District 15: Jackson, Macon, Smith, Trousdale, and Wilson		5
	Judicial District 31: Van Buren and Warren		4
South Central	Judicial District 14: Coffee	60/0	0
	Judicial District 17: Bedford, Lincoln, Marshall, and Moore		0
	Judicial District 2101: Hickman, Lewis, and Perry		0
	Judicial District 2202: Maury		0
Mid-Cumberland	Judicial District 16: Cannon and Rutherford	70/60	5
	Judicial District 18: Sumner		7
	Judicial District 1901: Montgomery		8
	Judicial District 1902: Robertson		2
	Judicial District 2102: Williamson		1
	Judicial District 23: Cheatham, Dickson, Houston, Humphreys, and Stewart		4
Davidson	Judicial District 20: Davidson	25/20	8

Table 3.2: Continued

Region	Judicial District and Counties	# Surveys Sent/Distributed by Region	# Surveys Returned by Judicial District
West	Judicial District 24: Benton, Carroll, Decatur, Hardin, and Henry	40/35	3
	Judicial District 25: Fayette, Hardeman, Lauderdale, McNairy, and Tipton		4 4
	Judicial District 27: Obion and Weakley		5
	Judicial District 28: Crockett, Gibson, and Haywood		3
	Judicial District 29: Dyer and Lake		
Madison	Judicial District 26: Chester, Henderson, and Madison	12/8	2
Shelby	Judicial District 30: Shelby	20/12	7
	Total	487/320	157

individual team members so they could return the surveys to the researcher. A cover letter and instruction sheets were also included in the individual packets, along with a cover letter for the team coordinator, which provided instructions for distribution of the surveys to all team members.

The survey research was carried out using the following procedure: The researcher sent each group of packets to judicial district team coordinators at local health departments via the United States Post Office's Priority Mail. The team coordinator was asked in a cover letter to distribute cover letters, research study information sheets, and instruments to team members for completion and return to the researcher.

Surveys were disseminated through regional or metropolitan health department coordinators in the judicial district to preserve the anonymity of individual judicial district child fatality review team members. To ensure anonymity of team member responses, the researcher did not have contact information for any individual judicial district child fatality review team member, nor does the survey instrument ask for any identifying personal information from team members.

Collection Follow Up

The researcher contacted all 14 child fatality review team coordinators three times by telephone to check on the status of survey instrument distribution to judicial district child fatality review team members.

In each follow-up telephone call, the researcher inquired whether the survey packets had been distributed to judicial district team members, and whether the team coordinator needed additional copies to be sent by mail, email, or fax. Individual district judicial child fatality review team members returned their survey instrument to the researcher using a self-addressed stamped envelope provided by the researcher.

Response to Survey Instrument

TDH overestimated the actual number of child fatality review team members working on judicial district teams in Tennessee at the time of survey implementation. The survey packets were distributed by all team coordinators to active team members, with one exception. Team coordinators reported that the number of survey packets distributed to active team members was 320. This number was 120 less than the 440 team members estimated by the TDH.

All judicial district health department coordinators, except for one who chose not to participate, distributed surveys to active team members directly at team meetings or by email, fax, or the U.S. postal service. Participants mailed responses directly to the researcher at the University of Tennessee, UT Safety Center. Survey responses were returned from 28 judicial district child fatality review teams, out of a possible 32 judicial district teams. This resulted in a judicial district participation rate of 87.5%. Of the 320 surveys distributed to individual judicial district child fatality review team members,

157 surveys were returned. A return rate of 49% of surveys by individual team members was achieved.

Data Analysis

Introduction

Data from the 157 returned surveys were entered and analyzed using a computerized database file in the Statistical Package for the Social Sciences (SPSS, version 13.1). All 157 retired surveys were entered into the computer and used for the analysis. Data were verified by double entry to check for any errors or inconsistencies. Following this process for quality control, all statistical analyses were conducted utilizing SPSS, version 13.1. A significance level for all analyses was established using a p-value of less than or equal to .05.

Descriptive statistics were computed on all questions in the survey instrument, except for open-ended essay-type questions. Following this description, further assessments were conducted using questions under sections entitled "team member's participation in child fatality review" (Likert scale), "preventability of specific causes of child fatalities" (forced choice), "the effectiveness of the Tennessee child fatality review process" (Likert scale), and "the current educational initiatives used to prevent childhood fatalities" (Likert scale).

Descriptive analyses were computed on all forced choice and Likert scale questions. The statistical procedure of Chi-square analysis was utilized

to determine significance associations of ordinal and nominal categorical variables. If Chi-square values were significant, adjusted residuals were computed to determine whether there was a significant association between the number of responses statistically expected and the actual number of responses observed. Multivariate Analysis of Variance (MANOVA) was used to determine significance when comparing multiple means for continuous variables. If MANOVA results indicated significance, individual Analyses of Variances (ANOVA) were computed to determine the specific variables that were significantly different. Pairwise correlations, specifically Tukey's Honestly Significant Difference (Tukey's HSD), were computed to determine which occupation groups differed the most in self-reported perceptions.

Analysis of Research Objectives and Null Hypotheses

Procedures Used to Analyze Research Objectives

The following research objectives were generated to address the research study's focus:

- Develop and validate a survey instrument to assess the perceptions of Tennessee judicial district child fatality review teams concerning the team members' participation in child fatality review, the preventability of specific causes of childhood fatalities, the effectiveness of the Tennessee child fatality review process, and the current educational initiatives used to prevent childhood fatalities.

A survey instrument was developed based upon existing literature, information needed to answer research questions and hypotheses under research study, and information requested by the TDH. The researcher established content validity based upon responses to the survey instrument from a panel of Alabama child fatality review team members. Split halves reliability was established by the researcher using data collected from a pilot administration in Michigan. Test/re-test reliability was established by the researcher using data collected from pilot tests in Texas and Florida. The final survey instrument was distributed to Tennessee child fatality review team members during February-May 2005.

- Use a valid and reliable instrument to assess the perceptions of Tennessee child fatality review team members concerning the team members' participation in child fatality review, the preventability of specific causes of childhood fatalities, the effectiveness of the Tennessee child fatality review process, and the current educational initiatives used to prevent childhood fatalities.

The self-reported perceptions of Tennessee child fatality review team members were assessed by examining percentages of responses indicating strong agreement or agreement, or strong disagreement or disagreement to questions addressing the personal affect of participating in the child fatality review process, the effectiveness of the Tennessee child fatality review

process, educational initiatives to reduce childhood fatality, and preventability of specific causes of childhood death.

Analysis of Null Hypotheses

$H_0$1: There is no significant difference between the perceptions of judicial district child fatality review team members representing rural and urban judicial districts and their self-reported opinions of the effectiveness of the Tennessee child fatality review process.

The participant's self-reported rural or urban location was compared in conjunction with questions examining the child fatality review process using a MANOVA analysis. When significance was indicated by the MANOVA results, individual ANOVAs were performed and examined to determine which questions about the child fatality review process were significant.
A team member's self-report of a rural or urban location was used to determine rural or urban location of judicial district child fatality review team. This procedure was used instead of the United States Department of Agriculture's Economic Research Service, because six districts included a mixture of rural and urban designations using this criteria.

$H_0$2: There is no significant difference between members' self-reported perceptions of the effectiveness of the Tennessee child fatality review process based upon a member's occupation.

The participant's self-reported occupation was compared in conjunction with questions examining the child fatality review process using a MANOVA analysis. When significance was indicated by the MANOVA results, individual ANOVAs were performed and examined to determine which questions about the child fatality review process were significant.

$H_0$3: There is no significant difference between judicial district child fatality review team members representing rural and urban judicial districts and their self-reported perceptions of team members' participation in child fatality review.

The participant's self-reported rural or urban location was compared in conjunction with questions examining the child fatality review team involvement using a MANOVA analysis. When significance was indicated by the MANOVA results, individual ANOVAs were performed and examined to determine which questions about the child fatality review team involvement were significant.

$H_0$4: There is no significant association between the judicial district child fatality review team members from different occupations and their self-reported perceptions regarding natural and injury-related fatalities selected as the most preventable.

The respondent was asked to select the two causes of death he or she perceived to be most preventable from a list of natural causes of death and a list of injury causes of death. Additionally, the respondent was asked

to select the two causes of death he or she perceived to be least preventable from a list of natural causes of death and a list of injury causes of death. Responses were analyzed using cross tabulations, Chi-square analysis, and adjusted residuals. Self-reported occupations used in the analysis were court personnel, first responders, child advocates, public health, physicians, and health care provider (other than physicians).

$H_0$5: There is no significant difference between judicial district child fatality review team members and their self-reported perceptions related to a member's urban/rural location for current educational initiatives used to reduce childhood fatalities.

The participant's self-reported rural or urban location was compared in conjunction with questions examining the self-reported perceptions regarding educational activities and programs designed to reduce childhood fatalities using a MANOVA analysis. When significance was indicated by the MANOVA results, individual ANOVAs were performed and examined to determine which questions about educational activities and programs designed to reduce childhood fatalities were significant.

$H_0$6: There is no significant difference in perceptions of judicial district child fatality review team members from different occupations and the member's recommendations of current educational initiatives used to reduce childhood fatalities.

The respondent's self-reported occupation was compared in conjunction with questions examining the educational activities and programs to reduce childhood fatalities using a MANOVA analysis. When significance was indicated by the MANOVA results, individual ANOVAs were performed and examined to determine which questions about educational activities and programs to reduce childhood fatalities were significant. Table 3.3 illustrates statistical procedures used to analyze each null hypothesis.

Variable Analysis

Individual questions were analyzed by calculating percentages of participants selecting strong agreement (or strong disagreement) and agreement (or disagreement). Calculating these descriptive statistics allowed the researcher to create a profile of participating Tennessee child fatality review team members.

Additionally Chi-square statistical analyses were conducted to evaluate categorical independent variables and categorical dependent variables to answer the study's research questions. This statistical methodology is used to test hypotheses and can be used with nominal or categorical data. The methodology was utilized to examine associations between occupation and preventability of specific causes of death.

The Chi-square test is more likely to detect a relationship if the sample size is large or if the relationship is strong. A Chi-square value's significance

Table 3.3: Statistical Analyses Performed for Null Hypothesis Testing

Null Hypothesis	**Analyses Performed**
$H_0$1: There is no significant difference between the perceptions of judicial district child fatality review team members representing rural and urban judicial districts and their self-reported opinions of the effectiveness of the Tennessee child fatality review process.	MANOVA ANOVA
$H_0$2: There is no significant difference between members' self-reported perceptions of the effectiveness of the Tennessee child fatality review process based upon a member's occupation.	MANOVA ANOVA
$H_0$3: There is no significant difference between judicial district child fatality review team members representing rural and urban judicial districts and their self-reported perceptions of team members' participation in child fatality review.	MANOVA ANOVA
$H_0$4: There is no significant association between the judicial district child fatality review team members from different occupations and their self-reported perceptions of natural and injury-related fatalities selected as the most preventable.	Descriptive Chi-Square Adjusted Residual
$H_0$5: There is no significant difference between judicial district child fatality review team members and their self-reported perceptions related to a member's urban/rural location regarding current educational initiatives used to reduce childhood fatalities.	MANOVA ANOVA
$H_0$6: There is no significant difference in perceptions of judicial district child fatality review team members from different occupations and the member's recommendations of current educational initiatives used to reduce childhood fatalities.	MANOVA ANOVA Tukey's Honestly Significant Difference

level at .05 or less is interpreted as justification for rejecting the idea that there is no association between the variables. The assumptions that are associated with use of the Chi-square methodology include random sample data, sufficiently large enough sample size, adequate cell sizes, non-directional hypotheses, and independence of observations. If the Chi-square sample is applied to small samples, the rate of Type II errors is increased, failing to reject the null hypothesis when it is false (Levin, 1999). The survey questions analyzed with a Chi-Square are listed in Table 3.4. An increase in Type II errors has not been problematic in this research study due to sufficient size of each cell examined.

Finally, Multivariate Analysis of Variance (MANOVA) was used to look for demographic differences within Likert scale questions. MANOVA was used to examine the main and interaction effects of categorical independent variables on multiple dependent interval variables. If the MANOVA was significant, individual ANOVAs were analyzed to determine which items differed. This research utilized the most common test of significance when there are more than two groups formed by independent variables, Wilks' lambda. Smaller lambda values indicate greater differences between the variables.

Assumptions that must be applied to utilize MANOVA include independent observations, categorical independent variables, continuous and

Table 3.4: Survey Questions Analyzed with Chi-Square Analysis

Survey Question	Possible Responses
19. Please select the two causes of natural fatality that you believe are the most and least preventable	Sudden Infant Death Syndrome Prematurity Chronic and Infectious Disease Smoke Inhalation from Fire Burn Infection from fire
20. Please select the two causes of injury fatality that you believe are the most and least preventable	Drowning Lack of Adequate Care Suffocation or Strangulation Firearm Vehicular

interval dependent variables, low measurement error of the covariates (i.e., interval), and adequate sample size (Gill, 2001). Questions analyzed using MANOVA statistical procedures are listed in Table 3.5.

Tukey's post hoc analyses were used when indicated by a statistically significant difference MANOVA value to determine specifically how groups differ. This procedure examines the individual significance tests to determine which group differs and in which direction a group most significantly differs from the other groups (Gill, 2001).

Coding of Variables. Responses to survey questions in sections II, IV, and V that were on the Likert type scale were coded for data analysis with a "5" for "Strongly Agree," a "4" for "Agree," a "3" for "Not Sure," a "2" for "Disagree," and a "1" for "Strongly Disagree." Additionally, occupational groups were recoded into larger categories to ensure that the categories contained enough subjects for statistical analysis. These categories are

Table 3.5: Selected Sections Analyzed using MANOVA by Section of Instrument

Sections Examining Perceptions	**Number**	**Question**
Section I: Demographic information		
Section II: Self-reported team member's participation in child fatality review	12	Participating in the Team has increased my awareness of health and safety behaviors.
	13	Participating in the CFR Team has increased my awareness of health and safety behaviors of my child(ren), grandchildren, or other children in my life.
	14	Participating in the CFR Team has increased my actions related to child fatality prevention initiatives as a part of my job.
	15	Participating in the CFR Team has increased my actions related to child fatality prevention initiatives as a volunteer.
	16	I believe my contribution to Child Fatality Review is substantial.
	17	Serving on the CFR Team is an important aspect of my job.
	18	CFR is an important contribution to Tennessee's public health.
Section III: Preventability of child fatalities		
Section IV: Self-reported current educational initiatives used to prevent child fatalities	21	Promoting folic acid supplements for women of childbearing age reduces child fatality.
	22	Continuing the "Back to Sleep" campaign about sudden infant death syndrome reduces child fatality
	23	Educating about the dangers of parental alcohol abuse reduces child fatality.
	24	Educating about the dangers of parental drug use reduces child fatality.
	25	Educating about the dangers of tobacco during pregnancy reduces child fatality.
	26	Educating about the dangers of alcohol during pregnancy reduces child fatality
	27	Educating about the dangers of over-the-counter drugs during pregnancy reduces child fatalities.
	28	Educating school children is an effective way to prevent childhood fatalities
	29	Educating medical providers is an effective way to prevent childhood fatality.
	30	Educating law enforcement officers is an effective way to prevent childhood fatalities.
	31	Educating people working in the legal system is an effective way to prevent childhood fatalities.
	32	Giving information to parents about community resources reduces child fatalities
	33	Making available safety equipment (such as helmets, car seats, or gun locks) reduces child fatality.
	34	Providing supervised after school programs reduce child fatality.
	35	Educating parents is an effective way to prevent child fatality.
	36	Educating parents about risk factors for premature birth reduces childhood fatalities.

Table 3.5: Continued

Sections Examining Perceptions	Number	Question
Section V: Self-reported effectiveness of the Tennessee child fatality review process	37	Confidentiality issues among members have prevented full exchange of information during CFR meetings.
	38	HIPAA regulations have prevented access to or exchange of information during CFR meetings.
	39	Inadequate investigation precluded having enough information for review during CFR meetings.
	40	Team members' not bringing adequate information to the CFR meeting affects the review process.
	41	Delays in receiving autopsy reports affect the CFR process.
	42	Obtaining records or information from another locality in state affects the review process.
	43	Obtaining records or information from another state affects the review process.
	44	Team disagreement on circumstances of child's fatality affects the review process.
	45	Receiving written communication about the review process from the Tennessee Department of Health is beneficial.
	46	Receiving articles published in professional journals on child fatalities is beneficial
	47	Using the internet to access information about child fatalities is beneficial.

discussed in detail in Chapter IV.

Summary

This chapter examined the creation and establishment of validity and reliability of the survey instrument to examine child fatality review team members. A content validation panel from Alabama reviewed the instrument prior to pilot testing. The survey instrument was pilot tested in Michigan, Texas, and Florida, before the survey was administered in Tennessee.

The chapter described the sample population of Tennessee child fatality review team members, and outlined the method of distributing surveys to team members while maintaining respondent anonymity. IRB approval was obtained prior to distribution in Tennessee. Participant consent information was reviewed, and specific statistical analyses to examine research questions were identified. Chapter IV will present raw data in tables, illustrate data in tables and graphs, and describe specific data analyses occurring to examine the variables under the research study. Chapter V will discuss specific results stemming from the data analysis and discuss the data's relationship to the research questions discussed in Chapters I and III. Chapter VI will examine the research study in retrospect and discuss what should be changed for future studies addressing similar issues.

CHAPTER IV

Analysis and Interpretation of Data

Introduction

The purpose of the research study was to 1) develop a valid and reliable survey instrument to assess Tennessee judicial district child fatality review team members' perceptions of the process used to review childhood fatalities in Tennessee and 2) establish an initial profile of information concerning Tennessee's child fatality review team members' perceptions of the review process and program effectiveness. Specifically, the instrument examines the child fatality review team members' perceptions concerning the team members' participation in child fatality review, the preventability of specific causes of childhood fatalities, the effectiveness of the Tennessee child fatality review process, and the current educational initiatives used to prevent childhood fatalities.

This research study examined the perceptions of 157 Tennessee judicial district child fatality review team members concerning the team members' participation in child fatality review, the preventability of specific causes of childhood fatalities, the effectiveness of the Tennessee child fatality review process, and the current educational initiatives used to prevent childhood fatalities.

Utilization of Reliable and Validated Survey Instrument

The 157 team members who responded to the survey represented 28 of a possible 32 judicial districts (87.5% of the judicial districts). Responses provided by Tennessee judicial district child fatality review team members were examined to establish a baseline. The cover letter and final survey instrument are available for review in Appendix F.

Descriptive Statistics of Team Members

Sample Description

As discussed in Chapter III, each Tennessee child fatality review team coordinator was asked to distribute survey instruments to all team members within the judicial district and complete the survey as a team member. With the exception of one coordinator, all coordinators elected to participate. Returned surveys represented 28 out of a possible 32 child fatality review teams, for a judicial district response rate of 87.5%. One hundred fifty-seven individuals within the judicial districts responded out of 320 surveys distributed, for an overall survey response rate of 49%.

Rural versus Urban Designation

Of the 157 Tennessee judicial district child fatality review team members who completed and returned surveys, 56 (35.7%) self-reported that they represented an urban area; the remaining 101 participants (64.3%) self-reported that they represented a rural area.

Participation and Time Spent on Judicial District Child Fatality Review Team

Survey respondents self-reported the number of years the respondent had participated in Tennessee's judicial district child fatality review team. The results ranged from 0 years to 12 years, with a mean of 4.70 years (n=152, SD=2.96). This indicates that Tennessee's judicial district child fatality review team members have a diverse range of experience, ranging from members with little to no experience to members who have participated since the inception of Tennessee's child fatality review process in 1995.

Participants self-reported that the amount of time spent on the child fatality review process ranged from 0 hours per month to 40 hours per month, with a mean of 2.60 hours per month spent on child fatality review (n=150, SD=3.73).

Members' Self-Reported Role on Judicial District Child Fatality Review Team

Respondents self-reported their role on the team as team coordinator, an individual who is identified by the state to direct meetings; team member, an individual who brings information to the meeting from the agency represented; or team leader, an individual who works directly with the team coordinator but who functions more behind the scenes. Twelve (7.6%) survey respondents self-reported their role on the team as team leader, 139 respondents (88.5%) self-reported their role on the team as team member, and 6 (3.8%) respondents self-reported their role on the team as team coordinator.

Members' Self-Reported Frequency of Judicial District Child Fatality Review Meetings

One hundred nine (78.2%) of the survey respondents self-reported the frequency of their team meetings as quarterly, followed by 27 (17.9%) respondents who self-reported meeting monthly, and 13 (8.6%) respondents who self-reported meeting approximately six times per year.

Members' Self-Reported Frequency of Attending Judicial District Child Fatality Review Meetings

Respondents self-reported how often they attended regularly scheduled child fatality review meetings. One hundred twenty-two (79.7%) respondents self-reported attending meetings regularly. Twenty (13.1%) team members self-reported occasional attendance of meetings. Seven (4.6%) responding team members self-reported attending meetings when asked. Four respondents (2.6%) self-reported never attending a child fatality review meeting.

Members' Self-Reported Educational Degrees

The self-reported educational level of respondents varied from high school graduate to degree beyond a master's degree. Fifty-four (34.6%) respondents self-reported having a degree beyond a master's degree, followed by 41 (26.3%) respondents who self-reported having a bachelor's degree, 29 (18.6%) respondents who self-reported having some college, 18 (11.5%) respondents who self-reported having a master's degree, 5 (3.2%)

respondents who self-reported having a technical or vocational certificate, and 9 (5.8%) respondents who self-reported being high school graduates.

Members' Self-Reported Occupation and Statistical Regrouping into Categories

The self-reported occupation of participants illustrated the diverse composition of the judicial district child fatality review teams in Tennessee. Survey respondents self-reported representation in each occupational category, except for the categories of substance abuse and hospital records staff. The most frequently selected categories were physicians and law enforcement. Twenty-nine (20%) of the survey respondents self-selected physician as best representing their occupation, followed closely by 27 (18.7%) respondents who self-selected law enforcement.

The small size of each individual occupation group made it necessary to group occupations into larger categories for statistical analysis. The categories of court personnel, health care provider (other than physician), physician, child advocate, law enforcement, and public health were chosen based upon similarities of the most frequently selected occupations. The court personnel category included survey respondents who selected attorney, court, or prosecutor. Health care provider (other than physician) included survey respondents who selected health care provider (other than physician), medical examiner/coroner, and mental health. Physicians included survey respondents who selected the category of physician. Child advocates

included survey respondents who selected child advocate, education, or Department of Children's Services. These regroupings of self-reported professional occupations into larger categories are illustrated in Table 4.1.

Members' Self-Reported Race

One hundred forty-five (92.9%) respondents self-reported race as white. Ten (6.4%) respondents self-reported race as black, and 1 (0.6%) respondent self-reported race as other.

Members' Self-Reported Ethnicity

One (0.6%) respondent self-reported being of Hispanic origin (0.6%), and 155 (99.6%) respondents indicated no Hispanic origin. One respondent did not indicate ethnicity.

Baseline Responses of Tennessee Child Fatality Review Team Members about the Review Process

Tennessee judicial district child fatality review team members participating in this research study were asked to respond to a series of questions addressing their perceptions about participation in child fatality review, preventability of specific causes of childhood deaths, effectiveness of the Tennessee child fatality review process, and current educational initiatives used to prevent childhood fatalities in Tennessee. The participants were asked to indicate their level of agreement or disagreement with these items on a scale that ranged from strong agreement to strong disagreement.

