Child Deaths from Heat-Related Motor Vehicle Entrapment

a report from the

VIRGINIA STATE CHILD FATALITY REVIEW TEAM

Virginia Department of Health
Office of the Chief Medical Examiner

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CHILD DEATHS FROM HEAT-RELATED MOTOR VEHICLE ENTRAPMENT

MISSION STATEMENT

As an interdisciplinary team, we review and analyze sudden, violent, or unnatural deaths of children so that strategies can be recommended to reduce the number of preventable child deaths in Virginia.

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Executive Summary

Between 1988 and 2003, thirteen children died in Virginia from heat-related injuries as a result of confinement in a motor vehicle. The children were left unattended in a vehicle by a caretaker or climbed into a vehicle on their own and became entrapped. The State Child Fatality Review Team reviewed these child deaths and identified strategies to prevent these tragic and fatal injuries.

Key circumstances identified by the Team include the following:

- Males (nine deaths) had a higher frequency of death than females (four deaths).
- Twelve children were white and one child was black.
- All deaths occurred among children less than 5 years of age, with a mean age of 22 months and a range of 8 months to 59 months.
- In eleven of the thirteen deaths, the child's parent was responsible for supervision of the child at the time of entrapment. A babysitter had responsibility for the child in two cases. Two caretakers assigned the responsibility of removing a child from a safety seat and vehicle to an older child.
- Among the twelve incidents of motor vehicle entrapment, nine occurred when caretakers left children unattended in a vehicle or became incapacitated and could not care for children in the vehicle. Three other incidents occurred when children gained access to a vehicle without their caretaker's knowledge. Older children were more likely to climb into vehicles on their own while younger children were more often left behind.
- Child deaths by entrapment in motor vehicles clustered around the summer months between May and September. Outside air temperatures ranged from a high of 80°F to 94°F.
- The average time a child was left unattended or confined within a vehicle was four hours, and entrapment time ranged from forty-five minutes to nine and one-half hours. Children who were forgotten were left for longer periods of time than children who were intentionally left or those who had climbed into the vehicle of their own.
- The majority of cases occurred in a parking lot setting.
- Of the four children who were forgotten by a caretaker, three were transported in a larger model vehicle, such as a sports utility vehicle or a van. Among children who were forgotten, the child safety seat was placed in the back seat directly behind the driver, preventing the caretaker from seeing the child. Among the children who climbed into the vehicle on their own, all three vehicles were models which were low to the ground, allowing the child to gain easy access by reaching for the door handle or trunk latch to climb in.
- Team members noted a lack of adequate supervision in several children's deaths. Case review revealed that parents were often undergoing significant or stressful life events, were not following their normal routine, or both.

The Team concluded that the majority of these children's deaths were preventable and offered recommendations for change in the following areas: legislation, education, primary prevention, parent and caretaker response, and child death investigation.

SECTION I: Introduction

INTRODUCTION

This report presents conclusions and recommendations from Virginia's State Child Fatality Review Team[1] after its review of child deaths from heat-related stress as a result of entrapment in a vehicle. The findings provide a portrait of these deaths for the sixteen year period between 1988 and 2003. The Team reviewed these deaths in response to national and state concerns that heat-related deaths to children in motor vehicles are increasing. Furthermore, a 2002 Centers for Disease Control and Prevention report on children who were left unattended in or around a vehicle noted that heat-related injuries were most likely to result in fatalities [1]. Through multidisciplinary and retrospective review, the Team hoped to understand the circumstances of vehicular entrapment deaths, to identify improvements for medicolegal death investigations, to identify points of intervention, and to make recommendations for the prevention of these child deaths in the future.

The majority of these injuries and injury-related deaths are preventable and, as such, represent a significant child health and safety concern for Virginians. The following report was prepared for use by all Virginians - the Governor, members of the General Assembly, child advocates, policy makers, parents and citizens - with the firm conviction that the number of deaths to Virginia's children can be reduced.

ORGANIZATION OF THE REPORT

Section II of this report presents general descriptive information about the children who died and their caretakers. It also describes two categories of child death related to entrapment in motor vehicles: (1) children who were left in a vehicle by a caretaker and (2) unsupervised children who climbed into a vehicle on their own and became entrapped. This distinction is made to highlight the unique prevention strategies associated with each set of circumstances. Section III presents the Team's consensus recommendations for the prevention of child injuries and deaths and for improved medicolegal death investigation.

CASE SELECTION AND DEFINITION OF TERMS

The State Child Fatality Review Team was interested in reviewing those cases where children died as a result of being entrapped in motor vehicles. There were four criteria for inclusion as a case:

(1) the children were seventeen years of age or younger at the time of their death;

(2) the incident occurred within the sixteen year period between 1988 and 2003;

(3) the fatal injury occurred as a result of entrapment in an automobile; and

(4) Virginia's Office of the Chief Medical Examiner (OCME) took jurisdiction over the case because the death occurred in the Commonwealth of Virginia.

The Team's review and report includes fatalities from heat-related stress only. No fatalities resulting from cold-related stress and entrapment in an automobile were identified in Virginia during this sixteen year time period.

In this report, a *caretaker* refers to the adult who was responsible for the care and well-being of the child at the time of the fatal injury. This person may be a parent, a child care provider, or a babysitter, and may also be the person responsible for the supervision of the child at the time of the incident. A supervisor may also include an adolescent or teen who was assigned the task of watching or caring for a child.

[1] See Appendix A for a copy of the State Child Fatality Review Team statute. See Appendix B for a copy of the Team's Review Protocol.

SECTION II: Heat-Related Child Deaths from Vehicle Entrapment

CHARACTERISTICS OF CHILDREN

In Virginia, 12 incidents resulting in 13 heat-related child deaths were identified for the period 1988 to 2003. The Team reviewed all 13 fatalities, which resulted when children were left unattended in a vehicle or when unsupervised children climbed into a vehicle and became entrapped. While child deaths generally represent a small portion of a larger injury problem, no heat-related vehicular confinement injuries were identified in hospital admissions data for this time period. While children are highly susceptible to the effects of heat when compared to the ill or elderly, they are more likely to survive heat-related injuries if they are cared for promptly and their core body temperatures are reduced [2].

Key demographic findings about the children who died include:

- Males had a higher frequency of death than females. Nine males and four females died as a result of being entrapped in a vehicle.
- Twelve children were white and one child was black.
- All deaths occurred among children less than 5 years of age, with a mean age of 22 months and a range of 8 months to 59 months.

SUPERVISION

Who was responsible for these children at the time of their entrapment?