Table 4.1: Regrouping of Professional Occupations Reported by Child Fatality Review Team Members

Self-Reported Occupation	**Occupational Regrouping Category**					
Occupation	Court personnel	Health care provider (Other than physician)	Physician	Child advocate	First responder	Public health
Attorney	1	0		0	0	
Child advocate	0	0		3	0	
Child protective services	0	0		13	0	
Court	7	0		0	0	
Fire	0	0		0	5	
Education	0	0		3	0	
EMS	0	0		0	8	
Health care (other than physician)	0	6		0	0	
Law enforcement		0		0	27	
Medical examiner/Coroner	0	5		0	0	
Mental health	0	9		0	0	
Physician	0	0	29	0	0	
Prosecutor	13	0		0	0	
Public health	0	0		0	0	15
Total Participants in Regrouped Occupational Category	21	20	29	16	40	15

Judicial District Child Fatality Review Team Members' Perceptions about Participation in Child Fatality Review

Did Child Fatality Review Participation Increase Personal Awareness of Health and Safety Behaviors?

One hundred forty-six respondents self-reported agreement or strong agreement with the question asking whether their participation on the judicial district child fatality review team had increased their awareness of health and safety behaviors. Of these, 62 (39.5%) self-reported strong agreement and 84 (53.5%) self-reported agreement that participation had increased personal awareness of health and safety behaviors. Only 4 (2.5%) participating judicial district child fatality review team members self-reported disagreement or strong disagreement that participating on a judicial district child fatality review team had increased their awareness of health and safety behaviors. Six (3.8%) participants self-reported the category of Not Sure in response to the question asking whether participation on a judicial district child fatality review team had increased their awareness of health and safety behaviors.

Did Participation in Child Fatality Review Increase Awareness of Health and Safety Behaviors of Children, Grandchildren, or other Children in Participant's Life?

One hundred thirty-eight respondents reported agreement or strong agreement to the question asking whether participating on the judicial district child fatality review team had increased personal awareness of health and safety behaviors of children, grandchildren, or other children in the participant's life. Of these, 84 (53.8%) self-reported agreement and 54

(34.7%) self-reported strong agreement. Only 10 (6.7%) participating judicial district child fatality review team members self-reported disagreement that participating in the child fatality review process had increased their personal awareness of health and safety behaviors of children, grandchildren, or other children in the participant's life. Eight (5.1%) participants self-reported that they were not sure whether participating in the judicial district child fatality review team had increased personal awareness of health and safety behaviors of children, grandchildren, or other children in the participant's life.

Did Job-Related Actions for Child Fatality Prevention Increase as a Result of Participating in the Review Team?

One hundred thirty-one respondents agreed that participating in the judicial district child fatality review team had increased personal actions related to child fatality prevention initiatives as part of the participant's job, with 86 (54.8%) respondents self-reporting agreement and 45 (28.7%) respondents self-reporting strong agreement. Only 7 (4.4%) participating judicial district child fatality review team members self-reported disagreement with the statement that participating in the judicial district child fatality review team had increased personal actions related to child fatality prevention initiatives as a part of the participant's job. Nineteen (12.1%) participants self-reported that they were not sure whether participating in the judicial

district child fatality review team had increased personal actions related to child fatality prevention initiatives as part of the participant's job.

Did Volunteer Participation in Child Fatality Prevention Initiatives Increase as a Result of Participating in the Review Team?

Ninety-three respondents agreed that participating in the judicial district child fatality review team had increased personal actions related to child fatality prevention initiatives as a volunteer. Of these respondents, 67 (43.5%) self-reported agreement and 26 (16.9%) self-reported strong agreement. Only 2 (1.3%) participating judicial district child fatality review team members self-reported strong disagreement and 24 (15.6%) self-reported disagreement that participating in the judicial district child fatality review team had increased personal actions related to child fatality prevention initiatives as a volunteer. Thirty-five (22.7%) participants self-reported that they were not sure whether participating in the judicial district child fatality review team had increased personal actions related to child fatality prevention as a volunteer.

Reported Substantive Personal Contribution to the Child Fatality Review Process

One hundred eleven respondents believed that their personal contribution to the child fatality review process was substantial, with 79 (50.3%) self-reporting agreement and 36 (22.9%) self-reporting strong agreement. Only 1 (0.6%) participating judicial district child fatality review team member self-reported strong disagreement, and 9 (5.7%) respondents

self-reported disagreement that their personal contributions to the child fatality review process were substantial. Thirty-two (20.4%) participants self-reported that they were not sure whether their personal contribution to the child fatality review process was substantial.

Reported Importance of Job-Related Participation in the Child Fatality Review Process

One hundred twenty-one respondents agreed that serving on the judicial district child fatality review team is an important aspect of the participant's job, with 84 (53.5%) self-reporting agreement and 37 (23.6%) self-reporting strong agreement. Only 1 (0.6%) participating judicial district child fatality review team member self-reported strong disagreement, and 9 (5.7%) respondents self-reported disagreement to the question regarding the importance of serving on the judicial district child fatality review team as an aspect of the respondent's job. Twenty-six (16.6%) participants self-reported that they were not sure of the importance of serving on the judicial district child fatality review team as a part of their job.

The Role of Child Fatality Review in Tennessee's Public Health Programs

This section reviews responses to the survey questions that examined the role of judicial district child fatality review teams as a part of larger Tennessee Public Health programs. Survey respondents were asked about their view of the role of child fatality review in public health programs.

Reported Importance of Child Fatality Review to Tennessee's Public Health Programs

One hundred forty-five respondents agreed that the child fatality review process is an important contribution to Tennessee's public health; of these, 69 (43.9%) respondents self-reported agreement and 76 (48.4%) respondents self-reported strong agreement with the statement. Only 2 (1.3%) participating judicial district child fatality review team members self-reported disagreement that child fatality review is an important contribution to Tennessee's public health. Ten (6.4%) participants self-reported that they were not sure of child fatality review's importance in contributing to Tennessee's public health.

Judicial District Child Fatality Review Team Members' Views of Current Educational Initiatives to Prevent Childhood Fatalities

Tennessee's judicial district child fatality review team members were asked to respond to questions about a variety of educational initiatives to prevent future childhood fatalities. The possible responses were on a scale from strongly disagreement to strongly agreement. Details are provided about the participants' responses to each question consecutively.

Reported Perceptions of Selecting Folic Acid Supplements in Preventing Childhood Fatality

Ninety-one respondents agreed that promoting folic acid supplements for women of childbearing age reduces childhood fatality, with 65 (41.3%) self-reporting agreement and 26 (16.6%) self-reporting strong agreement.

Only 2 (1.3%) participating judicial district child fatality review team members self-reported strong disagreement with the statement that promoting folic acid supplements for women of childbearing age reduces childhood fatality, and 11 (7.0%) reported disagreement with the statement. Fifty-three (43.8%) participants self-reported that they were not sure whether promoting folic acid supplements for women of childbearing age reduces childhood fatality.

Reported Perceptions of the "Back to Sleep" Campaign's Role in Prevention of Childhood Fatality

One hundred twelve respondents agreed that continuing the "Back to Sleep" campaign about sudden infant death syndrome reduces childhood fatalities, with 55 (35.0%) respondents self-reporting agreement and 57 (36.3%) respondents self-reporting strong agreement. Only 1 (0.6%) participating judicial district child fatality review team member self-reported disagreement that continuing the "Back to Sleep" campaign about sudden infant death syndrome reduces childhood fatalities. Forty-four (28.0%) participants self-reported that they were not sure whether continuing the "Back to Sleep" campaign about sudden infant death syndrome reduces childhood fatalities.

Perceived Role of Educating Parents about Alcohol Abuse to Prevent Childhood Fatality

One hundred thirty-five respondents agreed that educating about the dangers of parental alcohol abuse reduces child fatality, with 87 (55.4%)

respondents self-reporting agreement and 48 (30.6%) respondents self-reporting strong agreement with the statement. Only 6 (3.8%) participating judicial district child fatality review team members self-reported disagreement with the statement that educating about the dangers of parental alcohol abuse reduces child fatality. Sixteen (10.2%) participants self-reported that they were not sure whether educating about the dangers of parental alcohol abuse reduces child fatality.

Perceived Role of Educating Parents about Drug Use to Prevent Childhood Fatality

One hundred thirty-three respondents agreed that educating about the dangers of parental drug use reduces child fatality, with 74 (47.1%) respondents self-reporting agreement and 59 (37.6%) respondents self-reporting strong agreement with the statement. Only 5 (3.2%) participating judicial district child fatality review team members self-reported disagreement with the statement that educating about the dangers of parental drug use reduces child fatality. Nineteen (12.1%) participants self-reported that they were not sure whether educating about the dangers of parental drug use reduces child fatality.

Perceived Role of Education about Tobacco Use during Pregnancy and Prevention of Childhood Fatality

One hundred twenty-nine respondents agreed that educating about the dangers of tobacco use during pregnancy reduces child fatality, with 80 (51.0%) respondents self-reporting agreement and 49 (31.2%) respondents

self-reporting strong agreement with the statement. Only 7 (4.5%) participating judicial district child fatality review team members self-reported disagreement with the statement that educating about the dangers of tobacco use during pregnancy reduces child fatality. Twenty-one (13.4%) participants self-reported that they were not sure whether educating about the dangers of tobacco use during pregnancy reduces child fatality.

Perceived Role of Education about Dangers of Alcohol Use during Pregnancy and Prevention of Childhood Fatality

One hundred thirty-eight respondents agreed that educating about the dangers of alcohol use during pregnancy reduces child fatality, with 88 (56.1%) respondents self-reporting agreement and 50 (31.1%) respondents self-reporting strong agreement with the statement. Only 6 (3.8%) participating judicial district child fatality review team members self-reported disagreement with the statement that educating about the dangers of alcohol use during pregnancy reduces child fatality. Thirteen (8.3%) participants self-reported that they were not sure whether educating about the dangers of alcohol use during pregnancy reduces child fatality.

Perceived Role of Educating about Dangers of Over-the-Counter Drug Use during Pregnancy

One hundred sixteen respondents agreed that educating about the dangers of over-the-counter drug use during pregnancy reduces child fatalities, with 85 (54.1%) respondents self-reporting agreement and 31 (19.7%) respondents self-reporting strong agreement with the statement.

Only 7 (4.5%) participating judicial district child fatality review team members self-reported disagreement with the statement that educating about the dangers of over-the-counter drug use during pregnancy reduces child fatalities. Thirty-four (24.7%) participants self-reported that they were not sure whether educating about the dangers of over-the-counter drug use during pregnancy reduces child fatalities.

Perceived Role of Educating School Children to Prevent Child Fatality

One hundred twenty-nine respondents agreed that educating school children is an effective way to prevent childhood fatalities, with 93 (59.2%) respondents self-reporting agreement and 36 (22.9%) respondents self-reporting strong agreement with the statement. Only 2 (1.3%) participating judicial district child fatality review team members self-reported disagreement with the statement that educating school children is an effective way to prevent childhood fatalities. Twenty-six (16.6%) participants self-reported that they were not sure whether educating school children is an effective way to prevent childhood fatalities.

Perceived Role of Educating Medical Providers and Prevention of Child Fatality

One hundred thirty-three respondents agreed that educating medical providers is an effective way to prevent childhood fatalities, with 85 (54.1%) respondents self-reporting agreement and 48 (30.6%) respondents self-reporting strong agreement with the statement. Only 3 (1.9%) participating judicial district child fatality review team members self-reported disagreement

with the statement that educating medical providers is an effective way to prevent childhood fatalities. Twenty-one (13.4%) participants self-reported that they were not sure whether educating medical providers is an effective way to prevent childhood fatalities.

Perceived Role of Educating Law Enforcement Officers to Prevent Child Fatality

One hundred twenty-five respondents agreed with this item, with 88 (56.1%) respondents self-reporting agreement and 37 (23.6%) respondents self-reporting strong agreement that educating law enforcement officers is an effective way to prevent childhood fatalities. Only 8 (5.1%) participating judicial district child fatality review team members self-reported disagreement with the statement that educating law enforcement officers is an effective way to prevent childhood fatalities. Twenty-four (15.3%) participants self-reported that they were not sure whether educating law enforcement officers is an effective way to prevent childhood fatalities.

Perceived Role of Educating Legal System Employees to Prevent Child Fatality

One hundred seven respondents agreed that educating people working in the legal system is an effective way to prevent childhood fatalities, with 76 (46.4%) respondents self-reporting agreement and 31 (19.7%) respondents self-reporting strong agreement with the statement. Only 13 (8.3%) participating judicial district child fatality review team members self-reported disagreement with the statement that educating people working in the legal

system is an effective way to prevent childhood fatalities. Thirty-seven (23.6%) participants self-reported that they were not sure whether educating people working in the legal system is an effective way to prevent childhood fatalities.

Perceived Role of Educating Parents about Community Resources to Reduce Child Fatality

One hundred thirty-eight respondents agreed that giving information to parents about community resources reduces child fatality, with 98 (62.4%) respondents self-reporting agreement and 40 (25.5%) respondents self-reporting strong agreement with the statement. Only 2 (1.3%) participating judicial district child fatality review team members self-reported disagreement with the statement that giving information to parents about community resources reduces child fatality. Seventeen (10.8%) participants self-reported that they were not sure whether giving information to parents about community resources reduces child fatality.

Perceived Role of Safety Equipment Availability to Reduce Child Fatality

One hundred fifty-one respondents agreed that making available safety equipment (such as helmets, car seats, or gun locks) reduces child fatality, with 61 (38.9%) respondents self-reporting agreement and 90 (57.3%) respondents self-reporting strong agreement with the statement. None of the respondents self-reported disagreement with the statement that making available safety equipment reduces child fatality. Sixty-one (38.9%)

participants self-reported that they were not sure whether making available safety equipment reduces child fatality.

Perceived Role of Providing After School Programs to Reduce Child Fatality

One hundred twenty respondents agreed that providing supervised after school programs reduces child fatality, with 59 (37.6%) respondents self-reporting agreement and 61 (38.9%) respondents self-reporting strong agreement with the statement. Only 1 (0.6%) participating judicial district child fatality review team member self-reported disagreement with the statement that providing supervised after school programs reduces child fatality. Thirty-six (22.9%) participants self-reported that they were not sure whether providing supervised after school programs reduces child fatality.

Perceived Role of Parental Education to Prevent Childhood Fatalities

One hundred forty-eight respondents agreed that educating parents is an effective way to prevent childhood fatalities, with 75 (47.8%) respondents self-reporting agreement and 73 (46.5%) respondents self-reporting strong agreement with the statement. None of the participating judicial district child fatality review team members self-reported disagreement with the statement that educating parents is an effective way to prevent childhood fatalities. Nine (5.7%) participants self-reported that they were not sure whether educating parents is an effective way to prevent childhood fatalities.

Perceived Role of Educating Parents about Premature Birth to Prevent Child Fatality

One hundred thirty-four respondents agreed that educating parents about risk factors for premature birth reduces child fatality, with 71 (45.2%) respondents self-reporting agreement and 63 (40.1%) respondents self-reporting strong agreement with the statement. Only 2 (1.3%) of the participating judicial district child fatality review team members self-reported disagreement with the statement that educating parents about risk factors for premature birth reduces child fatality. Twenty-one (13.4%) participants self-reported that they were not sure whether educating parents about risk factors for premature birth reduces child fatality.

Effectiveness of the Tennessee Child Fatality Review Process

Perceived Role of Confidentiality Issues During Child Fatality Review

Ninety-five respondents disagreed that confidentiality issues among members had prevented a full exchange of information during child fatality review meetings, with 29 (18.5%) respondents self-reporting strong disagreement and 66 (42.0%) respondents self-reporting disagreement with the statement. Twenty-five (15.9%) participants self-reported that they were not sure whether confidentiality issues among members had prevented a full exchange of information during child fatality review meetings. Only 20 (12.7%) participants agreed and 17 (10.8%) participants strongly agreed that confidentiality issues among members had prevented a full exchange of

information during child fatality review meetings.

Perceived Role of HIPAA Regulations and the Child Fatality Review Process

Eighty-one respondents disagreed that HIPAA regulations had prevented access to or exchange of information during child fatality review meetings, with 15 (9.6%) respondents self-reporting strong disagreement and 66 (42.0%) respondents self-reporting disagreement with the statement. Thirty-nine (24.8%) participants self-reported that they were not sure whether HIPAA regulations had prevented access to or exchange of information during child fatality review meetings. Only 23 (14.6%) respondents agreed and 14 (8.9%) respondents strongly agreed that HIPAA regulations had prevented access to or exchange of information during child fatality review meetings.

Perceived Role of Inadequate Investigations and the Child Fatality Review Process

Ninety-one respondents agreed that inadequate investigation precluded having enough information for review during child fatality review meetings, with 63 (40.1%) respondents self-reporting agreement and 28 (17.8%) respondents self-reporting strong agreement with the statement. Only 3 (1.9%) of the participating judicial district child fatality review team members self-reported disagreement with the statement that inadequate investigation precluded having enough information for review during child fatality review meetings, with 36 (22.9%) participants self-reporting

agreement with the statement. Twenty-seven (17.2%) participants self-reported that they were not sure whether inadequate investigation precluded having enough information for review during child fatality review meetings.

Perceived Role of Team Members' Lack of Information and the Child Fatality Review Process

One hundred five respondents agreed that team members not bringing adequate information to the child fatality review meeting affected the review process, with 80 (51.0%) respondents self-reporting agreement and 25 (15.9%) respondents self-reporting strong agreement with the statement. Only 4 (2.5%) participating judicial district child fatality review team members self-reported strong disagreement with the statement that team members not bringing adequate information to the child fatality review meeting affected the review process. Twenty-eight (17.8%) participants self-reported disagreement with the statement that team members not bringing adequate information to the child fatality review meeting affected the review process. Twenty (12.7%) participants self-reported that they were not sure whether a team member not bringing adequate information to the child fatality review meeting affected the review process.

Perceived Role of Autopsy Delays and the Child Fatality Review Process

One hundred eleven respondents agreed that delays in receiving autopsy reports affects the child fatality review process, with 71 (45.2%) respondents self-reporting agreement and 40 (25.5%) respondents self-

reporting strong agreement with the statement. Only 2 (1.3%) participating judicial district child fatality review team members self-reported strong disagreement with the statement that delays in receiving autopsy reports affects the child fatality review process; 22 (14.0%) participants self-reported disagreement with the statement. Twenty-two (14.0%) participants self-reported that they were not sure whether delays in receiving autopsy reports affect the child fatality review process.

Perceived Role of In-State Record Delays and the Child Fatality Review Process

One hundred thirteen respondents agreed that obtaining records or information from another locality in the state affects the review process, with 77 (49.0%) respondents self-reporting agreement and 36 (22.9%) respondents self-reporting strong agreement with the statement. Only 3 (1.9%) participating judicial district child fatality review team members self-reported strong disagreement with the statement that obtaining records or information from another locality in the state affects the review process; 13 (8.3%) participants self-reported disagreement with the statement. Twenty-eight (17.8%) participants self-reported that they were not sure whether obtaining records or information from another locality in the state affects the review process.

Perceived Role of Out-of-State Record Delays and the Child Fatality Review Process

One hundred seven respondents selected the response of agree or strongly agreed when asked whether obtaining records or information from another state affects the review process, with 78 (49.7%) respondents self-reporting agreement and 29 (18.5%) respondents self-reporting strong agreement. Only 2 (1.3%) participating judicial district child fatality review team members self-reported strong disagreement with the statement that obtaining records or information from another state affects the review process, and 11 (7.0%) participants disagreed with the statement. Thirty-seven (23.6%) participants self-reported that they were not sure whether obtaining records or information from another state affects the review process.

Perceived Role of Team Disagreement on Circumstances of Fatality and the Child Fatality Review Process

Ninety-one respondents selected the response of disagree or strongly disagree when asked whether team disagreement on circumstances of a child's fatality affects the review process, with 2 (1.3%) participating judicial district child fatality review team members self-reporting strong disagreement with the item and 89 (56.6%) respondents self-reporting disagreement. Thirty (19.1%) participants self-reported that they were not sure whether team disagreement on circumstances of a child's fatality affects the review process. Only 28 (17.8%) respondents self-reported agreement and 8

(5.1%) respondents self-reported strong agreement with the statement.

Perceived Role of the Benefit of Written Communications from Tennessee Department of Health Regarding Child Fatality Review

One hundred thirty respondents selected the response of strongly agree or agree when asked whether receiving written communications about the review process from the Tennessee Department of Health is beneficial, with 100 (63.7%) respondents self-reporting agreement and 30 (19.1%) respondents self-reporting strong agreement with the statement. Only 3 (1.9%) respondents self-reported disagreement with the statement that receiving written communications about the review process from the Tennessee Department of Health is beneficial. Twenty-four (15.3%) participants self-reported that they were not sure whether receiving written communications about the review process from the Tennessee Department of Health is beneficial.

Perceived Role of the Benefit of Receiving Child Fatality Review Articles Published in Professional Journals

One hundred twenty-one respondents selected the response of strongly agree or agree when asked whether receiving articles published in professional journals on child fatalities is beneficial, with 98 (62.8%) respondents self-reporting agreement and 23 (14.7%) respondents self-reporting strong agreement with the statement. Only 3 (1.9%) respondents self-reported disagreement with the statement that receiving articles published in professional journals on child fatalities is beneficial. Thirty-two

(20.5%) participants self-reported that they were not sure whether receiving articles published in professional journals on child fatalities is beneficial.

Perceived Role of the Benefit of Internet Use to Obtain Information about Child Fatalities

Eighty-seven (56.1%) respondents indicated they were not sure whether using the internet to access information about child fatalities is beneficial. Only 1 (0.6%) participating judicial district child fatality review team members self-reported strong disagreement with the statement, and 44 (28.4%) respondents self-reported disagreement. Twenty-two (14.0%) respondents self-reported agreement and 1 (0.6%) respondent self-reported strong agreement with the statement that using the internet to access information about child fatalities is beneficial.

Summary of Baseline Responses from Tennessee Judicial District Child Fatality Review Team Members

Responding Tennessee judicial district child fatality review team members selected responses indicating agreement that participating in child fatality review had increased personal awareness of health and safety issues pertinent to childhood fatality prevention. All responding Tennessee judicial district child fatality review team members agreed that education about childhood fatality should occur with children, parents, medical providers, law enforcement, and within the legal system. Member responses were more divided when responding to questions about the Tennessee child fatality review process. Delays in information delivery and autopsy results were

identified as a cause of concern within the child fatality review process. However, team members disagreed about whether confidentiality issues and HIPAA prevents a full exchange of information during the review process. Appendix G illustrates the survey questions and responses divided by category of survey question.

Analysis of Null Hypotheses

Individual data analyses were conducted to investigate the research questions discussed in Chapter I to determine whether significant differences or associations exist between variables. This section presents the results of these analyses and provides answers to the research questions.

Self-Reported Geographic Area and Self-reported Effectiveness of the Tennessee Child Fatality Review Process

MANOVA analyses were conducted to determine whether there was a difference in self-reported geographic location in a rural or urban judicial district of the judicial district child fatality review team and self-reported opinions about the effectiveness of the Tennessee child fatality review process.

Geographic Location

Geographic area was the independent variable and was self-reported by the respondent. Surveys were compared based upon the participant's answer to question 1, "Check the box that best describes the community you

serve." Respondents were grouped based upon their selection of "metropolitan county/city" or "rural county/town."

Survey Questions Examining the Self-Reported Effectiveness of the Tennessee Child Fatality Review Process

Survey questions included in this analysis included Likert scale questions with the possible responses of "5 Strongly Agree," "4 Agree," "3 Not Sure," "2 Disagree," and "1 Strongly Disagree." Questions examined confidentiality, HIPAA, lack of fatality investigation, delay in receiving autopsy reports or other records, and ways to best communicate and educate child fatality review team members. The specific questions utilized in this analysis are illustrated in a table located in Appendix G.

Results of MANOVA Analysis

The results of the MANOVA analysis found no significant differences at a p=.05 level in responses to the questions above between judicial district child fatality review team members who self-reported a rural judicial district and those who self-reported an urban judicial district. The MANOVA F value was $F(11,143)=1.666$, $p=.087$, indicating no significant differences between geographic location and responses to questions about the effectiveness of the Tennessee child fatality review process. Results indicate that perceptions of the effectiveness of the Tennessee child fatality review process do not differ in members self-reporting an urban or a rural location.

Self-Reported Occupation Group and Self-Reported Effectiveness of the Tennessee Child Fatality Review Process

MANOVA analyses were conducted to determine whether there were differences in the self-reported occupation of the judicial district child fatality review team members and self-reported opinions of the effectiveness of the Tennessee child fatality review process.

Occupation

Occupations were grouped into six categories based upon the self-reported professional affiliation of survey respondents. The six categories included in the analysis were court personnel (attorney, court, and prosecutors); health care provider (other than physician); physicians; child advocates (Department of Children's Services and education); first responders (fire, police, and EMS); and public health personnel.

Survey Questions Examining the Self-Reported Effectiveness of the Tennessee Child Fatality Review Process

Survey questions included in this analysis included Likert scale questions with the possible responses of "5 Strongly Agree," "4 Agree," "3 Not Sure," "2 Disagree," and "1 Strongly Disagree." Questions examined confidentiality, HIPAA, lack of fatality investigation, delay in receiving autopsy reports or other records, and ways to best communicate and educate child fatality review team members. The specific questions utilized in this analysis are illustrated in a table located in Appendix G.

Results of MANOVA Analysis

The results of the MANOVA analysis found no significant differences between members self-reporting different occupations and perceptions of the effectiveness of the Tennessee child fatality review process at the p=.05 level with a value of F(55,591)=.628, p=.239. Results indicate that perceptions do not differ in members from different occupations regarding the child fatality review process.

Self-Reported Geographic Area and Team Members' Participation in Judicial District Child Fatality Review Teams

MANOVA analyses were conducted to determine whether there was a difference in the self-reported geographic location in a rural or urban judicial district of the judicial district child fatality review team and self-reported team member's participation in judicial district child fatality review teams.

Geographic Location

Geographic area was the independent variable and was self-reported by the respondent. Surveys were compared based upon the participant's answer to question 1, "Check the box that best describes the community you serve." Respondents were grouped based upon their selection of "metropolitan county/city" or "rural county/town."

Survey Questions Examining Team Members' Participation in the Child Fatality Review Team

Survey questions included in this analysis included Likert scale questions with the possible responses of "5 Strongly Agree," "4 Agree," "3

Not Sure," "2 Disagree," and "1 Strongly Disagree." The specific questions utilized in this analysis are illustrated in a table located in Appendix G.

Results of MANOVA Analysis

The results of the MANOVA analysis found no significant differences in self-reported perceptions of team members' participation in child fatality review teams in members who self-reported a rural judicial district and those who self-reported an urban judicial district at the p=.05 level with a value of F(7,145)=1.559, p=.152. Results indicate that perceptions do not differ in members from urban and rural locations regarding team member participation in child fatality review teams.

Self-Reported Occupation and Perceptions of Preventability of Causes of Deaths

Individual counts, percentages, cross tabulations, Chi-square analyses, and adjusted residuals were conducted to determine whether the self-reported occupation of the judicial district child fatality review team member was associated with self-reported opinions of the following classifications of causes of death: most preventable natural death, least preventable natural death, most preventable injury death, and least preventable injury death. Team members were asked to choose two most preventable natural causes of death and two least preventable natural causes of death. Additionally, team members were asked to choose two most preventable injury causes of

death and two least preventable injury causes of deaths. Causes of natural and injury deaths are illustrated in Table 4.2.

Occupation

The six categories included in the analysis were: court personnel (attorney, court, and prosecutors); health care provider (other than physician); physicians; child advocates (Department of Children's Services and education); first responders (fire, police, and EMS); and public health personnel.

Natural Deaths

In question 19, survey respondents were asked to "Select ONLY 2 causes that you believe are the most and least preventable from the following six causes of natural death." Possible selections included "Sudden Infant Death Syndrome," "Lack of Adequate Care," "Prematurity of Birth," "Chronic and Infectious Diseases," "Smoke Inhalation from Fire," and "Burn Infection caused by Fire." Participants were asked to select the two causes that they perceived to be most preventable and the two causes that they perceived to be least preventable.

Self-Reported Most Preventable Natural Causes of Deaths. Individual counts were computed for each selected preventable natural cause of childhood deaths. "Lack of Adequate Care" was selected by 123 78%) respondents as a most preventable cause of death. "Chronic and Infectious Disease" (was selected by 41 (26%) respondents, followed by "Sudden Infant

Table 4.2: Categories for Natural and Injury Causes of Death

Natural or Injury Classification	**Cause of Death**
Natural Death Causes	Sudden Infant Death Syndrome
	Lack of Adequate Care
	Prematurity of Birth
	Chronic and Infectious Diseases
	Smoke Inhalation from Fire
	Burn Infection caused from Fire
Injury Death Causes	Drowning
	Suffocation or Strangulation
	Inflicted Injury
	Vehicular
	Firearm
	Chemical Poisoning

Death Syndrome," which was selected by 41 (26%) respondents. Thirty-nine (25%) respondents selected "Smoke Inhalation from Fire," 38 (24%) respondents selected "Prematurity," and 24 (15%) respondents selected "Burn Infection from Fire." The natural causes of death selected by respondents as most preventable are illustrated in Table 4.3.

Self-Reported Least Preventable Natural Causes of Deaths. Individual counts were computed for each selected least preventable natural cause of childhood deaths. "Sudden Infant Death Syndrome" was selected by 77 (49%) respondents as a least preventable cause of death. "Prematurity" was selected by 75 (48%) respondents, followed "Chronic and Infectious Disease," which was selected by 60 (38%) respondents. Forty-six (29%) respondents selected "Smoke Inhalation from Fire," 38 (24%) respondents selected "Burn Infection from Fire," and 11 (7%) respondents selected "Lack of Adequate Care" as a least preventable cause of natural death. The least preventable causes of natural death selected by respondents are illustrated in Table 4.4.

Injury Deaths

Self-Reported Most Preventable Injury Causes of Deaths. Individual counts were computed for each selected most preventable injury cause of childhood deaths. "Firearm" was selected by 97 (62%) respondents as a most preventable cause of injury deaths. "Chemical Poisoning" was selected by 52 (33%) respondents, followed by "Drowning," which was selected by 49

Table 4.3: Self-Reported Most Preventable Natural Causes of Deaths

Natural Causes of Death	**n**	**Percent**
Lack of Adequate Care	123	78%
Chronic and Infectious Disease	41	26%
Sudden Infant Death Syndrome	41	26%
Smoke Inhalation from Fire	39	25%
Prematurity	38	24%
Burn Infection from Fire	24	15%
Total	157	

*Percentage values do not add up to 100% due to participants' selection of two causes of natural death.

Table 4.4: Self-Reported Least Preventable Natural Causes of Deaths

Natural Causes of Death	**n**	**Percent**
Sudden Infant Death Syndrome	77	49%
Prematurity	75	48%
Chronic and Infectious Disease	60	38%
Smoke Inhalation from Fire	46	29%
Burn Infection from Fire	38	24%
Lack of Adequate Care	11	7%
Total	157	

*Percentage values do not add up to 100% due to participants' selection of two causes of natural death

(31%) respondents. Forty-seven (30%) respondents selected "Vehicular," 36 (23%) respondents selected "Inflicted Injury," and 27 (17%) respondents selected "Suffocation or Strangulation." The most preventable causes of injury deaths selected by respondents are illustrated in Table 4.5.

Self-Reported Least Preventable Injury Causes of Deaths. Individual counts were computed for each selected least preventable injury cause of childhood deaths. "Vehicular" was selected by 78 (50%) respondents as a least preventable cause of injury deaths. "Inflicted Injury" was selected by 72 (46%) respondents, followed by "Suffocation or Strangulation," which was selected by 68 (43%) respondents. Twenty-eight (18%) respondents selected "Drowning," 27 (17%) respondents selected "Chemical Poisoning," and 18 (12%) respondents selected "Firearm." The least preventable causes of injury deaths selected by respondents are illustrated in Table 4.6.

Specific Most Preventable Natural Causes of Deaths

Sudden Infant Death Syndrome. An association between occupation and selection of most preventable causes of childhood deaths was found. A cross tabulation was performed to look for associations between occupation and frequency of selected cause of death. In the cross tabulation for each categorical grouping of occupation, the count of selected most preventable deaths due to sudden infant death syndrome as a natural cause of death was given. Chi-square result of Chi square= 7.169, df=5, p=.179 indicated that no significant association (at the p=.05 level) was found between occupations

Table 4.5: Self-Reported Most Preventable Injury Causes of Deaths

Injury Causes of Death	**n**	**Percent**
Firearm	97	62%
Chemical Poisoning	52	33%
Drowning	49	31%
Vehicular	47	30%
Inflicted Injury	36	23%
Suffocation or Strangulation	27	17%
Total	157	

*Percentage values do not add up to 100% due to participants' selection of two causes of injury death.

Table 4.6: Self-Reported Least Preventable Injury Causes of Deaths

Injury Causes of Death	**n**	**Percent**
Vehicular	78	50%
Inflicted Injury	72	46%
Suffocation or Strangulation	68	43%
Drowning	28	18%
Chemical Poisoning	27	17%
Firearm	18	12%
Total	157	

*Percentage values do not add up to 100% due to participants' selection of two causes of injury death.

for selection of sudden infant death syndrome as a most preventable cause of natural deaths.

Lack of Adequate Care. An association between occupation and selection of most preventable causes of childhood deaths was found. A cross tabulation was performed to look for associations between occupation and frequency of selected cause of death. In th cross tabulation for each categorical grouping of occupation, the count of selected most preventable deaths due to lack of adequate care as a natural cause of death was given. Chi-square result of Chi square= 6.840, df=5, p=.233 indicated that no significant association (at the p=.05 level) was found between occupations for selection of lack of adequate care as a most preventable cause of natural deaths.

Prematurity of Birth. An association between occupation and selection of most preventable causes of childhood deaths was found. A cross tabulation was performed to look for associations between occupation and frequency of selected cause of death. In the cross tabulation for each categorical grouping of occupation, the count of selected most preventable deaths due to prematurity of birth as a natural cause of death was given. Chi-square result of Chi square= 6.840, df=5, p=.233 indicated that no significant association (at the p=.05 level) was found between occupations for selection of prematurity of birth as a most preventable cause of natural deaths.

Chronic and Infectious Diseases. An association between occupation and selection of most preventable causes of childhood deaths was found. A cross tabulation was performed to look for associations between occupation and frequency of selected cause of death. In the cross tabulation for each categorical grouping of occupation, the count of selected most preventable deaths due to chronic and infectious diseases as a natural cause of death was given. Chi-square result of Chi square= 2.467, df=5, p=.781 indicated that no significant association (at the p=.05 level) was found between occupations for selection of chronic and infectious diseases as a most preventable cause of natural deaths.

Smoke Inhalation from Fire.[*] An association between occupation and selection of most preventable causes of childhood deaths was found. A cross tabulation was performed to look for associations between occupation and frequency of selected cause of death. In the cross tabulation for each categorical grouping of occupation, the count of selected most preventable deaths due to smoke inhalation from fire as a natural cause of death was given. Chi-square result of Chi square= 3.798, df=5, p=.579 indicated that no significant association (at the p=.05 level) was found between occupations for selection of smoke inhalation from fire as a most preventable cause of natural deaths.

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[*]Possible problem with reporting form labeling death for burn infection versus death from smoke inhalation from fire.

Burn Infection from Fire.[*] An association between occupation and selection of most preventable causes of childhood deaths was found. A cross tabulation was performed to look for associations between occupation and frequency of selected cause of death. In the cross tabulation for each categorical grouping of occupation, the count of selected most preventable deaths due to burn infection from fire as a natural cause of death was given. Chi-square result of Chi square= 5.457, df=5, p=.363 indicated that no significant association (at the p=.05 level) was found between occupations for selection of burn infection from fire as a most preventable cause of natural deaths.

Specific Least Preventable Natural Causes of Deaths

Sudden Infant Death Syndrome. An association between occupation and selection of least preventable causes of childhood deaths was found. A cross tabulation was performed to look for associations between occupation and frequency of selected cause of death. In the cross tabulation for each categorical grouping of occupation, the count of selected least preventable deaths due to sudden infant death syndrome as a natural cause of death was given. Chi-square result of Chi square= 6.163, df=5, p=.291 indicated that no significant association (at the p=.05 level) was found between occupations

[*]Possible problem with reporting form labeling death for burn infection versus death from smoke inhalation from fire.

for selection of sudden infant death syndrome as a least preventable cause of natural deaths.

Lack of Adequate Care. An association between occupation and selection of least preventable causes of childhood deaths was found. A cross tabulation was performed to look for associations between occupation and frequency of selected cause of death. In the cross tabulation for each categorical grouping of occupation, the count of selected least preventable deaths due to lack of adequate care as a natural cause of death was given. Chi-square result of Chi square= 4.531, df=5, p=.476 indicated that no significant association (at the p=.05 level) was found between occupations for selection of lack of adequate care as a least preventable cause of natural deaths.

Prematurity of Birth. An association between occupation and selection of least preventable causes of childhood deaths was found. A cross tabulation was performed to look for associations between occupation and frequency of selected cause of death. In the cross tabulation for each categorical grouping of occupation, the count of selected least preventable deaths due to prematurity of birth as a natural cause of death was given. Chi-square result of Chi square= 4.531, df=5, p=.476 indicated that no significant association (at the p=.05 level) was found between occupations for selection of prematurity of birth as a least preventable cause of natural deaths.

Chronic and Infectious Disease. An association between occupation and selection of least preventable causes of childhood deaths was found. A cross tabulation was performed to look for associations between occupation and frequency of selected cause of death. In the cross tabulation for each categorical grouping of occupation, the count of selected least preventable deaths due to chronic and infectious disease as a natural cause of death was given. Chi-square result of Chi square= 5.383, df=5, p=.371 indicated that no significant association (at the p=.05 level) was found between occupations for selection of chronic and infectious disease as a least preventable cause of natural deaths.

Smoke Inhalation from Fire.[*] An association between occupation and selection of least preventable causes of childhood deaths was found. A cross tabulation was performed to look for associations between occupation and frequency of selected cause of death. In the cross tabulation for each categorical grouping of occupation, the count of selected least preventable deaths due to smoke inhalation from fire as a natural cause of death was given. Chi-square result of Chi square= 1.612, df=5, p=.900 indicated that no significant association (at the p=.05 level) was found between occupations for selection of smoke inhalation from fire as a least preventable cause of natural deaths.

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[*]Possible problem with reporting form labeling death for burn infection versus death from smoke inhalation from fire.

Burn Infection Caused from Fire.[*] An association between occupation and selection of least preventable causes of childhood deaths was found. A cross tabulation was performed to look for associations between occupation and frequency of selected cause of death. In the cross tabulation for each categorical grouping of occupation, the count of selected least preventable deaths due to burn infection from fire as a natural cause of death was given. Chi-square result of Chi square= 5.590, df=5, p=.348 indicated that no significant association (at the p=.05 level) was found between occupations for selection of burn infection from fire as a least preventable cause of natural deaths.

Specific Most Preventable Injury Causes of Deaths

Drowning. An association between occupation and selection of most preventable causes of childhood deaths was found. A cross tabulation was performed to look for associations between occupation and frequency of selected cause of death. In the cross tabulation for each categorical grouping of occupation, the count of selected most preventable deaths due to drowning as an injury cause of death was given. Chi-square result of Chi square= 2.498, df=5, p=.777 indicated that no significant association (at the p=.05 level) was found between occupations for selection of drowning as a most preventable cause of injury deaths.

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[*]Possible problem with reporting form labeling death for burn infection versus death from smoke inhalation from fire.

Suffocation or Strangulation. An association between occupation and selection of most preventable causes of childhood deaths was found. A cross tabulation was performed to look for associations between occupation and frequency of selected cause of death. In the cross tabulation for each categorical grouping of occupation, the count of selected most preventable deaths due to suffocation or strangulation as an injury cause of death was given. Chi-square result of Chi square= 11.092, df=5, p=.*.05 indicated that a significant association (at the p=.05 level) was found between occupations for selection of suffocation or strangulation as a most preventable cause of injury deaths.

In addition to actual count of choices, an expected count and an adjusted residual were determined. An adjusted residual of less than -2 or more than +2 was considered to be significant. Those found between –2 and +2 were not significant. The adjusted residual for respondents was not significant for health care providers (other than physicians), physicians, first responders (fire, police, and EMS), child advocates (Department of Children's Services and educators), and public health personnel. The professional category of court personnel (attorneys, prosecutors, and court) had a high adjusted residual of 2.2, indicating a high rate of the selection of suffocation or strangulation as a most preventable cause of childhood deaths due to injury causes. These values are illustrated in Table 4.7.

Table 4.7: Observed/Expected Outcomes Using Adjusted Residuals for Respondents Selecting "Suffocation or Strangulation" as a Most Preventable Injury Cause of Deaths

Occupation	**Not Selected**	**Selected**	**Total**
First Responders Observed Count	34	6	40
Expected Count	33.3	6.7	40.0
Adjusted Residual	.3	-.3	
Court Personnel Observed Count	14	7	21
Expected Count	17.5	3.5	21.0
Adjusted Residual	**-2.2	**2.2	
Health Care Provider (other than physician) Observed Count	17	3	20
Expected Count	16.7	3.3	20.0
Adjusted Residual	.2	-.2	
Physician Observed Count	27	2	29
Expected Count	24.2	4.8	29.0
Adjusted Residual	1.6	-1.6	
Child Advocate Observed Count	18	1	19
Expected Count	15.8	3.2	19.0
Adjusted Residual	1.4	-1.4	
Public Health Observed Count	10	5	15
Expected Count	12.5	2.5	15.0
Adjusted Residual	-1.8	1.8	
Total Count	120	24	144

Chi-Square value=11.092, df=5, sig=.050*

** An adjusted residual of less than –2 or more than +2 was considered to be significant. Those found between –2 and +2 were not significant.

Inflicted Injury. An association between occupation and selection of most preventable causes of childhood deaths was found. A cross tabulation was performed to look for associations between occupation and frequency of selected cause of death. In the cross tabulation for each categorical grouping of occupation, the count of selected most preventable deaths due to inflicted injury as an injury cause of death was given. Chi-square result of Chi square= 9.945, df=5, p=.077 indicated that no significant association (at the p=.05 level) was found between occupations for selection of inflicted injury as a most preventable cause of injury deaths.

Vehicular. An association between occupation and selection of most preventable causes of childhood deaths was found. A cross tabulation was performed to look for associations between occupation and frequency of selected cause of death. In the cross tabulation for each categorical grouping of occupation, the count of selected most preventable deaths due to vehicular as an injury cause of death was given. Chi-square result of Chi square= 9.386, df=5,p=.095 indicated that no significant association (at the p=.05 level) was found between occupations for selection of vehicular as a most preventable cause of injury deaths.

Firearms. An association between occupation and selection of most preventable causes of childhood deaths was found. A cross tabulation was performed to look for associations between occupation and frequency of selected cause of death. In the cross tabulation for each categorical grouping

of occupation, the count of selected most preventable deaths due to firearms as an injury cause of death was given. Chi-square result of Chi square= 5.997, df=5, p=.306 indicated that no significant association (at the p=.05 level) was found between occupations for selection of firearms as a most preventable cause of injury deaths.

Chemical Poisoning. An association between occupation and selection of most preventable causes of childhood deaths was found. A cross tabulation was performed to look for associations between occupation and frequency of selected cause of death. In the cross tabulation for each categorical grouping of occupation, the count of selected most preventable deaths due to chemical poisoning as an injury cause of death was given. Chi-square result of Chi square= 6.405, df=5, p=.269 indicated that no significant association (at the p=.05 level) was found between occupations for selection of chemical poisoning as a most preventable cause of injury deaths.

Specific Least Preventable Injury Causes of Deaths

Drowning. An association between occupation and selection of least preventable causes of childhood deaths was found. A cross tabulation was performed to look for associations between occupation and frequency of selected cause of death. In the cross tabulation for each categorical grouping of occupation, the count of selected least preventable deaths due to drowning as an injury cause of death was given. Chi-square result of Chi

square= 1.881, df=5, p=.865 indicated that no significant association (at the p=.05 level) was found between occupations for selection of drowning as a least preventable cause of injury deaths.

Suffocation or Strangulation. An association between occupation and selection of least preventable causes of childhood deaths was found. A cross tabulation was performed to look for associations between occupation and frequency of selected cause of death. In the cross tabulation for each categorical grouping of occupation, the count of selected least preventable deaths due to suffocation or strangulation as an injury cause of death was given. Chi-square result of Chi square= 10.443, df=5, p=.064 indicated that no significant association (at the p=.05 level) was found between occupations for selection of suffocation or strangulation as a least preventable cause of injury deaths.

Inflicted Injury. An association between occupation and selection of least preventable causes of childhood deaths was found. A cross tabulation was performed to look for associations between occupation and frequency of selected cause of death. In the cross tabulation for each categorical grouping of occupation, the count of selected least preventable deaths due to inflicted injury as an injury cause of death was given. Chi-square result of Chi square= 5.800, df=5, p=.326 indicated that no significant association (at the p=.05 level) was found between occupations for selection of inflicted injury as a least preventable cause of injury deaths.

Vehicular. An association between occupation and selection of least preventable causes of childhood deaths was found. A cross tabulation was performed to look for associations between occupation and frequency of selected cause of death. In the cross tabulation for each categorical grouping of occupation, the count of selected least preventable deaths due to vehicular as an injury cause of death was given. Chi-square result of Chi square= 20.779, df=5, p=*.001 indicated that a significant association (at the p=.05 level) was found between occupations for selection of vehicular as a least preventable cause of injury deaths.

In addition to actual count of choices, an expected count and an adjusted residual were determined. An adjusted residual of less than -2 or more +2 was considered to be significant. Those found between –2 and +2 were not significant. The adjusted residual for respondents was not significant for health care providers (other than physicians), child advocates (Department of Children's Services and educators), public health personnel, and court personnel (attorneys, prosecutors, and court). The professional category of first responder (which incorporated occupations of police, EMS, and fire) had a high adjusted residual of 3.0, indicating a high rate of the selection of vehicular as a least preventable cause of childhood deaths due to injury causes. The professional category of physicians had a high adjusted residual of -3.9, indicating a low rate of the selection of vehicular as a least preventable cause of childhood deaths due to injury causes. The adjusted

residuals for respondents selecting vehicular as a least preventable cause of injury death are presented in Table 4.8.

Firearms. An association between occupation and selection of least preventable causes of childhood deaths was found. A cross tabulation was performed to look for associations between occupation and frequency of selected cause of death. In the cross tabulation for each categorical grouping of occupation, the count of selected least preventable deaths due to firearms as an injury cause of death was given. Chi-square result of Chi square= 13.375, df=5, p=*.020 indicated that a significant association (at the p=.05 level) was found between occupations for selection of firearms as a least preventable cause of injury deaths.

In addition to actual count of choices, an expected count and an adjusted residual were determined. An adjusted residual of less than -2 or more +2 was considered to be significant. Those found between –2 and +2 were not significant. The adjusted residual for respondents was not significant for physicians, first responders (fire, police, and EMS), child advocates (Department of Children's Services and educators), public health personnel, and court personnel (attorneys, prosecutors, and court). The professional category of health care provider (other than physician) had a high adjusted residual of 2.7, indicating a high rate of the selection of firearms as a least preventable cause of childhood deaths due to injury

Table 4.8: Observed/Expected Outcomes Using Adjusted Residuals for Respondents Selecting "Vehicular" as a least Preventable Injury Cause of Deaths

Occupation	**Not Selected**	**Selected**	**Total**
First Responders Observed Count	12	28	40
Expected Count	20.0	20.0	40.0
Adjusted Residual	**-3.0	**3.0	
Court Personnel Observed Count	8	13	21
Expected Count	10.5	10.5	21.0
Adjusted Residual	-1.2	1.2	
Health Care Provider (other than physician) Observed Count	9	11	20
Expected Count	10.0	10.0	20.0
Adjusted Residual	-.5	.5	
Physician Observed Count	24	5	29
Expected Count	14.5	14.5	29.0
Adjusted Residual	**3.9	**-3.9	
Child Advocate Observed Count	11	8	19
Expected Count	9.5	9.5	19.0
Adjusted Residual	.7	-.7	
Public Health Observed Count	8	7	15
Expected Count	7.5	7.5	15.0
Adjusted Residual	.3	-.3	
Total Count	72	72	144

Chi-Square value 20.779, df=5, sig <.001*

** An adjusted residual of less than –2 or more than +2 was considered to be significant. Those found between –2 and +2 were not significant.

causes. The adjusted residuals for respondents selecting firearms as a least preventable cause of injury death are presented in Table 4.9.

Chemical Poisoning. An association between occupation and selection of least preventable causes of childhood deaths was found. A cross tabulation was performed to look for associations between occupation and frequency of selected cause of death. In the cross tabulation for each categorical grouping of occupation, the count of selected least preventable deaths due to chemical poisoning as an injury cause of death was given. Chi-square results of Chi square= 3.740, df=5, p=.587 indicated that no significant association (at the p=.05 level) was found between occupations for selection of chemical poisoning as a least preventable cause of injury deaths.

Self-Reported Geographic Area and Perceptions of Current Educational Initiatives Used to Prevent Child Fatalities

MANOVA analyses were conducted to determine whether differences exist between the self-reported geographic location in a rural or urban judicial district of the judicial district child fatality review team and self-reported opinions of current educational initiatives used to prevent child fatalities.

Geographic Location

Geographic area was the independent variable and was self-reported by the respondent. Surveys were compared based upon the participant's

Table 4.9: Observed/Expected Outcomes Using Adjusted Residuals for Respondents Selecting "Firearms" as a Least Preventable Injury Cause of Deaths

Occupation	**Not Selected**	**Selected**	**Total**
First Responders Observed Count	38	2	40
Expected Count	35.3	4.7	40.0
Adjusted Residual	1.6	-1.6	
Court Personnel Observed Count	20	1	21
Expected Count	18.5	2.5	21.0
Adjusted Residual	1.1	-1.1	
Health Care Provider (other than physician) Observed Count	14	6	20
Expected Count	17.6	2.4	20.0
Adjusted Residual	**-2.7	**2.7	
Physician Observed Count	23	6	29
Expected Count	25.6	3.4	29.0
Adjusted Residual	-1.7	1.7	
Child Advocate Observed Count	17	2	19
Expected Count	16.8	2.2	19.0
Adjusted Residual	.2	-.2	
Public Health Observed Count	15	0	15
Expected Count	13.2	1.8	15.0
Adjusted Residual	1.5	-1.5	
Total Count	127	17	

Chi-Square value = 13.375, df=5, sig=.020*

** An adjusted residual of less than –2 or more than +2 was considered to be significant. Those found between –2 and +2 were not significant.

answer to question 1, "Check the box that best describes the community you serve." Respondents were grouped based upon their selection of "metropolitan county/city" or "rural county/town."

Survey Questions Examining the Educational Child Fatality Initiatives

Survey questions included in this analysis included Likert scale questions with the possible responses of "5 Strongly Agree," "4 Agree," "3 Not Sure," "2 Disagree," and "1 Strongly Disagree." Questions examined issues of folic acid supplementation, the "Back to Sleep" campaign, educating about alcohol and other drug use, availability of safety equipment, providing supervised after school care, and alcohol and tobacco use during pregnancy. Additionally, child fatality review team members' perceptions about educating school children, medical providers, law enforcement, court personnel, and parents were examined. Specific questions utilized in this analysis are in a table located in Appendix G.

Results of MANOVA Analysis

The result of the MANOVA analysis found that there were no significant differences at a p=.05 level in responses to questions about the educational child fatality initiatives between judicial district child fatality review team members who self-reported a rural judicial district and those who self-reported an urban judicial district, with an F value of $F(16,140)=.540$, $p=.922$. Results indicated that perceptions of the current

educational initiatives used to prevent child fatalities are not different in members self-reporting an urban or a rural location.

Self-Reported Occupation Group and Perceptions of Current Educational Initiatives Used to Prevent Child Fatality

MANOVA analyses were conducted to determine whether significant differences exist between the self-reported occupational group of judicial district child fatality review team members and self-reported opinions about current educational initiatives used to prevent child fatalities.

Occupation

Occupation was grouped into six categories based upon self-reported professional affiliation of survey respondents. The six categories included in analysis were court personnel (attorney, court, and prosecutors); health care provider (other than physician); physicians: child advocates (Department of Children's Services and education); first responders (fire, police, and EMS); and public health personnel.

Survey Questions Examining the Current Educational Child Fatality Initiatives

Survey questions included in this analysis included Likert scale questions with the possible responses of "5 Strongly Agree," "4 Agree," "3 Not Sure," "2 Disagree," and "1 Strongly Disagree." Questions examined issues of folic acid supplementation, the "Back to Sleep" campaign, educating about alcohol and other drug use, availability of safety equipment, providing supervised after school care, and alcohol and tobacco use during pregnancy.

Additionally, child fatality review team members' perceptions about educating school children, medical providers, law enforcement, court personnel, and parents were examined. Specific questions utilized in this analysis are in a table located in Appendix G.

Results of MANOVA Analysis

The result of the MANOVA analysis found that there was strong significant differences at a p=.05 level in responses to the questions about current educational initiatives used to prevent child fatalities between judicial district child fatality review team members who self-reported different occupational categories, with an F value of F(80,596)=1.991 p=*<.001. Results indicated that perceptions of the educational initiatives to prevent child fatality are different in members self-reporting different occupational categories.

To determine where the difference occurred in perceptions of current educational initiatives used to prevent childhood fatalities, individual ANOVAs were performed. Significant differences at the p=.05 level were found with the following questions:

1. Question 22: "Continuing the 'Back to Sleep' campaign about sudden infant death syndrome reduces childhood fatalities" (p=<.001)
2. Question 23: "Educating about the dangers of parental alcohol abuse reduces childhood fatalities" (p=.007)

3. Question 25: "Educating about the dangers of tobacco use during pregnancy reduces childhood fatalities" (p=.009)
4. Question 26: "Educating about the dangers of alcohol use during pregnancy reduces childhood fatalities" (p=.007)
5. Question 27: "Educating about the dangers of over-the-counter drug use during pregnancy reduces childhood fatalities" (p=.001),
6. Question 32: "Giving information to parents about community resources reduces child fatalities" (p=.019).
7. Question 34: "Providing supervised after school programs reduces child fatalities" (p=.040).
8. Question 35: "Educating parents is an effective way to prevent childhood fatalities" (p=.049).

A table illustrating all individual ANOVA items is found in Appendix H.

Post Hoc Analysis of Individual Significant ANOVA Items

To determine how responses based upon occupational groups differed for the significant ANOVA questions, post hoc comparisons using Tukey's Honestly Significant Difference were completed. Any means that appear in the same column are not significantly different. In contrast, means appearing in different columns are significantly different when examined by occupation. That is, occupational categories appearing in different columns indicate strong differences in answers to survey questions. Occupational categories

appearing in the same column indicate similar responses to the question. Data tables for all questions analyzed using Tukey's HSD are available in Appendix H.

"Back to Sleep" Campaign for SIDS Prevention. For Question 22, "Continuing the 'Back to Sleep' campaign about sudden infant death syndrome reduces childhood fatalities," public health workers self-reported strongest agreement, followed closely by physicians. Child advocates, first responders, and court self-reported less strong agreement to the importance of the "Back to Sleep" campaign for sudden infant death syndrome prevention. Health care providers (other than physician) appeared in both columns, indicating that this group's responses did not differ significantly from any other occupational group.

Educating about Parental Alcohol Abuse. For Question 23, "Educating about the dangers of parental alcohol abuse reduces childhood fatalities," court personnel felt significantly stronger than did child advocates. Self-reported occupations of child advocate, first responder, health care (other than physician), physician, and public health did not show large differences from any other group that could be detected.

Educating about Tobacco Use during Pregnancy. For Question 25, "Educating about the dangers of tobacco use during pregnancy reduces childhood fatalities," in the individual ANOVAs post hoc analysis, first responders were more likely to self-report stronger agreement than were

other occupational groupings. Public health, health care provider (other than physician), court personnel, and physicians did not indicate large differences in responses that could be detected with the post hoc analysis. Child advocates were more likely to indicate that they were unsure of the dangers of tobacco use during pregnancy than were respondents from other occupations.

Educating about Alcohol Use during Pregnancy. For Question 26, "Educating about the dangers of alcohol use during pregnancy reduces childhood fatalities," public health and child advocates differed from first responders. Court personnel, other health care providers, and physicians did not differ from either group, as could be detected by post hoc analysis.

Educating about Over-the-Counter Drug Use during Pregnancy. For Question 27, "Educating about the dangers of over-the-counter drug use during pregnancy reduces childhood fatalities," first responders responded with stronger agreement than did participants from other occupations. Physicians and court personnel did not show large differences that could be detected by post hoc analysis.

Giving Information to Parents about Community Resources. For Question 32, "Giving information to parents about community resources reduces childhood fatalities," none of the occupation groups of first responder, health care provider (other than physician), child advocate,

physician, public health, and court personnel showed large differences that could be detected by post hoc analysis.

Providing Supervised After School Programs Reduces Child Fatality. For Question 34, "Providing supervised after school programs reduces childhood fatalities," physicians were more likely to respond that they were not sure about the importance of providing supervised after school programs in reducing childhood fatalities. Other occupation groups of first responder, health care provider (other than physician), child advocate, public health, and court personnel did not show large differences that could be detected by post hoc analysis.

Educating Parents. For question 35, "Educating parents is an effective way to prevent childhood fatalities," none of the occupation groups of first responder, health care provider (other than physician), child advocate, physician, public health, and court personnel showed large differences that could be detected by post hoc analysis.

Summary

This chapter presented the analysis and interpretation of data collected from Tennessee's judicial district child fatality review team members responding to the survey instrument. The analysis of the voluntary, self-reported data indicated that overall, judicial district child fatality review team members share similar perceptions towards preventability of the causes of death, personal affects of participating in the child fatality review process,

effectiveness of the Tennessee child fatality review process, and educational initiatives to prevent child fatality. This homogeneity of responses resulted in few significant differences in MANOVA analyses of Likert type questions and Chi-square analyses of categorical responses, as illustrated in Table 4.10. The few significant differences were presented in this chapter, and will be discussed in Chapter V.

Table 4.10: Summary of Null Hypotheses Findings

Null Hypotheses	**Statistical Procedure**	**Value**	**Sig Value**	**Outcome**
$H_0$1: There is no significant difference between the perceptions of judicial district child fatality review team members representing rural and urban judicial districts and their self-reported opinions of the effectiveness of the Tennessee child fatality review process.	MANOVA	1.666	.087	Confirmed
$H_0$2: There is no significant difference between members' self-reported perceptions of the effectiveness of the Tennessee child fatality review process based upon a member's occupation.	MANOVA	1.137	.239	Confirmed
$H_0$3: There is no significant difference between judicial district child fatality review team members representing rural and urban judicial districts and their self-reported perceptions of team members' participation in child fatality review.	MANOVA	1.559	.152	Confirmed
$H_0$4: There is no significant association between the judicial district child fatality review team members from different occupations and their self-reported perceptions regarding natural and injury-related fatalities selected as the most preventable.	Chi-Square	Most Preventable Causes – Suffocation or Strangulation Least Preventable Causes – Vehicular - Firearms	 .050 * .001* .020*	Rejected
$H_0$5: There is no significant difference between judicial district child fatality review team members and their self-reported perceptions related to a member's urban/rural location regarding current educational initiatives used to reduce childhood fatalities.	MANOVA	.540	.922	Confirmed

Table 4.10: Continued

Null Hypotheses	**Statistical Procedure**	**Value**	**Sig Value**	**Outcome**
$H_0$6: There is no significant difference in perceptions of judicial district child fatality review team members from different occupations and the member's recommendations of current educational initiatives used to reduce childhood fatalities.	MANOVA	1.991	<.001*	Rejected

*Denotes significance at the p=.05 level

CHAPTER V

Summary, Findings, Conclusions, and Recommendations

Introduction

The purpose of this chapter is to summarize the findings, conclusions, and recommendations resulting from the self-reported survey responses of the Tennessee judicial district child fatality review team members. Perceptions concerning the team members' participation in child fatality review, the preventability of specific causes of childhood fatalities, the effectiveness of the Tennessee child fatality review process, and the current educational initiatives used to prevent childhood fatalities were assessed. The assessment of child fatality review teams was intended to increase the availability of reliable information concerning perceptions of the effectiveness of the judicial district child fatality review team process in Tennessee and prevent future fatalities.

The data analyzed in this research study were from the Tennessee judicial district child fatality review team members. This analysis was conducted using descriptive statistics, MANOVA, cross tabulations, and Chi-square analysis to examine judicial district child fatality review team members' perceptions concerning the team members' participation in child fatality review, the preventability of specific causes of childhood fatalities, the effectiveness of the Tennessee child fatality review process, and the current educational initiatives used to prevent childhood fatalities. The additional

statistical procedures of ANOVA, Tukey's HSD, and adjusted residuals were computed when indicated by the statistical results of the tests listed above.

Findings

Instrument Development

An instrument entitled "Tennessee Child Fatality Review Team Members: Role in the review process" was created and validated to assess perceptions of Tennessee child fatality review team members concerning the team members' participation in child fatality review, the preventability of specific causes of childhood fatalities, the effectiveness of the Tennessee child fatality review process, and the current educational initiatives used to prevent childhood fatalities. An expert content panel was utilized to obtain data necessary to establish content validity. The expert content panel was asked to respond to the survey, ensure that the survey addressed issues relevant to child fatality review team members, and ensure that the survey was easy to read/understand. The researcher established internal consistency reliability and test-retest reliability based upon data obtained from pilot testing of the survey instrument in three states.

The researcher established internal consistency reliability by pilot testing parallel forms of the instrument with Michigan's child fatality review team members. For the Michigan pilot test, questions were randomly assigned to a different position within the same section of the survey instrument. No significant differences in pilot responses to the parallel

instruments were found. The parallel forms survey instruments are included in Appendix E.

The researcher established the reliability of the instrument over time and the extent that question items correlate with other questions within the same section using data obtained by pilot instruments administered and returned from Florida and Texas child fatality review team members. No significant differences were found in survey responses between the test administration and the re-test administration one month later.

Cronbach's Alpha established item correlation within each survey section of personal team members' participation in child fatality review, educational child fatality initiatives, and the effectiveness of the Tennessee child fatality review process. Cronbach's Alpha for each section was above the commonly accepted threshold of .80, indicating item correlations within each survey section. There were no significant differences when using Bonferroni's adjusted alpha to reduce likelihood of Type I error due to use of multiple comparison tests.

Survey Administration

Returned survey responses represented responses from 28 out of a possible 32 judicial district child fatality review teams. This resulted in a judicial district participation rate of 87.5%. Of the 320 surveys distributed to individual judicial district child fatality review team members, 157 surveys

were returned by judicial district child fatality review team members. A return rate of 49% of individual team member surveys was achieved.

Demographics

The following findings are in regard to the demographics of survey respondents.

1. The majority of child fatality review team members surveyed represent a rural area, hold a degree beyond a master's degree, are white, and are not Hispanic. The most commonly selected occupational categories by participants were physician and law enforcement.
2. The majority of child fatality review team members indicated regular attendance of the quarterly judicial district team meetings. Responding team members have participated in the process for an average of 4 years, and spend on average 2½ hours on child fatality review each month.

Team Members' Participation in Child Fatality Review

The following findings are in regard to child fatality review team members' participation in the review process.

1. Agreement or strong agreement was reported by 146 (93%) respondents to the statement that participation increased personal awareness of health and safety issues.

2. Agreement or strong agreement was reported by 138 (88%) respondents to the statement that participation increased awareness of health and safety issues in regard to children in the member's life.
3. Agreement or strong agreement was reported by 131 (83%) respondents to the statement that participation increased job-related and volunteer participation (93 participation; 59%) in child fatality prevention initiatives.
4. Agreement or strong agreement was reported by 111 (70%) respondents to the statement that personal contributions to the child fatality review process were substantial.
5. Agreement or strong agreement was reported by 121 (77%) respondents to the statement that participation is an important part of the member's job responsibilities.
6. Agreement or strong agreement was reported by 145 (92%) respondents to the statement that child fatality review is an important contribution to Tennessee's public health programs.

Current Educational Initiatives to Prevent Child Fatalities

The following findings are in regard to current educational initiatives to prevent child fatalities.

1. Agreement or strong agreement was reported by a majority of the respondents to the statements that the following programs

reduce childhood death: 91 (57%) team members agreed that promotion of folic acid supplementation reduces childhood death; 112 (71%) respondents agreed that the "Back to Sleep" sudden infant death syndrome campaign reduces childhood death; 151 (96%) respondents agreed that making safety equipment available reduces childhood death; and 119 (76%) respondents agreed that providing after school care reduces childhood death.

2. Agreement or strong agreement was reported by a majority of the respondents that educating parents about the following risk factors for childhood death reduces childhood death: 135 (86%) selected alcohol abuse; 133 (85%) selected drug use: 138 (88%) selected community resources; 129 (82%) selected tobacco use during pregnancy; 137 (87%) selected alcohol use during pregnancy; 116 (74%) selected over-the-counter drug use during pregnancy; and 133 (85%) selected risk factors for premature birth (85%).
3. Agreement or strong agreement was reported by a majority of the respondents that educating the following groups reduces childhood death: 148 (94%) selected parents; 129 (82%) selected school children; 133 (85%) selected medical

providers; 125 (80%) selected law enforcement; and 107 (68%) selected legal system employees.

The Effectiveness of the Tennessee Child Fatality Review Process

The following findings are in regard to child fatality review team members' perceptions of the effectiveness of the child fatality review process.

1. Agreement or strong agreement was reported by a majority of the respondents about the following issues that have a negative impact on the efficiency of the child fatality review process: 91 (58%) respondents selected inadequate investigations; 105 (67%) respondents selected team members' lack of information; 111 (71%) respondents selected autopsy report delays; 113 (72%) respondents selected in-state record delays; and 107 (68%) respondents selected out-of-state record delays.
2. Agreement or strong agreement was reported by a majority of the respondents about the following information that is beneficial to the child fatality review process: 130 (83%) respondents selected written communications from the Tennessee Department of Health and 121 (77%) respondents selected receiving professional journal articles addressing child fatality review.

3. A majority (87 respondent; 55%) of the respondents were not sure of the benefit of using of the internet to access information about child fatalities.
4. Disagreement or strong disagreement was reported by a majority of the respondents to the following statements addressing the effectiveness of the Tennessee child fatality review process: 95 (60%) respondents disagreed that confidentiality issues had prevented full disclosure during meetings; 81 (52%) respondents disagreed that HIPAA regulations had prevented access to information; and 91 (58%) respondents disagreed that team disagreement on the circumstances surrounding a child's fatality affects the review process.
5. No significant difference was found between self-reported rural or urban geographic location of a team member and the member's perception of the effectiveness of the Tennessee child fatality review process.
6. No significant difference was found between self-reported team member's occupation and the team member's perceptions of the effectiveness of the Tennessee child fatality review process.

7. No significant difference was found between self-reported rural or urban geographic location and the team member's self-reported participation in child fatality review.
8. Team members' self-reported occupation was not significantly associated with selection of team members' selections of the natural causes of death that they perceived to be most preventable. Categories of causes of death included sudden infant death syndrome, prematurity, chronic and infectious disease, smoke inhalation from fire, burn infection from fire, and lack of adequate care.
9. Team members' self-reported occupation was not significantly associated with team members' selections of injury causes of death that they perceived to be most preventable for the injury causes of death of chemical poisoning, drowning, and inflicted injury.
10. Significant differences were found for the injury causes of death selected by team members as most preventable in the categories of vehicular, strangulation or suffocation, and firearms.
11. Court personnel selected strangulation as a preventable cause of injury deaths significantly more frequently than did team members reporting other occupations.

12. Physician team members selected vehicular as a non-preventable cause of death significantly less frequently than did team members from other occupations.
13. First responders serving as team members selected vehicular as a non-preventable cause of death significantly more frequently than did team members from other occupations.
14. Health care providers (other than physicians) serving as team members selected firearms as a non-preventable cause of death significantly more frequently than did team members from other occupations.
15. No significant difference was found between self-reported team members' rural or urban geographic location and team members' perceptions of current educational initiatives to reduce child fatalities.
16. A significant difference was found between self-reported team member's occupation and perceptions of team members concerning current educational initiatives to reduce child fatalities.
17. Public health personnel self-reported significantly stronger agreement concerning the effectiveness of the "Back to Sleep" campaign to prevent sudden infant death syndrome and

providing after school care to prevent childhood fatalities than did members from other occupations.

18. First responders (fire, police, and EMS personnel) were significantly more likely than team members from other occupations to agree that implementing parental education was effective in the prevention of childhood death, especially when parental education addressed the issues of parental alcohol abuse, dangers of tobacco, alcohol, and over-the-counter drug use during pregnancy, and providing information about community resources to parents to prevent childhood fatalities.

Conclusions

Several conclusions may be drawn from this research study (listed in no particular order).

1. The newly developed and pilot tested survey instrument entitled "Tennessee Child Fatality Review Team members: Role in the review process" was found to be both valid and reliable.
2. A majority of Tennessee judicial district child fatality review team members perceive that their participation in child fatality review process has contributed to an increase in the member's awareness of health and safety issues for themselves and also

increased their awareness of the importance of health and safety of children in the member's life.

3. A majority of members who participate in the child fatality review process perceive that advisory team involvement has increased the member's job-related and volunteer participation in child fatality prevention initiatives.
4. A majority of judicial district child fatality review team members perceive that their personal contributions to the child fatality review process are substantial. A majority of child fatality review team members perceive that child fatality review is an important contributor to Tennessee's public health.
5. The majority of judicial district child fatality review team members support the continued promotion of folic acid supplementation for women of childbearing age, the "Back to Sleep" campaign for reducing sudden infant death syndrome, and the provision of safety equipment to reduce childhood fatalities.
6. The majority of judicial district child fatality review team members perceive parental education about the dangers of use of alcohol, tobacco, and over-the-counter drugs during pregnancy and parental education about deaths associated

with parental alcohol abuse as effective in reducing childhood death.

7. Judicial district child fatality review team members perceive that education of the following groups reduces childhood deaths: parents, school children, medical providers, law enforcement, and legal system employees.
8. Inadequate investigations, team members' lack of information, autopsy report delays, in-state record delays, and out-of-state record delays are perceived by child fatality review team members as having an impact on the efficiency of the child fatality review process.
9. Neither confidentiality issues during meetings nor HIPAA regulations nor team disagreement surrounding a child's death are perceived by judicial district child fatality review team members as negatively affecting the review process.
10. Regardless of whether the judicial district of the member is located in a rural or an urban area, child fatality review team members perceive the same level of effectiveness of the Tennessee child fatality review process.
11. A child fatality review team member's occupation does not affect the team member's perceptions of the effectiveness of the Tennessee child fatality review process.

12. Child fatality review team members' perceptions of their participation in child fatality review are the same regardless of whether the member's judicial district is located in a rural or an urban area.
13. Child fatality review team members' perceptions of the preventability of specific causes of natural and injury deaths depend on the members' occupational classification.
    a) Physicians serving as child fatality review team members perceived vehicular deaths as preventable more often than did team members from other occupations.
    b) First responders serving as child fatality review team members perceived vehicular deaths as less preventable more often than did team members from other occupations.
    c) Court personnel serving as child fatality review team members perceived suffocation or strangulation deaths as preventable more often than did team members from other occupations.
14. Child fatality review team members' perceptions of current educational activities are the same regardless of whether their judicial district is located in a rural or an urban area.

15. Perceptions of the effectiveness of specific current educational activities to reduce child fatalities differ among judicial district child fatality review team members depending on their occupation.

    a) Community awareness programs targeting pregnant women and focused on the dangers to unborn children posed by alcohol, tobacco, and over-the-counter drug use were supported most strongly by judicial district child fatality review team members who are first responders (police, fire and EMS personnel).

    b) Community awareness programs providing information about community resources for parents were most strongly supported by judicial district child fatality review team members who are first responders (police, fire, and EMS personnel).

    c) Community awareness programs focused on the "Back to Sleep" campaign for prevention of sudden infant death syndrome were most strongly supported by judicial district child fatality review team members who are public health professionals.

Recommendations

The following recommendations are based on the findings and the conclusions of this research study.

1. The State of Tennessee should use the new validated instrument entitled "Tennessee Child Fatality Review Team Members: Role in the review process" to survey judicial district child fatality review team members every two years in order to evaluate the perceptions of the team members' participation in child fatality review, the effectiveness of the Tennessee child fatality review process, the preventability of specific causes of childhood fatalities, and the current educational activities.
2. When designing training for judicial district child fatality review teams, training with the same content should be planned for teams working in rural and urban judicial districts.
3. The State of Tennessee and community organizations in Tennessee advocating for reduction of child fatalities should recruit first responders to assist in developing and implementing programs focusing on parental awareness of dangers to unborn children of alcohol, tobacco, and over-the-counter drug consumption by pregnant women.

4. When designing training for judicial district child fatality review teams, trainers should recognize that team members representing different occupations may perceive the preventability of vehicular and suffocation or strangulation deaths as more or less preventable than other team members.
5. Additional research focusing on knowledge and perceptions of members with different occupational classifications might be useful in determining whether additional community members from other occupational areas should be encouraged to participate in the child fatality review process.

Summary

Occupational and educational differences exist among child fatality review team members. Members with occupational differences perceive the effectiveness of educational programs differently. However, in spite of these differences, more similarities than differences exist among perceptions offered by Tennessee's child fatality review team members based on occupation and geographic area. Additional research focusing on knowledge and perceptions of members with different occupational classifications might be useful in determining whether additional community members from other occupational areas should be encouraged to participate in the child fatality review process.

CHAPTER VI

The Study in Retrospect

Introduction

Purpose of the Research Study

The purpose of the research study was to 1) develop a valid and reliable survey instrument to assess Tennessee judicial district child fatality review team members' perceptions of the process used to review childhood fatalities in Tennessee and 2) establish an initial profile of information concerning Tennessee's child fatality review team members' perceptions of the review process and program effectiveness. This research study was completed utilizing the Community Capacity theory as its framework.

Observations about the Research Study

The initial assessment provided by the study enables the Tennessee Department of Health, Division of Maternal and Child Health, to review the child fatality review process using a valid and reliable survey instrument. The completion of the study allows the State of Tennessee to serve as a leader in reviewing the child fatality review process using a valid and reliable survey instrument. The distribution of the baseline assessment completed through this study can serve as a starting point for team discussions at the judicial district and state levels to examine community-based and state-level programs as well as the child fatality review process as it is now conducted.

Tennessee judicial district child fatality review team members and agencies participate in child fatality review on a strictly voluntary basis. Members are not required to send an agency representative to ensure continuity of information from one meeting to the next if the designated individual is unable to attend. Inconsistent agency representation might hamper the review process. The voluntary nature of participation in child fatality review could hinder collection of information about a child's death due to lack of representation of and information from an agency that interacted with the family prior to the child's death. Future assessments should include more specific questions to examine whether consistency of volunteer representation at local team meetings is a problem, since this issue was not included in current research.

Additionally, the research study results indicate that members would like to receive written communications about child fatality review from the Tennessee Department of Health, such as receiving published articles from professional journals about childhood fatality issues or the child fatality review process.

The Tennessee Department of Health could provide information about research views and applicable professional journal articles to members of child fatality review teams. Because only 55% of respondents indicated that the internet was beneficial to the child fatality review process, providing actual "hard copies" of material directly to Tennessee child fatality review

team members would be preferable to "posting" research or articles on an internet site.

Future Research Needs

This research study is only generalizable to Tennessee's child fatality review teams or to teams conducting child fatality review using the same definitions, district review process, and cause of death categories as Tennessee. Future research studies should be conducted on the perceptions of child fatality review team members in other states.

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APPENDICES

APPENDIX A: CHILD FATALITY REVIEW AND PREVENTION ACT OF 1995

Child Fatality Review and Prevention Act

68-142-101. Short title

The chapter shall be known as and may be cited as the "Child Fatality Review and Prevention Act of 1995."

[Acts 1995, ch.511,§ 1.]

68-142-102. Child fatality prevention team

There is hereby created the Tennessee child fatality prevention team, otherwise known as the state team. For administrative purposes only, the state team shall be attached to the department of health.

[Acts 1995, ch. 511, § 1.]

68-142-103. Composition

The state team shall be composed as provided herein. Any ex officio member, other than the commissioner of health, may designate an agency representative to serve in such person's place. Members of the state team shall be as follows: (1) The commissioner of health, who shall chair the state team;

(2) The attorney general and reporter;
(3) The commissioner of children's services;
(4) The director of the Tennessee bureau of investigation;
(5) A physician nominated by the state chapter of the American Medical Association;
(6) A physician to be appointed by the commissioner of health who is credentialed in forensic pathology, preferably with experience in pediatric forensic pathology;
(7) The commissioner of mental health and mental retardation;
(8) A member of the judiciary selected from a list submitted by the chief justice of the Tennessee Supreme Court;

(10) The executive director of the commission of children and youth;
(11) The president of the state professional society on the abuse of children
(12) A team coordinator, to be appointed by the commissioner of health;
(13) The chair of the select committee on children and youth;

(14) Two members of the house of representatives to be appointed by the speaker of the house, at least one of whom shall be a member of the house health and human resources committee; and
(15) Two senators to be appointed by the speaker of the senate at least one of whom shall be a member of the senate general welfare, health and human resources committee.

[Acts 1995, ch. 511, §152.]

68-142-104. Voting members-Vacancies

All members of the state team shall be voting members. All vacancies shall be filled by the appointing or designating authority in accordance with the requirements of § 68-142-103.

[Acts 1995, ch. 511, § 1.]

68-142-105. Duties of state team

The state team shall:
(1) Review reports from the local child fatality review teams;
(2) Report to the governor and the general assembly concerning the state team's activities and its recommendations for changes to any law, rule, and policy that would promote the safety and well-being of children;
(3) Undertake annual statistical studies of the incidence and causes of child fatalities in this state. The studies shall include an analysis of community and public and private agency involvement with the decedents and their families prior to and subsequent to the deaths;
(4) Provide training and written materials to the local teams established by this chapter to assist them in carrying out their duties. Such written materials may include model protocols for the operation of local teams;
(5) Develop a protocol for the collection of data regarding child deaths;
(6) Upon request of a local team, provide technical assistance to such team, including the authorization of another medical or legal opinion on a particular death; and
(7) Periodically assess the operations of child fatality prevention efforts and make recommendations for changes as needed.

[Acts 1995, ch. 511, §2.]

68-142-106. Local teams-Composition-Vacancy-Chair-Meetings

(a) There shall be a minimum of one local team in each judicial district;
(b) Each local team shall include the following statutory members or their designees;
    (1) A supervisor of social services in the department of children's services within the area served by the team;
    (2) The regional health officer in the department of health in the area served by the team or such officer's designee, who shall serve as interim chair pending the election by the local team;
    (3) A medical examiner who provides services in the area served by the team;
    (4) A prosecuting attorney appointed by the district attorney general;
    (5) The interim chair of the local team shall appoint the following members to the local team:
        (a) A local law enforcement officer;
        (b) A mental health professional;
        (c) A pediatrician or family practice physician;
        (d) An emergency medical service provider orfirefighter; and
        (e) A representative from a juvenile court,
(c) Each local child fatality team may include representatives of public and nonpublic agencies in the community that provide services to children and their families;
(d) The local team may include non-statutory members to assist them in carrying out their duties. Vacancies on a local team shall be filled by the original appointing authority;
(e) A local team shall elect a member to serve as chair;
(f) The chair of each local team shall schedule the time and place of the first meeting, and shall prepare the agenda. Thereafter, the team shall meet no less often than once per quarter and often enough to allow adequate review of the cases meeting the criteria for review.

[Acts 1 995, ch. 511 , § 3; 1 996, ch. 1 079, § 1 52.]

68-142-107. Duties of local teams

(a) The local child fatality review teams shall:
    (1) Be established to cover each judicial district in the state;
    (2) Review, in accordance with the procedures established by the state team, all deaths of children seventeen (17) years of age or younger;
    (3) Collect data according to the protocol developed by the state team;
    (4) Submit data on child deaths quarterly to the state team;
    (5) Submit annually to the state team recommendations, if any, and advocate for system improvements and resources where gaps and deficiencies may exist; and
    (6) Participate in training provided by the state team.
(b) Nothing in this chapter shall preclude a local team from providing consultation to any team member conducting an investigation.
(c) Local child fatality review teams may request a second medical or legal opinion to be authorized by the state team in the event that a majority of the local team's statutory membership is in agreement that a second opinion is needed. [Acts 1995, ch. 511, §4.]

68-142-108. Powers of local team-Limitations-Confidentiality of state and local team records

(a) The local team shall have access to and subpoena power to obtain all medical records and records maintained by any state, county or local agency, Including, but not limited to, police investigations data, medical examiner investigative data and social services records, as necessary to complete the review of a specific fatality.

(b) The local team shall not, as part of the review authorized under this chapter, contact, question or interview the parent of the deceased child or any other family member of the child whose death is being reviewed.

(c) The local team may request that persons with direct knowledge of circumstances surrounding a particular fatality provide the local team with information necessary to complete the review of the particular fatality; such persons may include the person or persons who first responded to a report concerning the child.

(d) Meetings of the state team and each local team shall not be subject to the provisions of title 8, chapter 44, part 1. Any minutes or other information generated during official meetings of state or local teams shall be sealed from public inspection. However, the state and local teams may periodically make available, in a general manner not revealing confidential information about children and families, the aggregate findings of their reviews and their recommendations for preventive actions.

(e) (1) All otherwise confidential information and records acquired by the state team or any local child fatality review team in the exercise of the duties are confidential, are not subject to discovery or introduction into evidence in any proceedings, and may only be disclosed as necessary to carry out the purposes of the state team or local teams.

(2) In addition, all otherwise confidential information and records created by a local team in the exercise of its duties are confidential, are not subject to discovery or introduction in evidence in any proceedings, and may only be disclosed as necessary to carry out the purposes of the state or local teams. Release to the public or the news media of information discussed at official meetings is strictly prohibited. No member of the state team, a local team nor any person who attends an official meeting of the state team or a local team, may testify in any proceeding about what transpired at the meeting, about information presented at the meeting, or about opinions formed by the person as a result of the meeting.

(3) This subsection shall not, however, prohibit a person from testifying in a civil or criminal action about matters within that person's independent knowledge.

(f) Each statutory member of a local child fatality review team and each non-statutory member of a local team and each person otherwise attending a meeting of a local child fatality review team shall sign a statement indicating an understanding of and adherence to confidentiality requirements, including the possible civil or criminal consequences of any breach of confidentiality.

[Acts 1995, ch. 11, 5]

68-142-109. Staff and

consultants

To the extent of funds available, the state team may hire staffer consultants to assist the state team and local teams in completing their duties.

2000 Da. ollection Form

TENNESSEE DEPAR. .NT OF HEALTH
CHILD FATALITY REVIEW TEAM

The information on this form was entered into the data system
on _____ by _____

This form is confidential

2000 REVIEW/DATA COLLECTION FORM

Judicial District No.: _____ Child Death Year/No.: ___ / ___ / ___ - ___ / ___

Child's Name: _____ (Last) (First) (Middle)

Date of Death: ___ / ___ / ___ Date of Birth: ___ / ___ / ___ Sex: ☐ Male ☐ Female

Address: _____ (Street) (City) Zip Code: _____

Race: ☐ White ☐ African American ☐ Hispanic ☐ Asian
Other: _____

Mother's Name: _____ / _____ / _____ / _____ (Last) (Maiden) (First) (Middle)

Mother's Social Security Number: ___ - ___ - ___ Date of Birth: ___ / ___ / ___ (Month) (Day) (Year)

Census Tract: _____ County of Residence: _____

Birth Weight: ___ kg ___ gm ___ lb ___ oz Clinical Estimate of Gestation (weeks): _____

Abnormal Conditions: _____ Congenital Anomalies: _____

Prenatal Care Questions:

Specify Month Prenatal Care Began _____ ☐ No Prenatal Care ☐ Unknown

Number of Prenatal Visits: _____ ☐ No Visits ☐ Unknown

Risk Factors: Tobacco Use ☐ Yes ☐ No No. of cigarettes per day _____
Alcohol Use ☐ Yes ☐ No No. of drinks per week _____
Chemical Substance Abuse ☐ Yes ☐ No Specify _____

To the best of the team's knowledge, is the Birth Certificate information correct/complete: ☐ Yes ☐ No

Death Certificate Number _____

Manner of death on Death Certificate: ☐ Homicide ☐ Suicide ☐ Accidental ☐ Natural
☐ Pending Investigation ☐ Could not be determined ☐ Blank

Place of Death: ☐ Hospital Inpatient ☐ At Scene of Incident
☐ Hospital Emergency Room ☐ Child's Residence
☐ In Transit ☐ Relative's/Friend's Home
☐ Institutional Setting ☐ Child Care

Is the Death Certificate adequate/complete? ☐ Yes ☐ No
Was an autopsy performed? ☐ Yes ☐ No ☐ Unknown
If Yes, location: ☐ Medical Examiner _____ ☐ Hospital _____ ☐ Other _____

Review team comments/recommendations and prevention issues:

_____
_____
_____
_____
_____
_____
_____

1. CAUSE AND CIRCUMSTANCES OF DEATH
(Complete on back)
☐ Sudden Infant Death Syndrome ☐ Firearm
☐ Lack of adequate care ☐ Inflicted injury
☐ Prematurity ☐ Poisoning/overdose
☐ Illness or other natural cause ☐ Fire/burn
☐ Drowning ☐ Other cause not listed above
☐ Suffocation/strangulation ☐ Unknown cause
☐ Vehicular

2. Family has prior child protective services involvement?
☐ Yes ☐ No

3. Other public/private agency involvement?
☐ Yes ☐ No ☐ Unknown
If yes, name of agency:
Health Department: ☐ Immunizations ☐ CSS ☐ WIC
☐ Home visiting program ☐ Other
DHS: ☐ FF ☐ Food Stamps ☐ Other
☐ Counseling/Mental Health ☐ Police/Sheriff
☐ TennCare ☐ Juvenile Court
☐ Other: _____

4. Was there an apparent delay in seeking medical treatment?
☐ Yes ☐ No ☐ Unknown

5. Suspected child abuse/neglect fatality?
☐ Yes ☐ No ☐ Unknown

6. Overall was the investigation adequate? ☐ Yes ☐ No
If no, was the problem with:
☐ Autopsy ☐ Police follow-up
☐ Hospital review ☐ Death Scene Investigation
☐ Interagency Cooperation ☐ CPS Follow-up
☐ Other _____

7. Manner of death as determined by the CFRT team:
☐ Homicide ☐ Accidental ☐ Natural ☐ Suicide
☐ Could not be determined ☐ Undetermined due to suspicious circumstances

Recommended for additional review? ☐ Yes ☐ No
Which reports/records were requested for full review?
☐ Law enforcement ☐ School ☐ DHS ☐ Med. Exam autopsy
☐ Hospital autopsy ☐ Court ☐ DA report ☐ Health Dept.
☐ Attending physician ☐ Other: _____

1st Review: ___ / ___ / ___ | 2nd Review: ___ / ___ / ___ 3rd Review: ___ / ___ / ___

Date case closed by CFRT: ___ / ___ / ___

CAUSE AND CIRCUMSTANCES OF THE DEATH

Complete one of blocks 1-12 as applicable to indicate cause of death.

☐ **1. Sudden Infant Death Syndrome (SIDS)**
A. Position of infant on discovery?
1. ☐ On stomach, face down
2. ☐ On stomach, face to side
3. ☐ On back 4. ☐ On side 5. ☐ Unknown
B. Smoker in household? ☐ Yes ☐ No ☐ Unknown

☐ **2. Lack of Adequate Care**
A. Apparent lack of supervision? ☐ Yes ☐ No
B. Apparent lack of medical care? ☐ Yes ☐ No
C. If yes: 1. ☐ Malnutrition or dehydration
2. ☐ Oral water intoxication
3. ☐ Delayed medical care
4. ☐ Inadequate medical attention
5. ☐ Out-of-hospital birth
6. ☐ Other:_____
7. ☐ Unknown

☐ **3. Prematurity** (less than 37 weeks gestation)
A. ☐ Known Condition _____

☐ **4. Illness or Other Natural Cause**
A. ☐ Known condition _____
_____
B. ☐ Unknown

☐ **5. Drowning**
A. Place of drowning?
1. ☐ Creek, river, pond or lake
Location prior to drowning?
a. ☐ Boat b. ☐ Waters edge
c. ☐ Other_____ d. ☐ Unknown
2. ☐ Well, cistern, or septic tank
3. ☐ Bathtub 4. ☐ Swimming pool
5. ☐ Bucket 6. ☐ Wading pool
7. ☐ Other:_____ 8. ☐ Unknown
B. Wearing flotation device?
1. ☐ Yes 2. ☐ No 3. ☐ Unknown 5. ☐ NA
C. ☐ Circumstances Unknown

☐ **6. Suffocation/Strangulation**
A. Circumstances of the event?
1. ☐ Other person overlying or rolling over decedent?
2. ☐ Caused by other person, not overlying or rolling over
3. ☐ Self-inflicted by decedent
4. ☐ Not inflicted by any person
5. ☐ Other:_____ 6. ☐ Unknown
B. Object impeding breath?
1. ☐ Food 2. ☐ Other person's hand(s)
3. ☐ Small object or toy in mouth
4. ☐ Object (e.g., plastic bag) covering victim's mouth/nose
5. ☐ Object (e.g., rope) exerting pressure on victim's neck
6. ☐ Other:_____ 7. ☐ Unknown
C. Injury occurred in bed, crib, or other sleeping arrangement?
1. ☐ Yes 2. ☐ No 3. ☐ Unknown
D. If in bed/crib, due to:
1. ☐ Hazardous design of crib/bed
2. ☐ Malfunction/improper use of crib/bed
3. ☐ Placement on soft sleeping surface (e.g. waterbed)
4. ☐ Other:_____
5. ☐ Unknown 6. ☐ NA
E. Due to carbon monoxide inhalation?
1. ☐ Yes 2. ☐ No 3. ☐ Unknown
F. ☐ Circumstances unknown

☐ **7. Vehicular**
A. # and type of vehicles involved:
1. Cars____ 2. All-terrain vehicles____
3. Motorcycles____ 4. Riding mowers____
5. Bicycles____ 6. Farm tractors____
7. Other farm vehicles____ 8. Truck/RV____
9. Other____ 10. Unknown____
B. Position of decedent?
1. ☐ Driver 2. ☐ Pedestrian
3. ☐ Passenger 4. ☐ Back of truck
5. ☐ Other:_____ 6. ☐ Unknown
C. Type vehicle in which decedent was occupant?
1. ☐ Car 2. ☐ All-terrain vehicle
3. ☐ Motorcycle 4. ☐ Riding mower
5. ☐ Bicycle 6. ☐ Farm tractor
6. ☐ Other farm vehicle 7. ☐ Truck/RV
8. ☐ Other:_____ 8. ☐ Unknown
D. Deceased's safety belt use?
1. ☐ Present in vehicle, but not used
2. ☐ None in vehicle 3. ☐ Restraint used
4. ☐ Unknown 5. ☐ NA
E. Deceased's infant/toddler seat use?
1. ☐ Present in vehicle, but not used
2. ☐ None in vehicle
3. ☐ Seat used correctly
4. ☐ Seat used incorrectly
5. ☐ NA
F. Deceased was wearing a helmet?
1. ☐ Yes 2. ☐ No
3. ☐ Unknown 4. ☐ NA
G. Vehicle in which decedent was occupant?
1. Age of driver_____ ☐ Unknown
2. ☐ Operator driving impaired (alcohol/drug)
3. ☐ Speed/recklessness indicated
4. ☐ Other violation by operator
5. ☐ Mechanical failure
6. ☐ Other_____
7. ☐ Unknown 8. ☐ NA
H. Vehicle in which decedent was not occupant?
1. Age of driver_____ ☐ Unknown
2. ☐ Operator driving impaired (alcohol/drug)
3. ☐ Speed/recklessness indicated
4. ☐ Other violation by operator
5. ☐ Mechanical failure
6. ☐ Other_____
7. ☐ Unknown 8. ☐ NA
I. Condition of road?
1. ☐ Normal 2. ☐ Loose gravel
3. ☐ Wet 4. ☐ Ice or snow
5. ☐ Other:_____ 6. ☐ Unknown
7. ☐ NA
J. ☐ Circumstances unknown

☐ **8. Firearm**
A. Person handling the firearm?
1. ☐ Decedent 2. ☐ Parent
3. ☐ Other:_____ 4. ☐ Unknown
B. Type firearm involved?
1. ☐ Handgun 2. ☐ Rifle 3. ☐ Shotgun
4. ☐ Other:_____ 5. ☐ Unknown
C. Age of person handling firearm:
1. years_____ 2. ☐ Unknown
D. Use of firearm at time of injury?
1. ☐ Shooting at other person 2. ☐ Suicide
3. ☐ Hunting 4. ☐ Playing
5. ☐ Other:_____ 6. ☐ Unknown
E. Was decedent's home source of firearm?
1. ☐ Yes 2. ☐ No 3. ☐ Unknown
F. ☐ Circumstances unknown

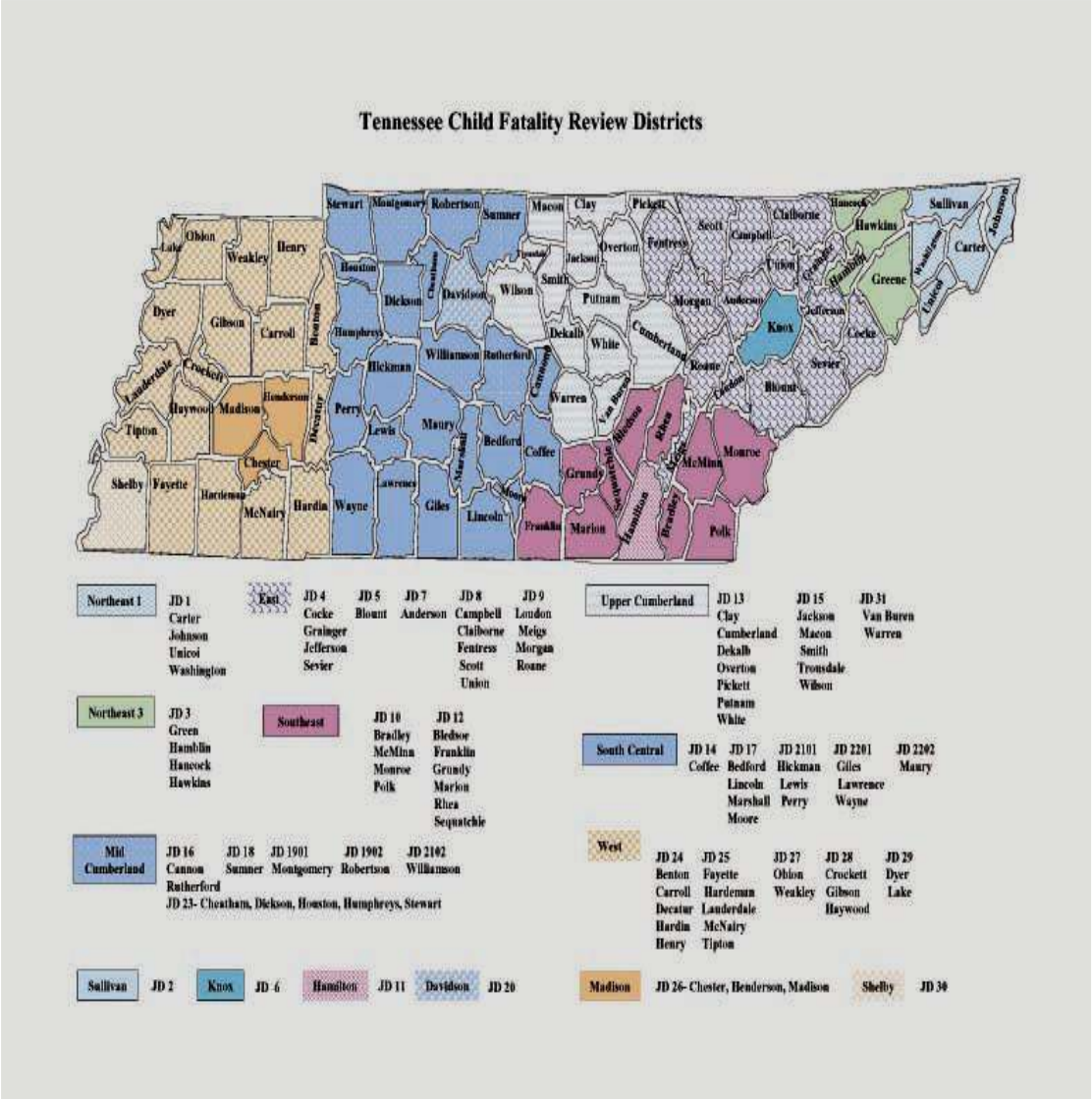
☐ **9. Inflicted Injury** (NOT firearm or suffocation/strangulation)
A. Who inflicted the injury?
1. ☐ Self-inflicted 2. ☐ Parent
3. ☐ Relative:_____ 4. ☐ Other:_____
B. Person inflicting injury?
1. Age _____ ☐ Unknown
2. Gender: ☐ Male ☐ Female
3. Race: ☐ White ☐ African American
☐ Other:_____ ☐ Unknown
C. Manner in which injury was inflicted?
1. ☐ Shaken 2. ☐ Struck 3. ☐ Thrown
4. ☐ Cut/stabbed 5. ☐ Sexual Assault
6. ☐ Other:_____ 7. ☐ Unknown
D. Injury inflicted with?
1. ☐ Sharp object (e.g., knife, scissors)
2. ☐ Blunt object (e.g., hammer, bat)
3. ☐ Hot liquid or other substance
4. ☐ Hands/feet 5. ☐ Fire
6. ☐ Other:_____ 7. ☐ Unknown
E. Where did injury occur?
1. ☐ Child's residence 2. ☐ School
3. ☐ Relative/friend's home
4. ☐ Child care
5. ☐ Other:_____ 6. ☐ Unknown
F. ☐ Circumstances unknown

☐ **10. Poisoning/overdose**
A. Name of drug or chemical?
1. ☐ Name _____
2. ☐ Unknown
B. ☐ Circumstances unknown

☐ **11. Fire/burn**
A. If not a fire burn, its source?
1. ☐ Hot water, etc. 2. ☐ Appliance
3. ☐ Other:_____
4. ☐ Unknown 5. ☐ NA
B. If ignition/fire, what was source?
1. ☐ Oven/stove explosion
2. ☐ Cooking appliance used as heat source
3. ☐ Matches 4. ☐ Lit cigarette
5. ☐ Lighter 6. ☐ Space heater
7. ☐ Furnace 8. ☐ Explosives
9. ☐ Fireworks 10. ☐ Electrical wiring
11. ☐ Other:_____
12. ☐ Unknown 13. ☐ NA
C. Smoke alarm present at fire scene?
1. ☐ Yes 2. ☐ No 3. ☐ Unknown
D. If alarm present, did it sound?
1. ☐ Yes 2. ☐ No 3. ☐ Unknown
E. Was the fire started by a person?
1. ☐ Yes 2. ☐ No 3. ☐ Unknown
F. If started by a person, his/her age?
Age_____years
1. ☐ Unknown 2. ☐ NA
G. If started by a person, his/her activity
1. ☐ Playing 2. ☐ Smoking
3. ☐ Cooking 4. ☐ Suspected arson
5. ☐ Other:_____
6. ☐ Unknown 7. ☐ NA
H. Type of construction of building burned:
1. ☐ Wood frame 2. ☐ Brick/stone
3. ☐ Trailer 4. ☐ Other:_____
5. ☐ Unknown 6. ☐ NA
I. ☐ Circumstances unknown

☐ **12. Other Cause Not Listed Above:**
_____
_____

APPENDIX B: JUDICIAL DISTRICT CHILD FATLITY REVIEW TEAMS BY TENNESSEE DEPARTMENT OF HEALTH REGIONS



Appendix B: Judicial district Child Fatality Review Teams by Tennessee Department of Health Region (State of Tennessee, http://www2.state.tn.us/health/MCH/PDFs/Judicial districtsMap.pdf, 2004)

APPENDIX C: UNIVERSITY IRB LETTER

THE UNIVERSITY OF TENNESSEE

Department of Health and Exercise Science
1914 Andy Holt Avenue
Knoxville, TN 37996-2710
(865) 974-5041
FAX (865) 974-6439

July 9, 2004

Title: Tennessee's Child Fatality Review Team Members: Perceptions of the Process and Effectiveness of Educational Prevention Strategies.

Charity Smith
Dept of Health and Safety Sciences
Knoxville, TN 37996-2710

Dr. Susan Smith
Dept of Health & Safety Sciences
Knoxville, TN 37996-2710

The project listed above has been reviewed and has been certified as EXEMPT from review by the Departmental Review Board.

Unless there are major changes in the experimental methods or project design, no further reporting to this committee is required. The responsibility for oversight of this project will be that of the Principal Investigator and Student Advisor (if any). Please be advised at the end of the project a Form D for completion is required.

We wish you success in your research endeavors.

Sincerely,

June Gorski, DrPH

APPENDIX D: VALIDITY SURVEY COVER LETTER AND INSTRUMENTS

October 15, 2004

Dear Judicial district Child Fatality Review Team Member,

The death of a child is an extremely difficult time for any family. Until the reasons children die are understood, it is impossible to develop prevention initiatives to decrease childhood mortality. Many of these fatalities are preventable through behavioral changes, or early medical screening. However, little is known about the perceptions of individuals serving on Judicial district Child Fatality Review Teams about the Child Fatality Review Process and child fatality prevention initiatives.

The University of Tennessee Safety Center in collaboration with the Tennessee Department of Health is researching the role of the Judicial district Child Fatality Review Teams in the development of prevention initiatives addressing childhood fatalities occurring to children living in the State of Tennessee. This is a new survey instrument and needs to be tested by members of judicial district Child Fatality Review Team members in other states. As a member of a judicial district Child Fatality Review Team in Alabama, the researchers ask that you complete this survey and answer a few open ended questions about your experiences in completing the survey. This will allow the researcher to improve the survey instrument for future research projects.

This survey can be completed on the paper copy enclosed. This survey will take approximately 20 minutes of your time to complete, but the results of the survey truly have the potential to save lives of children in future years.

Participation in this survey group is completely confidential and voluntary. Consent to participate in this vital project is obtained by your completion and return of the survey instrument. Please complete and return this survey by fax or mail no later than October 28, 2004.

Your participation in this research project is essential to ensure that we create the best survey to examine perceptions of childhood fatalities and child fatality prevention initiatives. If you have any questions regarding this project, please contact Charity Smith at (865) 591-5756.

Thanks for your time regarding this project.

Sincerely,

Susan M. Smith, MSPH, EdD
Associate Professor
Dept of Health and Exercise Science
University of Tennessee, Knoxville

Charity Smith, MPH, CHES
Doctoral Student
Dept of Health and Exercise Science
University of Tennessee, Knoxville

Judicial district Child Fatality Review Team Members:

Impacting the Review Process

Instructions:

1. Please read instructions and respond to each question. Mark only one answer directly on this survey form. Your responses are confidential and no one will see your responses except for the researcher. Do not sign your name to the instrument so that there is no way to connect you with this survey after it has been returned. The survey will take about 20 minutes to complete.

2. After completing the survey, please respond to the open ended questions attached at the end of this survey. These questions examine your experiences in completing the survey. Specifically, please respond to any questions that you found difficult to understand or sections of the survey that did not seem to be user friendly.

3. Information provided on this survey will be used to improve the quality of the survey instrument for future research projects. Reponses will not be used in an analysis, but will be incorporated into future surveys.

4. Please complete and return this survey by fax or mail no later than October 28, 2004. If you have any problems faxing the survey please call 865-974-5041.

   Charity Smith
   UT Safety Center
   1914 Andy Holt Ave.
   Knoxville, TN 37996

   FAX: 865-974-6439

Thank you for taking time to complete this survey. Your contributions will help with future efforts in child fatality reporting.

Charity Smith, MPH, CHES
Doctoral Candidate

Examples of responding to survey questions:

There are two main types of questions on this survey. Please respond to the questions as illustrated below.

1. Check the one group that best represents your favorite color.
   - ❑ a. Red
   - ❑ b. Blue
   - ❑ c. Yellow
   - ❑ d. Orange
   - ❑ e. Other (Please specify)_____

The second type of question asks about your level of agreement with a series of statements, please respond as illustrated in the following example.

Circle the response that most closely agrees with your level of agreement.	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
1. All childhood fatalities are preventable.	5	4	(3)	2	1

Please continue to the next page.

BACKGROUND INFORMATION

We would like to know the background of the Child Fatality Review (CFR) Team members. Please check the appropriate box on the following items.

1. Check the box that **best describes the community** you serve.
   - ❑ a. Metropolitan county/city
   - ❑ b. Rural county/town

2. Your CFR Team is located in which **judicial district?**
   Please write in number __ __ __ __

3. Check the one group that best represents your **professional affiliation**.
   - ❑ a. Attorney
   - ❑ b. Child Advocate
   - ❑ c. Child Protective Services
   - ❑ d. Court
   - ❑ e. Fire
   - ❑ f. Education
   - ❑ g. EMS
   - ❑ h. Healthcare other than listed; please specify:_____
   - ❑ i. Hospital record staff
   - ❑ j. Law Enforcement
   - ❑ k. Medical Examiner/Coroner
   - ❑ l. Mental Health
   - ❑ m. Physician
   - ❑ n. Prosecutor/judicial district attorney
   - ❑ o. Public Health
   - ❑ p. Substance abuse
   - ❑ q. Other (please specify):_____

4. List the **years** you have participated as a member of **Alabama's CFR Process?** ____ years participating in AL CFR Process

5. Write in how much time on average you **commit to the CFR process each month?** _____ hours each month

6. What is your role on the team?
   - ❑ Team Leader
   - ❑ Team Member

7. How often do you **attend regularly scheduled CFR meetings**?
   - ❑ Regularly
   - ❑ Occasionally
   - ❑ When asked
   - ❑ Never

8. Check your **educational background**.
   - ❑ a. Less than High School Degree
   - ❑ b. High School Graduate
   - ❑ c. Technical or vocational certificate
   - ❑ d. Some college
   - ❑ e. Bachelor's Degree
   - ❑ f. Master Degree
   - ❑ g. Degree beyond Master Degree

9. Check your **race**.
   - ❑ Asian/Pacific Islander
   - ❑ Black
   - ❑ Native American Indian
   - ❑ White
   - ❑ Other (please specify):_____

10. Are you **Hispanic**?
   - ❑ Yes
   - ❑ No
   - ❑ Don't Know

CHILD FATALITY PREVENTION INITIATIVES

This section relates to child fatality prevention initiatives. Circle the answer that appropriately matches your opinion.

	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
11. Participating in the CFR Team has increased my awareness of health and safety behaviors.	5	4	3	2	1
12. Participating in the CFR Team has increased my awareness of health and safety behaviors of my child(ren) or grandchildren.	5	4	3	2	1
13. Participating in the CFR Team has increased my actions related to child fatality prevention initiatives as part of my job.	5	4	3	2	1

	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
14. Participating in the CFR Team has increased my actions related to child prevention initiatives as a volunteer.	5	4	3	2	1
15. I believe that my contribution to Child Fatality Review is substantial.	5	4	3	2	1
16. Serving on the CFR Team is an important aspect of my job.	5	4	3	2	1
17. CFR is an important contribution to public health in AL.	5	4	3	2	1

CHILD FATALITY REVIEW PROCESS

This section relates to the Child Fatality Review Process. Circle the answer that appropriately matches your opinions.

18. Select ONLY 2 causes that you believe are the most and least preventable from the following six causes of natural fatality. Mark the box that corresponds with your selection.

Check the 2 causes	***Check the 2 causes***
You believe are the Most Preventable	*you believe are the Least preventable*
❑ Sudden Infant Death Syndrome	❑ Sudden Infant Death Syndrome
❑ Lack of Adequate Care	❑ Lack of Adequate Care
❑ Prematurity of birth	❑ Prematurity of birth
❑ Chronic and infectious diseases	❑ Chronic and infectious diseases
❑ Smoke inhalation from fire	❑ Smoke inhalation from fire
❑ Burn infection caused from fire	❑ Burn infection caused by fire

19. Select ONLY 2 causes that you believe are the most and least preventable from the following six causes of injury fatalities. Mark the box that corresponds with your selection.

Check the 2 causes	***Check the 2 causes***
You believe are the Most Preventable	*you believe are the Least preventable*
❑ Drowning	❑ Drowning
❑ Suffocation or Strangulation	❑ Suffocation or Strangulation
❑ Inflicted Injury	❑ Inflicted Injury
❑ Vehicular	❑ Vehicular
❑ Firearm	❑ Firearms
❑ Chemical poisoning	❑ Chemical poisoning

This section relates to the Judicial district Child Fatality Review Team.
Circle the answer that appropriately matches your opinion.

	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
19. Promoting folic acid supplements for women of childbearing age reduces child death.	5	4	3	2	1
20. Continuing the 'Back to Sleep' campaign about Sudden Infant Death Syndrome reduces child death.	5	4	3	2	1
22. Educating about the dangers of parental alcohol abuse reduces child death.	5	4	3	2	1
23. Educating about the dangers of parental drug use reduces child death.	5	4	3	2	1
24. Educating about the dangers of tobacco during pregnancy reduces child death.	5	4	3	2	1
25. Educating about the dangers of alcohol during pregnancy reduces child death.	5	4	3	2	1
26. Educating about the dangers of over-the-counter drugs during pregnancy reduces child death.	5	4	3	2	1

	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
27. Educating school children is the most effective way to prevent childhood fatalities.	5	4	3	2	1
28. Educating medical providers is the most effective way to prevent childhood fatalities.	5	4	3	2	1
29. Educating law enforcement officers is the most effective way to prevent childhood fatalities.	5	4	3	2	1
30. Educating people working in the legal system is the most effective way to prevent childhood fatalities.	5	4	3	2	1
31. Giving information to parents about community resources reduces child fatalities.	5	4	3	2	1
32. Making available use of safety equipment (such as helmets, car seats, or gun locks) reduces child fatalities.	5	4	3	2	1
33. Providing supervised after school programs reduces child fatalities.	5	4	3	2	1
34. Educating parents is the most effective way to prevent childhood fatalities.	5	4	3	2	1
35. Educating parents about risk factors for premature birth reduces child fatalities.	5	4	3	2	1
36. Confidentiality issues among members has prevented full exchange of information during CFR meetings.	5	4	3	2	1
37. HIPAA regulations have prevented access to or exchange of information during CFR meetings.	5	4	3	2	1
38. Inadequate investigation precluded having enough information for review during CFR meetings affects the review process.	5	4	3	2	1
39. Team members not bringing adequate information to the CFR meeting affects the review process.	5	4	3	2	1

40. Delay between autopsy reports and time between the review team's decision affects the CFR process. 5 4 3 2 1

41. Records or information was needed from another locality in state. 5 4 3 2 1

42. Records or information was needed from another state. 5 4 3 2 1

43. Team disagreement on circumstances of child's death affects the review process. 5 4 3 2 1

44. Receiving written communication about the review process from the Alabama Dept of Health is beneficial. 5 4 3 2 1

45. Receiving articles published in professional journals on child fatalities is beneficial. 5 4 3 2 1

46. Using the internet to access information about child fatalities is beneficial. 5 4 3 2 1

The following questions relate to other information that you would suggest to improve the review process. Please continue on the back of the page, if necessary.

47. What additional information would you like to share about the child fatality review process?

48. How would you describe how being a part of CFR has changed your professional and volunteer career?

49. What 2 things would you suggest to improve the CFR process?

Thank you for taking the time to complete and return this survey. Please return in the stamped addressed envelope to Charity Smith, MPH, c/o Dr. Susan M. Smith 1914 Andy Holt Ave; Knoxville, TN, 37996. If you have any questions regarding this survey, please contact Charity Smith at (865)591-5756.

Judicial district Child Fatality Review Team Members: Impacting the CFR Process

Survey Administration Survey instrument

1. Which questions, if any, were difficult to understand in the survey? Why?

2. Were any words in the survey that you had difficulty in understanding the context?

3. Which questions, if any, were you unsure about what the question was asking for? Why?

4. Do you believe this survey addresses the issue of the Child Fatality Review Process adequately?

5. How long did it take you to read and respond to questions in the survey?

6. What changes do you believe need to be made to make the survey better? (Please list specific wording changes to questions, if needed)

Thank you for your time to make this survey easier to use and better address the vital issue of preventing childhood fatalities!

APPENDIX E: RELIABILITY SURVEY COVER LETTER AND INSTRUMENTS

January 3, 2005

Dear Judicial district Child Fatality Review Team Member,

The death of a child is an extremely difficult time for any family. Until the reasons children die are understood, it is impossible to develop prevention initiatives to decrease childhood mortality. Many of these fatalities are preventable through behavioral changes, or early medical screening. However, little is known about the perceptions of individuals serving on Judicial district Child Fatality Review Teams about the Child Fatality Review Process and child fatality prevention initiatives.

The University of Tennessee Safety Center in collaboration with the Tennessee Department of Health is researching the role of the Judicial district Child Fatality Review Teams members' role in the child fatality review process. This is a new survey instrument and needs to be tested by members of Judicial district Child Fatality Review Team members in other states. As a member of a Judicial district Child Fatality Review Team in Michigan, the researchers ask that you complete this survey and complete a second survey that you will receive in three weeks. Two surveys need to be completed three weeks apart to allow the researchers to examine if responses to the survey change over time. This will allow the researcher to improve the survey instrument for future research projects.

This survey can be completed on the paper copy enclosed. This survey will take approximately 20 minutes of your time to complete, but the results of the survey truly have the potential to save lives of children in future years.

Participation in this survey group is completely confidential and voluntary. Consent to participate in this vital project is obtained by your completion and return of the survey survey instrument. Please complete and return this survey by fax or mail no later than May 20, 2005.

Your participation in this research project is essential to ensure that we create the best survey to examine perceptions of childhood fatalities and child fatality prevention initiatives. If you have any questions regarding this project, please contact Charity Smith at (865) 591-5756.

Thanks for your time regarding this project.

Sincerely,

Susan M. Smith, MSPH, EdD
Associate Professor
Dept of Health and Exercise Science
University of Tennessee, Knoxville

Charity Smith, MPH, CHES
Doctoral Student
Dept of Health and Exercise Science
University of Tennessee, Knoxville

Child Fatality Review Team Members'

Role in the Review Process

Reliability Instrument A and Test/Retest Instrument

Instructions:

1. Please read instructions and respond to each question. Mark only one answer directly on this survey form. Your responses are confidential and no one will see your responses except for the researcher. Do not sign your name to the instrument so that there is no way to connect you with this survey after it has been returned. The survey will take about 20 minutes to complete.

2. After completing the survey, please respond to the open ended questions attached at the end of this survey. These questions examine your experiences in completing the survey. Specifically, please respond to any questions that you found difficult to understand or sections of the survey that did not seem to be user friendly.

3. Information provided on this survey will be used to improve the quality of the survey instrument for future research projects. Reponses will not be used in an analysis, but will be incorporated into future surveys.

4. Please complete and return this survey by fax or mail no later than May 20, 2005. If you have any problems faxing the survey please call 865-974-5041.

Charity Smith
UT Safety Center
1914 Andy Holt Ave.
Knoxville, TN 37996

FAX: 865-974-6439

Thank you for taking time to complete this survey. Your contributions will help with future efforts in child fatality reporting.

Charity Smith, MPH, CHES
Doctoral Candidate

Examples of responding to survey questions:

There are two main types of questions on this survey. Please respond to the questions as illustrated below.

1. Check the one group that best represents your favorite color.
   - ❑ a. Red
   - ❑ b. Blue
   - ❑ c. Yellow
   - ❑ d. Orange
   - ❑ e. Other (Please specify)_____

The second type of question asks about your level of agreement with a series of statements, please respond as illustrated in the following example.

Circle the response that most closely agrees with your level of agreement.	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
1. All childhood fatalities are preventable.	5	4	③	2	1

Please continue to the next page.

BACKGROUND INFORMATION

We would like to know the background of the Child Fatality Review (CFR) Team members. Please check the appropriate box on the following items.

1. Check the box that **best describes the community** you serve.
   - ❑ a. Metropolitan county/city
   - ❑ b. Rural county/town

2. Your CFR Team is located in which county**?**
   Please write in county name _____

3. Check the one group that best represents your **professional affiliation**.
   - ❑ a. Attorney
   - ❑ b. Child Advocate
   - ❑ c. Child Protective Services
   - ❑ d. Court
   - ❑ e. Fire
   - ❑ f. Education
   - ❑ g. EMS
   - ❑ h. Healthcare other than listed; please specify:_____
   - ❑ i. Hospital record staff
   - ❑ j. Law Enforcement
   - ❑ k. Medical Examiner/Coroner
   - ❑ l. Mental Health
   - ❑ m. Physician
   - ❑ n. Prosecutor/judicial district attorney
   - ❑ o. Public Health
   - ❑ p. Substance abuse
   - ❑ q. Other (please specify):_____

4. List the **years** you have participated as a member of Michigan's **CFR Process?** ____ years participating in MI CFR Process

5. Write in how much time on average you **commit to the CFR process each month?** _____ hours each month

Please Continue on the Next Page

6. How **often does your team meet**?
    - ❑ Monthly
    - ❑ Every other month
    - ❑ Quarterly
    - ❑ Every 6 months
    - ❑ Yearly

7. How often do you **attend regularly scheduled CFR meetings**?
    - ❑ Regularly
    - ❑ Occasionally
    - ❑ When asked
    - ❑ Never

8. What is your **role on the team**?
    - ❑ Team Leader
    - ❑ Team Member
    - ❑ Team Coordinator

9. Check your **educational background**.
    - ❑ a. Less than High School Degree
    - ❑ b. High School Graduate
    - ❑ c. Technical or vocational certificate
    - ❑ d. Some college
    - ❑ e. Bachelor's Degree
    - ❑ f. Master Degree
    - ❑ g. Degree beyond Master Degree

10. Check your **race**.
    - ❑ Asian/Pacific Islander
    - ❑ Black
    - ❑ Native American Indian
    - ❑ White
    - ❑ Other (please specify):_____

11. Are you **Hispanic**?
    - ❑ Yes
    - ❑ No
    - ❑ Don't Know

Please Continue on the Next Page

CHILD FATALITY PREVENTION INITIATIVES

This section relates to child fatality prevention initiatives. Circle the answer that appropriately matches your opinion.

	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
11. Participating in the CFR Team has increased my awareness of health and safety behaviors.	5	4	3	2	1
12. Participating in the CFR Team has increased my awareness of health and safety behaviors of my child(ren), grandchildren, or other children in my life	5	4	3	2	1
13. Participating in the CFR Team has increased my actions related to child fatality prevention initiatives as part of my job.	5	4	3	2	1
14. Participating in the CFR Team has increased my actions related to child fatality prevention initiatives as a volunteer.	5	4	3	2	1
15. I believe that my contribution to Child Fatality Review is substantial.	5	4	3	2	1
16. Serving on the CFR Team is an important aspect of my job.	5	4	3	2	1
17. CFR is an important contribution to public health in MI.	5	4	3	2	1

CHILD FATALITY REVIEW PROCESS

This section relates to the Child Fatality Review Process. Circle the answer that appropriately matches your opinions.

18. Select ONLY 2 causes that you believe are the most and least preventable from the following six causes of natural fatality. Mark the box that corresponds with your selection.

Check the 2 causes	***Check the 2 causes***
You believe are the Most Preventable	*you believe are the Least preventable*
❑ Sudden Infant Death Syndrome	❑ Sudden Infant Death Syndrome
❑ Lack of Adequate Care	❑ Lack of Adequate Care
❑ Prematurity of birth	❑ Prematurity of birth
❑ Chronic and infectious diseases	❑ Chronic and infectious diseases
❑ Smoke inhalation from fire	❑ Smoke inhalation from fire
❑ Burn infection caused from fire	❑ Burn infection caused by fire

19. Select ONLY 2 causes that you believe are the most and least preventable from the following six causes of injury fatalities. Mark the box that corresponds with your selection.

Check the 2 causes	***Check the 2 causes***
You believe are the Most Preventable	*you believe are the Least preventable*
❑ Drowning	❑ Drowning
❑ Suffocation or Strangulation	❑ Suffocation or Strangulation
❑ Inflicted Injury	❑ Inflicted Injury
❑ Vehicular	❑ Vehicular
❑ Firearm	❑ Firearms
❑ Chemical poisoning	❑ Chemical poisoning

This section relates to the Child Fatality Review Team. Circle the answer that appropriately matches your opinion.

	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
20. Promoting folic acid supplements for women of childbearing age reduces child fatality.	5	4	3	2	1
21. Continuing the 'Back to Sleep' campaign about Sudden Infant Death Syndrome reduces child death.	5	4	3	2	1
22. Educating about the dangers of parental alcohol abuse reduces child death.	5	4	3	2	1
23. Educating about the dangers of parental drug use reduces child death.	5	4	3	2	1

24. Educating about the dangers of tobacco during pregnancy reduces child death. 5 4 3 2 1

25. Educating about the dangers of alcohol during pregnancy reduces child death. 5 4 3 2 1

26. Educating about the dangers of over-the-counter drugs during pregnancy reduces child death. 5 4 3 2 1

27. Educating school children is an effective way to prevent childhood fatalities. 5 4 3 2 1

28. Educating medical providers is an effective way to prevent childhood fatalities. 5 4 3 2 1

29. Educating law enforcement officers is an effective way to prevent childhood fatalities. 5 4 3 2 1

30. Educating people working in the legal system is an effective way to prevent childhood fatalities. 5 4 3 2 1

31. Giving information to parents about community resources reduces child fatalities. 5 4 3 2 1

32. Making available use of safety equipment (such as helmets, car seats, or gun locks) reduces child fatalities. 5 4 3 2 1

33. Providing supervised after school programs reduces child fatalities. 5 4 3 2 1

34. Educating parents is an effective way to prevent childhood fatalities. 5 4 3 2 1

35. Educating parents about risk factors for premature birth reduces child fatalities. 5 4 3 2 1

36. Confidentiality issues among members has prevented full exchange of information during CFR meetings. 5 4 3 2 1

37. HIPAA regulations have prevented access to or exchange of information during CFR meetings. 5 4 3 2 1

	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
38. Inadequate investigation precluded having enough information for review during CFR meetings	5	4	3	2	1
39. Team members not bringing adequate information to the CFR meeting affects the review process.	5	4	3	2	1
40. Delays in receiving autopsy reports affects the CFR process.	5	4	3	2	1
41. Obtaining records or information from another locality in state affects the review process.	5	4	3	2	1
42. Obtaining records or information from another state affects the review process.	5	4	3	2	1
43. Team disagreement on circumstances of child's death affects the review process.	5	4	3	2	1
44. Receiving written communication about the review process process from the MI Family Independence Agency is beneficial.	5	4	3	2	1
45. Receiving articles published in professional journals on child fatalities is beneficial.	5	4	3	2	1
46. Using the internet to access information about child fatalities is beneficial.	5	4	3	2	1

The following questions relate to other information that you would suggest to improve the review process. Please continue on the back of the page, if necessary.

47. What additional information would you like to share about the child fatality review process?

48. How would you describe how being a part of CFR has changed your professional and volunteer career?

49. What 2 things would you suggest to improve the CFR process?

50.a. Has your CFR team encountered a system problem during the CFR process and recommended a system change to correct this problem?

- ❑ Yes (go to b)
- ❑ No (Finished)

b. Was the system change recommended by the CFR team implemented?

- ❑ Yes (go to c)
- ❑ No (Finished)

c. Please describe the system problem, CFR team recommendation, and implementation of team recommendation.

Thank you for taking the time to complete and return this survey. Please return to the box in the back of the room, **fax to 865-974-6439** or return to Charity Smith, MPH, c/o Dr. Susan M. Smith, UT Safety Center, 1914 Andy Holt Ave.; Knoxville, TN 37996. If you have any questions regarding this survey, please contact Charity Smith at (865)591-5756.

Child Fatality Review Team Members'

Role in the Review Process

Reliability Instrument B

Instructions:

1. Please read instructions and respond to each question. Mark only one answer directly on this survey form. Your responses are confidential and no one will see your responses except for the researcher. Do not sign your name to the instrument so that there is no way to connect you with this survey after it has been returned. The survey will take about 20 minutes to complete.

2. After completing the survey, please respond to the open ended questions attached at the end of this survey. These questions examine your experiences in completing the survey. Specifically, please respond to any questions that you found difficult to understand or sections of the survey that did not seem to be user friendly.

3. Information provided on this survey will be used to improve the quality of the survey instrument for future research projects. Reponses will not be used in an analysis, but will be incorporated into future surveys.

4. Please complete and return this survey by fax or mail no later than May 20, 2005. If you have any problems faxing the survey please call 865-974-5041.

Charity Smith
UT Safety Center
1914 Andy Holt Ave.
Knoxville, TN 37996

FAX: 865-974-6439

Thank you for taking time to complete this survey. Your contributions will help with future efforts in child fatality reporting.

Charity Smith, MPH, CHES
Doctoral Candidate

Examples of responding to survey questions:

There are two main types of questions on this survey. Please respond to the questions as illustrated below.

1. Check the one group that best represents your favorite color.
   - ❑ a. Red
   - ❑ b. Blue
   - ❑ c. Yellow
   - ❑ d. Orange
   - ❑ e. Other (Please specify)_____

The second type of question asks about your level of agreement with a series of statements, please respond as illustrated in the following example.

Circle the response that most closely agrees with your level of agreement.	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
1. All childhood fatalities are preventable.	5	4	③	2	1

Please continue to the next page.

BACKGROUND INFORMATION

We would like to know the background of the Child Fatality Review (CFR) Team members. Please check the appropriate box on the following items.

1. Your CFR Team is located in which county**?**
   Please write in county name _____

2. Check the one group that best represents your **professional affiliation**.
   - ❑ a. Attorney
   - ❑ b. Child Advocate
   - ❑ c. Child Protective Services
   - ❑ d. Court
   - ❑ e. Fire
   - ❑ f. Education
   - ❑ g. EMS
   - ❑ h. Healthcare other than listed; please specify:_____
   - ❑ i. Hospital record staff
   - ❑ j. Law Enforcement
   - ❑ k. Medical Examiner/Coroner
   - ❑ l. Mental Health
   - ❑ m. Physician
   - ❑ n. Prosecutor/judicial district attorney
   - ❑ o. Public Health
   - ❑ p. Substance abuse
   - ❑ q. Other (please specify):_____

3. Check the box that **best describes the community** you serve.
   - ❑ a. Metropolitan county/city
   - ❑ b. Rural county/town

4. List the **years** you have participated as a member of Michigan's **CFR Process?** ____ years participating in MI CFR Process

5. Write in how much time on average you **commit to the CFR process each month?** _____ hours each month

Please Continue on the Next Page

6. How often do you **attend regularly scheduled CFR meetings**?
    - ❑ Regularly
    - ❑ Occasionally
    - ❑ When asked
    - ❑ Never

7. Check your **educational background**.
    - ❑ a. Less than High School Degree
    - ❑ b. High School Graduate
    - ❑ c. Technical or vocational certificate
    - ❑ d. Some college
    - ❑ e. Bachelor's Degree
    - ❑ f. Master Degree
    - ❑ g. Degree beyond Master Degree

8. What is your **role on the team**?
    - ❑ Team Leader
    - ❑ Team Member
    - ❑ Team Coordinator

9. Check your **race**.
    - ❑ Asian/Pacific Islander
    - ❑ Black
    - ❑ Native American Indian
    - ❑ White
    - ❑ Other (please specify):_____

10. How **often does your team meet**?
    - ❑ Monthly
    - ❑ Every other month
    - ❑ Quarterly
    - ❑ Every 6 months
    - ❑ Yearly

11. Are you **Hispanic**?
    - ❑ Yes
    - ❑ No
    - ❑ Don't Know

Please Continue on the Next Page

CHILD FATALITY PREVENTION INITIATIVES

This section relates to child fatality prevention initiatives. Circle the answer that appropriately matches your opinion.

	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
12. CFR is an important contribution to public health in MI.	5	4	3	2	1
13. Participating in the CFR Team has increased my awareness of health and safety behaviors of my child(ren), grandchildren, or other children in my life	5	4	3	2	1
14. Participating in the CFR Team has increased my actions related to child fatality prevention initiatives as a volunteer.	5	4	3	2	1
15. Serving on the CFR Team is an important aspect of my job.	5	4	3	2	1
16. Participating in the CFR Team has increased my awareness of health and safety behaviors.	5	4	3	2	1
17. Participating in the CFR Team has increased my actions related to child fatality prevention initiatives as part of my job.	5	4	3	2	1
18. I believe that my contribution to Child Fatality Review is substantial.	5	4	3	2	1

CHILD FATALITY REVIEW PROCESS

This section relates to the Child Fatality Review Process. Circle the answer that appropriately matches your opinions.

19. Select ONLY 2 causes that you believe are the most and least preventable from the following six causes of natural fatality. Mark the box that corresponds with your selection.

Check the 2 causes	***Check the 2 causes***
You believe are the Most Preventable	*you believe are the Least preventable*
❑ Sudden Infant Death Syndrome	❑ Sudden Infant Death Syndrome
❑ Lack of Adequate Care	❑ Lack of Adequate Care
❑ Prematurity of birth	❑ Prematurity of birth
❑ Chronic and infectious diseases	❑ Chronic and infectious diseases
❑ Smoke inhalation from fire	❑ Smoke inhalation from fire
❑ Burn infection caused from fire	❑ Burn infection caused by fire

20 Select ONLY 2 causes that you believe are the most and least preventable from the following six causes of injury fatalities. Mark the box that corresponds with your selection.

Check the 2 causes	***Check the 2 causes***
You believe are the Most Preventable	*you believe are the Least preventable*
❑ Drowning	❑ Drowning
❑ Suffocation or Strangulation	❑ Suffocation or Strangulation
❑ Inflicted Injury	❑ Inflicted Injury
❑ Vehicular	❑ Vehicular
❑ Firearm	❑ Firearms
❑ Chemical poisoning	❑ Chemical poisoning

This section relates to the Child Fatality Review Team. Circle the answer that appropriately matches your opinion.

	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
21. Educating law enforcement officers is an effective way to prevent childhood fatalities.	5	4	3	2	1
22. Inadequate investigation precluded having enough information for review during CFR meetings	5	4	3	2	1
23. HIPAA regulations have prevented access to or exchange of information during CFR meetings.	5	4	3	2	1

24. Receiving written communication about the

review process from the MI Family Independence Agency is beneficial. 5 4 3 2 1

25. Educating about the dangers of parental alcohol abuse reduces child death. 5 4 3 2 1

26. Making available use of safety equipment (such as helmets, car seats, or gun locks) reduces child fatalities. 5 4 3 2 1

27. Educating about the dangers of alcohol during pregnancy reduces child death. 5 4 3 2 1

28. Team members not bringing adequate information to the CFR meeting affects the review process. 5 4 3 2 1

29. Educating about the dangers of parental drug use reduces child death. 5 4 3 2 1

30. Team disagreement on circumstances of child's death affects the review process. 5 4 3 2 1

31. Educating people working in the legal system is an effective way to prevent childhood fatalities. 5 4 3 2 1

32. Using the internet to access information about child fatalities is beneficial. 5 4 3 2 1

33. Receiving articles published in professional journals on child fatalities is beneficial. 5 4 3 2 1

34. Providing supervised after school programs reduces child fatalities. 5 4 3 2 1

35. Educating about the dangers of tobacco during pregnancy reduces child death. 5 4 3 2 1

36. Educating school children is an effective way to prevent childhood fatalities. 5 4 3 2 1

37. Confidentiality issues among members has prevented full exchange of information during CFR meetings. 5 4 3 2 1

	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
38. Educating about the dangers of over-the-counter drugs during pregnancy reduces child death.	5	4	3	2	1
39. Educating parents about risk factors for premature birth reduces child fatalities.	5	4	3	2	1
40. Continuing the 'Back to Sleep' campaign about Sudden Infant Death Syndrome reduces child death.	5	4	3	2	1
41. Obtaining records or information from another locality in state affects the review process.	5	4	3	2	1
42. Educating medical providers is an effective way to prevent childhood fatalities.	5	4	3	2	1
43. Obtaining records or information from another state affects the review process.	5	4	3	2	1
44. Educating parents is an effective way to prevent childhood fatalities.	5	4	3	2	1
45. Promoting folic acid supplements for women of childbearing age reduces child death.	5	4	3	2	1
46. Giving information to parents about community resources reduces child fatalities.	5	4	3	2	1

The following questions relate to other information that you would suggest to improve the review process. Please continue on the back of the page, if necessary.

47. What 2 things would you suggest to improve the CFR process?

48. How would you describe how being a part of CFR has changed your professional and volunteer career?

49.a. Has your CFR team encountered a system problem during the CFR process and recommended a system change to correct this problem?

- ❑ Yes (go to b)
- ❑ No (Finished)

b. Was the system change recommended by the CFR team implemented?

- ❑ Yes (go to c)
- ❑ No (Finished)

c. Please describe the system problem, CFR team recommendation, and implementation of team recommendation.

50. What additional information would you like to share about the child fatality review process?

Thank you for taking the time to complete and return this survey. Please return to the box in the back of the room, **fax to 865-974-6439** or return to Charity Smith, MPH, c/o Dr. Susan M. Smith, UT Safety Center, 1914 Andy Holt Ave.; Knoxville, TN 37996. If you have any questions regarding this survey, please contact Charity Smith at (865)591-5756.

Appendix F: Final Survey Cover Letters and Instrument

Team Coordinator Letter

February 18, 2005

Dear [Team Coordinator],

Charity Smith, a Doctoral Candidate in Community Health at the University of Tennessee, met you during your CFR meeting at the Cordell Hull building in August 2004 is now initiating the project she described at your meeting. This collaborative effort of the Health and Safety Programs at UT and the Tennessee Department of Health has been undertaken to assess Tennessee's Child Fatalities Review Team Process. The results of this survey will help Charity, who is an employee at the Knox County Health Department, complete the requirements for her PhD in Community Health and will potentially provide information for the Child Fatality Review Program to aid in its efforts to reduce child fatalities in Tennessee.

Summary information provided at the end of this project can be utilized by your team members to identify ways in which the CFR process can be more effective in preventing child fatalities at the regional and state level. As you can see, all information gathered is anonymous and any assessment reports will only use aggregate responses by geographic region or demographic sections. No specific individual judicial districts responses will be isolated or highlighted. A survey packet is included for each team member. Please distribute the enclosed survey packets and encourage your team members to complete and promptly return the survey instrument. Following your receipt of this mailing, Ms. Charity Smith will contact you by phone to see if you have additional questions about the distribution process to your judicial district team members or if you need further assistance.

Individual copies of the survey instrument are included in this mailing and for your convenience; additional electronic copies can also be obtained in Microsoft Word from Charity Smith at smith@utk.edu. Distribution of the surveys to your team members may be by mail, or in person at a team meeting. However, we are asking that each team member complete a survey survey instrument and place it in the enveloped provided and mail it back promptly to the UT Safety Center. Please distribute the surveys and encourage your team members to complete and return them by **April 1, 2005**.

A summary of the research results will be available by July 1, 2005. If you would like to obtain an electronic copy of the research study's results please email your request to smith@utk.edu. The Tennessee Department of Health can use the information from this

research study to develop training programs and educational materials for your team members. If you would like additional information or have questions, please call Charity Smith at 865-591-5756. Thank-you for your time and commitment to help prevent fatalities of Tennessee's children!

Sincerely,

Susan M. Smith, MSPH, EdD
Associate Professor
Health and Safety Programs
Director, UT Safety Center
University of Tennessee, Knoxville

Individual Team Member Cover Letter

February 18, 2005

Dear Child Fatality Review Team Member,

The death of a child is an extremely difficult time for any family. Until the reasons children die are understood, it is impossible to develop prevention initiatives to decrease childhood mortality. Many of these fatalities are preventable through program interventions, or early medical screening. Your perceptions as a member of a Child Fatality Review Team about the effectiveness of Child Fatality Prevention Initiatives can help reduce future child fatalities.

The UT Safety Center in collaboration with the Tennessee Department of Health has developed a survey instrument to assess the CFR process and prevention initiatives. This is a new survey instrument and has been tested by members of Child Fatality Review Teams in other states. Please complete the enclosed survey. This survey will take approximately 20 minutes, and the results of the survey can provide information for the Child Fatality Review Program to aid in its efforts to reduce child fatalities in Tennessee.

Your completion and return of the enclosed survey serves as your consent to participate in this research project. Participation in this survey is completely confidential and voluntary. Please complete and return this survey by mail or fax by **April 1, 2005**.

If you are interested in receiving an electronic copy of the results of this research project, please email a request to smith@utk.edu. In the subject heading please type "Child Fatality Review Team Project". If requested, the report will be sent to you as a Microsoft Word attachment after July 1, 2005. If you have any additional questions, please contact Charity Smith or myself. You can contact Charity by phone at 865-591-5756. Thanks for your time regarding this project.

Sincerely,

Susan M. Smith, MSPH, EdD
Associate Professor
Safety Program
UT Safety Center

Charity Smith, MPH, CHES
Doctoral Candidate
Community Health
University of Tennessee, Knoxville

Child Fatality Review Team Members'
Role in the Review Process
Final Survey Instrument

Instructions:

1. Please read instructions and respond to each question. Mark only one answer directly on this survey form. Your responses are confidential and no one will see your responses except for the researcher. Do not sign your name to the instrument so that there is no way to connect you with this survey after it has been returned. The survey will take about 20 minutes to complete.

2. After completing the survey, please respond to the open ended questions attached at the end of this survey. These questions examine your experiences in completing the survey. Specifically, please respond to any questions that you found difficult to understand or sections of the survey that did not seem to be user friendly.

3. Information provided on this survey will be used to improve the quality of the survey instrument for future research projects. Reponses will not be used in an analysis, but will be incorporated into future surveys.

4. Please complete and return this survey by fax or mail no later than January 28, 2004. If you have any problems faxing the survey please call 865-974-5041.

Charity Smith

UT Safety Center

1914 Andy Holt Ave.
Knoxville, TN 37996

FAX: 865-974-6439

Thank you for taking time to complete this survey. Your contributions will help with future efforts in child fatality reporting.

Charity Smith, MPH, CHES
Doctoral Candidate

Examples of responding to survey questions:

There are two main types of questions on this survey. Please respond to the questions as illustrated below.

1. Check the one group that best represents your favorite color.
   - ❑ a. Red
   - ❑ b. Blue
   - ❑ c. Yellow
   - ❑ d. Orange
   - ❑ e. Other (Please specify)_____

The second type of question asks about your level of agreement with a series of statements, please respond as illustrated in the following example.

Circle the response that most closely agrees with your level of agreement.	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
1. All childhood fatalities are preventable.	5	4	3	②	1

Please continue to the next page.

BACKGROUND INFORMATION

We would like to know the background of the Child Fatality Review (CFR) Team members. Please check the appropriate box on the following items.

1. Check the box that **best describes the community** you serve.
   - ❑ a. Metropolitan county/city
   - ❑ b. Rural county/town

2. Your CFR Team is located in which **judicial district?**
   Please write in number __ __ __ __

3. Check the one group that best represents your **professional affiliation**.
   - ❑ a. Attorney
   - ❑ b. Child Advocate
   - ❑ c. Child Protective Services
   - ❑ d. Court
   - ❑ e. Fire
   - ❑ f. Education
   - ❑ g. EMS
   - ❑ h. Healthcare other than listed; please specify:_____
   - ❑ i. Hospital record staff
   - ❑ j. Law Enforcement
   - ❑ k. Medical Examiner/Coroner
   - ❑ l. Mental Health
   - ❑ m. Physician
   - ❑ n. Prosecutor/judicial district attorney
   - ❑ o. Public Health
   - ❑ p. Substance abuse
   - ❑ q. Other (please specify):_____

4. List the **years** you have participated as a member of Tennessee's **CFR Process?** ____ years participating in TN CFR Process

5. Write in how much time on average you **commit to the CFR process each month?** **_____** hours each month

6. What is your **role on the team**?
   - ❑ Team Leader
   - ❑ Team Member
   - ❑ Team Coordinator

7. How **often does your team meet**?
    - ❑ Monthly
    - ❑ Every other month
    - ❑ Quarterly
    - ❑ Every 6 months
    - ❑ Yearly

8. How often do you **attend regularly scheduled CFR meetings**?
    - ❑ Regularly
    - ❑ Occasionally
    - ❑ When asked
    - ❑ Never

9. Check your **educational background**.
    - ❑ a. Less than High School Degree
    - ❑ b. High School Graduate
    - ❑ c. Technical or vocational certificate
    - ❑ d. Some college
    - ❑ e. Bachelor's Degree
    - ❑ f. Master Degree
    - ❑ g. Degree beyond Master Degree

10. Check your **race**.
    - ❑ Asian/Pacific Islander
    - ❑ Black
    - ❑ Native American Indian
    - ❑ White
    - ❑ Other (please specify):_____

11. Are you **Hispanic**?
    - ❑ Yes
    - ❑ No
    - ❑ Don't Know

CHILD FATALITY PREVENTION INITIATIVES

This section relates to child fatality prevention initiatives. Circle the answer that appropriately matches your opinion.

	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
12. Participating in the CFR Team has increased my awareness of health and safety behaviors.	5	4	3	2	1
13. Participating in the CFR Team has increased my awareness of health and safety behaviors of my child(ren), grandchildren, or other children in my life.	5	4	3	2	1
14. Participating in the CFR Team has increased my actions related to child fatality prevention initiatives as part of my job.	5	4	3	2	1
15. Participating in the CFR Team has increased my actions related to child fatality prevention initiatives as a volunteer	5	4	3	2	1
16. I believe that my contribution to Child Fatality Review is substantial.	5	4	3	2	1
17. Serving on the CFR Team is an important aspect of my job.	5	4	3	2	1
18. CFR is an important contribution to public health in TN.	5	4	3	2	1

CHILD FATALITY REVIEW PROCESS

This section relates to the Child Fatality Review Process. Circle the answer that appropriately matches your opinions.

19. Select ONLY 2 causes that you believe are the most and least preventable from the following six causes of natural fatality. Mark the box that corresponds with your selection.

Check the 2 causes	**Check the 2 causes**
You believe are the Most Preventable	*you believe are the Least preventable*
❑ Sudden Infant Death Syndrome	❑ Sudden Infant Death Syndrome
❑ Lack of Adequate Care	❑ Lack of Adequate Care
❑ Prematurity of birth	❑ Prematurity of birth
❑ Chronic and infectious diseases	❑ Chronic and infectious diseases
❑ Smoke inhalation from fire	❑ Smoke inhalation from fire
❑ Burn infection caused from fire	❑ Burn infection caused by fire

20. Select ONLY 2 causes that you believe are the most and least preventable from the following six causes of injury fatalities. Mark the box that corresponds with your selection.

Check the 2 causes	**Check the 2 causes**
You believe are the Most Preventable	*you believe are the Least preventable*
❑ Drowning	❑ Drowning
❑ Suffocation or Strangulation	❑ Suffocation or Strangulation
❑ Inflicted Injury	❑ Inflicted Injury
❑ Vehicular	❑ Vehicular
❑ Firearm	❑ Firearms
❑ Chemical poisoning	❑ Chemical poisoning

This section relates to the Child Fatality Review Team. Circle the answer that appropriately matches your opinion.	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
21. Promoting folic acid supplements for women of childbearing age reduces child death.	5	4	3	2	1
22. Continuing the 'Back to Sleep' campaign about Sudden Infant Death Syndrome reduces child death.	5	4	3	2	1
23. Educating about the dangers of parental alcohol abuse reduces child death.	5	4	3	2	1

	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
24. Educating about the dangers of parental drug use reduces child death.	5	4	3	2	1
25. Educating about the dangers of tobacco during pregnancy reduces child death.	5	4	3	2	1
26. Educating about the dangers of alcohol during pregnancy reduces child death.	5	4	3	2	1
27. Educating about the dangers of over-the-counter drugs during pregnancy reduces child death.	5	4	3	2	1
28. Educating school children is an effective way to prevent childhood fatalities.	5	4	3	2	1
29. Educating medical providers is an effective way to prevent childhood fatalities.	5	4	3	2	1
30. Educating law enforcement officers is an effective way to prevent childhood fatalities.	5	4	3	2	1
31. Educating people working in the legal system is an effective way to prevent childhood fatalities.	5	4	3	2	1
32. Giving information to parents about community resources reduces child fatalities.	5	4	3	2	1
33. Making available use of safety equipment (such as helmets, car seats, or gun locks) reduces child fatalities.	5	4	3	2	1
34. Providing supervised after school programs reduces child fatalities.	5	4	3	2	1
35. Educating parents is an effective way to prevent childhood fatalities.	5	4	3	2	1
36. Educating parents about risk factors for premature birth reduces child fatalities.	5	4	3	2	1
37. Confidentiality issues among members has prevented full exchange of information during CFR meetings.	5	4	3	2	1

	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
38. HIPPA regulations have prevented access to or exchange of information during CFR meetings.	5	4	3	2	1
39. Inadequate investigation precluded having enough information for review during CFR meetings affects the review process.	5	4	3	2	1
40. Team members not bringing adequate information to the CFR meeting affects the review process.	5	4	3	2	1
41. Delayed receipt of autopsy reports and time between the review team's decision affects the CFR process.	5	4	3	2	1
42. Obtaining records or information from another locality in state affects the review process.	5	4	3	2	1
43. Obtaining records or information from another state affects the review process.	5	4	3	2	1
44. Team disagreement on circumstances of child's death affects the review process.	5	4	3	2	1
45. Receiving written communication about the review process from the Tennessee Dept of Health is beneficial.	5	4	3	2	1
46. Receiving articles published in professional journals on child fatalities is beneficial.	5	4	3	2	1
47. Using the internet to access information about child fatalities is beneficial.	5	4	3	2	1

The following questions relate to other information that you would suggest to improve the review process. Please continue on the back of the page, if necessary.

48. What additional information would you like to share about the child fatality review process?

49. How would you describe how being a part of CFR has changed your professional and volunteer career?

50. What 2 things would you suggest to improve the CFR process?

51.a. Has your CFR team encountered a system problem during the CFR process and recommended a system change to correct this problem?

- ❑ Yes (go to b)
- ❑ No (Finished)

b. Was the system change recommended by the CFR team implemented?

a. Yes (go to c)
b. No (Finished)

c. Please describe the system problem, CFR team's recommendation, and implementation of the team's recommendation.

Thank you for taking the time to complete and return this survey. Please **fax to 865-974-6439** or return in the stamped addressed envelope to Charity Smith, MPH, c/o Dr. Susan M. Smith, UT Safety Center, 1914 Andy Holt Ave.; Knoxville, TN 37996. If you have any questions regarding this survey, please contact Charity Smith at (865)591-5756.

Appendix G: Categorical Division of Survey Questions

Appendix G.1: Survey Questions Examining Perceptions of Self-reported Effectiveness of the Tennessee Child Fatality Review Process

Section	Number	Question
Effectiveness of the Tennessee child fatality review process	37	Confidentiality issues among members have prevented full exchange of information during CFR meetings.
	38	HIPAA regulations have prevented access to or exchange of information during CFR meetings.
	39	Inadequate investigation precluded having enough information for review during CFR meetings
	40	Team members not bringing adequate information to the CFR meeting affects the review process.
	41	Delay between autopsy reports and time between the review team's decision affects the CFR process.
	42	Obtaining records or information from another locality in state affects the review process.
	43	Obtaining records or information from another state affects the review process.
	44	Team disagreement on circumstances of a child's fatality affects the review process.
	45	Receiving written communication about the review process from the Tennessee Dept of Health is beneficial.
	46	Receiving articles published in professional journals on childhood fatalities is beneficial.
	47	Using the internet to access information about childhood fatalities is beneficial.

Appendix G.2: Survey Questions Addressing Self-reported Team Members Participation in Child Fatality Review Teams

Section	Number	Question
Self-reported team members' participation in child fatality review teams	12	Participating in the CFR Team has increased my awareness of health and safety behaviors.
	13	Participating in the CFR Team has increased my awareness of health and safety behaviors of my child(ren), grandchildren, or other children in my life.
	14	Participating in the CFR Team has increased my actions related to child fatality prevention initiatives as part of my job.
	15	Participating in the CFR Team has increased my actions related to child fatality prevention initiatives as a volunteer.
	16	I believe that my contribution to Child Fatality Review is substantial.
	17	Serving on the CFR Team is an important aspect of my job.
	18	CFR is an important contribution to public health in Tennessee.

Appendix G.3: Survey Questions Examining Perceptions of Current Educational Initiatives to Prevent Child Fatalities

Section	Number	Question
Self-reported current educational initiatives to prevent child fatalities	21	Promoting folic acid supplements for women of childbearing age reduces childhood fatalities.
	22	Continuing the "Back to Sleep" campaign about Sudden Infant Death Syndrome reduces childhood fatalities.
	23	Educating about the dangers of parental alcohol abuse reduces childhood fatalities.
	24	Educating about the dangers of parental drug use reduces childhood fatalities.
	25	Educating about the dangers of tobacco during pregnancy reduces childhood fatalities.
	26	Educating about the dangers of alcohol during pregnancy reduces childhood fatalities.
	27	Educating about the dangers of over-the-counter drugs during pregnancy reduces childhood fatalities.
	28	Educating school children is an effective way to prevent childhood death.
	29	Educating medical providers is an effective way to prevent childhood fatalities.
	30	Educating law enforcement officers is an effective way to prevent childhood fatalities.
	31	Educating people working in the legal system is an effective way to prevent childhood fatalities.
	32	Giving information to parents about community resources reduces childhood fatalities.
	33	Making safety equipment available (such as helmets, car seats, or gun locks) reduces child death.
	34	Providing supervised after school programs reduces child fatalities.
	35	Educating parents is an effective way to prevent childhood fatalities.
	36	Educating parents about risk factors for premature birth reduces childhood fatalities.

Appendix H: Additional Data Tables

Appendix H.1: Summary of Tennessee Judicial District Child Fatality Review Team Members' Responses to Survey Items

Section	Question	Agree	Not Sure	Disagree
Self-reported team members' participation in child fatality review teams	11. Participating in the CFR Team has increased my awareness of health and safety behaviors.	X		
	12. Participating in the CFR Team has increased my awareness of health and safety behaviors of my child(ren), grandchildren, or other children in my life.	X		
	13. Participating in the CFR Team has increased my actions related to child fatality prevention initiatives as a part of my job.	X		
	14. Participating in the CFR Team has increased my actions related to child fatality prevention initiatives as a volunteer.	X		
	15. I believe my contribution to Child Fatality Review is substantial.	X		
	16. Serving on the CFR Team is an important aspect of my job.	X		
	17. CFR is an important contribution to Tennessee's public health.	X		
Self-reported current educational initiatives to prevent child fatalities	22. Promoting folic acid supplements for women of childbearing age reduces child death.	X		
	23. Continuing the "Back to Sleep" campaign about Sudden Infant Death Syndrome reduces child death	x		
	24. Educating about the dangers of parental alcohol abuse reduces child death.	X		
	25. Educating about the dangers of parental drug use reduces child death.	X		
	26. Educating about the dangers of tobacco during pregnancy reduces child death.	X		
	27. Educating about the dangers of alcohol during pregnancy reduces child death	X		
	28. Educating about the dangers of over-the-counter drugs during pregnancy reduces child fatalities.	X		
	29. Educating school children is an effective way to prevent childhood fatalities	X		
	30. Educating medical providers is an effective way to prevent childhood death.	X		

Section	Question	Agree	Not Sure	Disagree
	31. Educating law enforcement officers is an effective way to prevent childhood fatalities.	X		
	32. Educating people working in the legal system is an effective way to prevent childhood fatalities.	X		
	33. Giving information to parents about community resources reduces child fatalities	X		
	34. Making available safety equipment (such as helmets, car seats, or gun locks) reduces child death.	X		
	35. Providing supervised after school programs reduces child death.	X		
	36. Educating parents is an effective way to prevent child death.	X		
Effectiveness of the Tennessee child fatality review process	37. Confidentiality issues among members has prevented full exchange of information during CFR meetings.			X
	38. HIPAA regulations have prevented access to or exchange of information during CFR meetings.			X
	39. Inadequate investigation precluded having enough information for review during CFR meetings.	X		
	40. Team members not bringing adequate information to the CFR meeting affects the review process.	X		
	41. Delays in receiving autopsy reports affects the CFR process.	X		
	42. Obtaining records or information from another locality in state affects the review process.	X		
	43. Obtaining records or information from another state affects the review process.	X		
	44. Team disagreement on circumstances of child's death affects the review process.			X
	45. Receiving written communication about the review process from the Tennessee Department of Health is beneficial.	X		
	46. Receiving articles published in professional journals on child fatalities is beneficial	X		
	47. Using the internet to access information about child fatalities is beneficial.	X		

Appendix H.2: Observed/Expected Outcomes Using Adjusted Residuals for Respondents Selecting "Sudden Infant Death Syndrome" as a Preventable Cause of Natural Death

Occupation	Not Selected	Selected	Total
First Responders Observed Count	35	5	40
Expected Count	29.4	10.6	40.0
Adjusted Residual	**2.3	**-2.3	
Court Personnel Observed Count	13	8	21
Expected Count	15.5	5.5	21.0
Adjusted Residual	-1.3	1.3	
Health Care Provider (other than physician) Observed Count	14	6	20
Expected Count	14.7	5.3	20.0
Adjusted Residual	-.4	.4	
Physician Observed Count	20	9	29
Expected Count	21.3	7.7	29.0
Adjusted Residual	-.6	.6	
Child Advocate Observed Count	15	4	19
Expected Count	14.0	5.0	19.0
Adjusted Residual	.6	-.6	
Public Health Observed Count	9	6	15
Expected Count	11.0	4.0	15.0
Adjusted Residual	-1.3	1.3	
Total Count	106	38	144

Chi-Square value=7.619, df=5, sig=.179

** An adjusted residual of less than –2 or more than +2 was considered to be significant. Those found between –2 and +2 were not significant.

Appendix H.3: Observed/Expected Outcomes Using Adjusted Residuals for Respondents Selecting "Sudden Infant Death Syndrome" as a Non-Preventable Cause of Natural Death

Occupation	Not Selected	Selected	Total
First Responders Observed Count	14	26	40
Expected Count	19.7	20.3	40.0
Adjusted Residual	**-2.1	**2.1	
Court Personnel Observed Count	11	10	21
Expected Count	10.4	10.6	21.0
Adjusted Residual	.3	-.3	
Health Care Provider (other than physician) Observed Count	9	11	20
Expected Count	9.9	10.1	20.0
Adjusted Residual	-.4	.4	
Physician Observed Count	18	11	29
Expected Count	14.3	14.7	29.0
Adjusted Residual	1.5	-1.5	
Child Advocate Observed Count	10	9	19
Expected Count	9.4	9.6	19.0
Adjusted Residual	.3	-.3	
Public Health Observed Count	9	6	15
Expected Count	7.4	7.6	15.0
Adjusted Residual	.9	-.9	
Total Count	71	73	144

Chi-Square value=6.163, df=5, sig=.291

** An adjusted residual of less than –2 or more than +2 was considered to be significant. Those found between –2 and +2 were not significant.

Appendix H.4: Observed/Expected Outcomes Using Adjusted Residuals for Respondents Selecting "Inflicted Injury" as a Preventable Cause of Injury Fatalities

Occupation	Not Selected	Selected	Total
First Responders Observed Count	33	7	40
Expected Count	30.6	9.4	40.0
Adjusted Residual	1.1	-1.1	
Court Personnel Observed Count	12	9	21
Expected Count	16.0	5.0	21.0
Adjusted Residual	**-2.2	**2.2	
Health Care Provider (other than physician) Observed Count	15	5	20
Expected Count	15.3	4.7	20.0
Adjusted Residual	-.2	.2	
Physician Observed Count	26	3	29
Expected Count	22.2	6.8	29.0
Adjusted Residual	1.9	-1.9	
Child Advocate Observed Count	12	7	19
Expected Count	14.5	4.5	19.0
Adjusted Residual	-1.5	1.5	
Public Health Observed Count	12	3	15
Expected Count	11.5	3.5	15.0
Adjusted Residual	.3	-.3	
Total Count	110	34	144

Chi-Square value=9.945, df=5, sig=.077

** An adjusted residual of less than –2 or more than +2 was considered to be significant. Those found between –2 and +2 were not significant.

Appendix H.5: Observed/Expected Outcomes Using Adjusted Residuals for Respondents Selecting "Vehicular" as a Preventable Cause of Injury Fatalities

Occupation	Not Selected	Selected	Total
First Responders Observed Count	32	8	40
Expected Count	28.6	11.4	40.0
Adjusted Residual	1.4	-1.4	
Court Personnel Observed Count	16	5	21
Expected Count	15.0	6.0	21.0
Adjusted Residual	.5	-.5	
Health Care Provider (other than physician) Observed Count	13	7	20
Expected Count	14.3	5.7	20.0
Adjusted Residual	-.7	.7	
Physician Observed Count	15	14	29
Expected Count	20.7	8.3	29.0
Adjusted Residual	*-2.6	*2.6	
Child Advocate Observed Count	14	5	19
Expected Count	13.6	5.4	19.0
Adjusted Residual	.2	-.2	
Public Health Observed Count	13	2	15
Expected Count	10.7	4.3	15.0
Adjusted Residual	1.4	-1.4	
Total Count	103	41	144

Chi-Square value=9.386, df=5, sig=.095

** An adjusted residual of less than –2 or more than +2 was considered to be significant. Those found between –2 and +2 were not significant.

Appendix H.6: Observed/Expected Outcomes Using Adjusted Residuals for Respondents Selecting "Firearm" as a Preventable Cause of Injury Fatalities

Occupation	Not Selected	Selected	Total
First Responders Observed Count	10	30	40
Expected Count	15.0	25.0	40.0
Adjusted Residual	-1.9	1.9	
Court Personnel Observed Count	10	11	21
Expected Count	7.9	13.1	21.0
Adjusted Residual	1.0	-1.0	
Health Care Provider (other than physician) Observed Count	8	12	20
Expected Count	7.5	12.5	20.0
Adjusted Residual	.2	-.2	
Physician Observed Count	14	15	29
Expected Count	10.9	18.1	29.0
Adjusted Residual	1.3	-1.3	
Child Advocate Observed Count	8	11	19
Expected Count	7.1	11.9	19.0
Adjusted Residual	.4	-.4	
Public Health Observed Count	4	11	15
Expected Count	5.6	9.4	15.0
Adjusted Residual	-.9	.9	
Total Count	54	90	144

Chi-Square value=5.997, df=5, sig=.306

** An adjusted residual of less than –2 or more than +2 was considered to be significant. Those found between –2 and +2 were not significant.

Appendix H.7: Observed/Expected Outcomes Using Adjusted Residuals for Respondents Selecting "Suffocation or Strangulation" as a Non-Preventable Cause of Injury Fatalities

Occupation	Not Selected	Selected	Total
First Responders Observed Count	17	23	40
Expected Count	22.2	17.8	40.0
Adjusted Residual	*-2.0	*2.0	
Court Personnel Observed Count	16	5	21
Expected Count	11.7	9.3	21.0
Adjusted Residual	2.1	-2.1	
Health Care Provider (other than physician) Observed Count	10	10	20
Expected Count	11.1	8.9	20.0
Adjusted Residual	-.5	.5	
Physician Observed Count	18	11	29
Expected Count	16.1	12.9	29.0
Adjusted Residual	.8	-.8	
Child Advocate Observed Count	8	11	19
Expected Count	10.6	8.4	19.0
Adjusted Residual	-1.3	1.3	
Public Health Observed Count	11	4	15
Expected Count	8.3	6.7	15.0
Adjusted Residual	1.5	-1.5	
Total Count	80	64	144

Chi-Square value=10.443, df=5, sig=.064

** An adjusted residual of less than –2 or more than +2 was considered to be significant. Those found between –2 and +2 were not significant.

Appendix H.8: Individual ANOVAs for Educational Activities and Programs, Compared by Self-Reported Occupational Category

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Occupation	21. Promoting folic acid supplements for women of childbearing age reduces child death.	4.5324	5	.906	1.139	.343
	22. Continuing the "Back to Sleep" campaign about Sudden Infant Death Syndrome reduces child death.	19.034	5	3.807	6.674	*<.001
	23. Educating about the dangers of parental alcohol abuse reduces child death.	8.515	5	1.703	3.313	*.007
	24. Educating about the dangers of parental drug use reduces child death.	5.411	5	1.082	1.839	.109
	25. Educating about the dangers of tobacco during pregnancy reduces child death.	9.495	5	1.899	3.229	*.009
	26. Educating about the dangers of alcohol during pregnancy reduces child death.	8.524	5	1.705	3.328	*.007
	27. Educating about the dangers of over-the-counter drugs during pregnancy reduces child death.	11.412	5	2.282	4.310	*.001
	28. Educating school children is an effective way to prevent childhood fatalities.	3.781	5	.756	1.793	.118
	29. Educating medical providers is an effective way to prevent childhood fatalities.	3.017	5	.603	1.212	.307
	30. Educating law enforcement officers is an effective way to prevent childhood fatalities.	3.889	5	.780	1.453	.209
	31. Educating people working in the legal system is an effective way to prevent childhood fatalities.	6.432	5	1.286	1.835	.110
	32. Giving information to parents about community resources reduces child fatalities.	5.350	5	1.070	2.818	*.019
	33. Making available use of safety equipment (such as helmets, car seats, or gun locks) reduces child fatalities.	1.494	5	.299	.929	.464
	34. Providing supervised after school programs reduces child fatalities.	7.196	5	1.439	2.399	*.040
	35. Educating parents is an effective way to prevent childhood fatalities.	4.054	5	.811	2.294	*.049
	36. Educating parents about risk factors for premature birth reduces child fatalities.	1.680	5	.336	.612	.691

MANOVA F(80, 596) = 1.991, p=<.001*

Appendix H.9: Tukey's HSD Examining Self-Reported Occupation and Perceptions of "Back to Sleep" Campaign for SIDS Prevention

Occupation	**N**	**Subset**	
		1	2
Child Advocate	19	3.74	
First Responders	40	3.75	
Court personnel	21	3.76	
Health Care provider (other than MD)	20	4.05	4.05
Physician	29		4.55
Public Health	15	4.00	4.60
Sig.		.747	.164

Appendix H.10: Tukey's HSD Examining Self-Reported Occupation and Perceptions of Education about Dangers of Parental Alcohol Abuse

Occupation	**N**	**Subset**	
		1	2
Public Health	15	3.80	
Child Advocate	19	3.84	
Health Care provider (other than MD)	20	3.85	
MD	29	4.07	
Court personnel	21	4.24	
First Responders	40	4.43	
Sig.		.052	

Appendix H.11: Tukey's HSD Examining Self-Reported Occupation and Perceptions of Education about Dangers of Tobacco Use during Pregnancy

Occupation	**N**	**Subset**	
		1	2
Child Advocate	19	3.58	
Public Health	15	3.93	3.93
Health Care provider (other than MD)	20	4.00	4.00
Court personnel	21	4.00	4.00
Physician	29	4.00	4.00
First Responders	40		4.40
Sig.		.464	.345

Appendix H.12: Tukey's HSD for Educating about the Dangers of Alcohol Use during Pregnancy Reduces Childhood Fatalities

Occupation	**N**	**Subset**	
		1	2
Public Health	15	3.73	
Child Advocate	19	3.79	
Health Care provider (other than physician)	20	4.05	4.05
Court personnel	21	4.14	4.14
Physician	29	4.24	4.24
First Responders	40		4.43
Sig.		.125	.232

Appendix H.13: Tukey's HSD for Educating about Dangers of Over-the-Counter Drug Use during Pregnancy

Occupation	**N**	**Subset**	
		1	2
Health Care provider (other than MD)	20	3.60	
Child Advocate	19	3.63	
Physician	29	3.66	3.66
Public Health	15	3.67	
Court personnel	21	4.00	4.00
First Responders	40		4.28
Sig.		.462	.062

Appendix H.14: Tukey's HSD for Giving Information to Parents about Community Resources Reduces Childhood Fatalities

Occupation	**N**	**Subset**	
		1	2
Public Health	15	3.93	
Court personnel	21	3.95	
Physician	29	4.00	
Health Care Provider (other than physician)	20	4.05	
Child Advocate	19	4.11	
First Responders	40	4.43	
Sig.		.097	

Appendix H.15: Tukey's HSD for Providing Supervised After School Programs Reduces Child Death

Occupation	**N**	**Subset**	
		1	2
Physician	29	3.90	
Court personnel	21	4.00	4.00
Child Advocate	19	4.11	4.11
First Responders	40	4.18	4.18
Health Care provider (other than physician)	20	4.45	4.45
Public Health	15	4.00	4.60
Sig.		.180	.117

Appendix H.16: Tukey's HSD for Educating Parents Is an Effective Way to Prevent Childhood Fatalities

Occupation	**N**	**Subset**	
		1	2
Physician	29	4.10	
Health Care Provider (other than physician)	20	4.40	
Child Advocate	19	4.42	
Court personnel	21	4.43	
Public Health	15	4.53	
First Responders	40	4.58	
Sig.		.101	

VITA

Charity Sue Smith is a life-long resident of Knoxville, TN. She graduated from Central High School in 1992. After high school graduation, she enrolled in the University of Tennessee in Knoxville. And in 1997, she received two Bachelor of Science Degrees, one in Zoology and the other in Psychology. The Master of Public Health degree from UT's accredited program was earned in 1999, with a concentration in Community Health Education. While at the University of Tennessee, she was inducted into three honoraries, Alpha Epsilon Delta, Psi Chi, and Phi Eta Sigma. In 1994, she received her certification as an Emergency Medical Technician and in 1997 she received her licensure as an Emergency Medical Technician, Intravenous Technician.

In the summer of 2000, she returned to the University of Tennessee to pursue a PhD in Human Ecology, with a concentration in Community Health and a specialization in public health. Her cognate area is in Child and Family Studies. While pursuing this degree, she maintained her employment at the Knox County Health Department as a community health education specialist and violence prevention coordinator. Charity was balancing earning a doctorate, full-time employment, caring for family members, and maintaining her own growing family.

Since 1998, she married Will M. Smith, a wonderfully supportive husband. Together they have a six-year-old daughter, Alexandria, and a five-month-old son, Houston.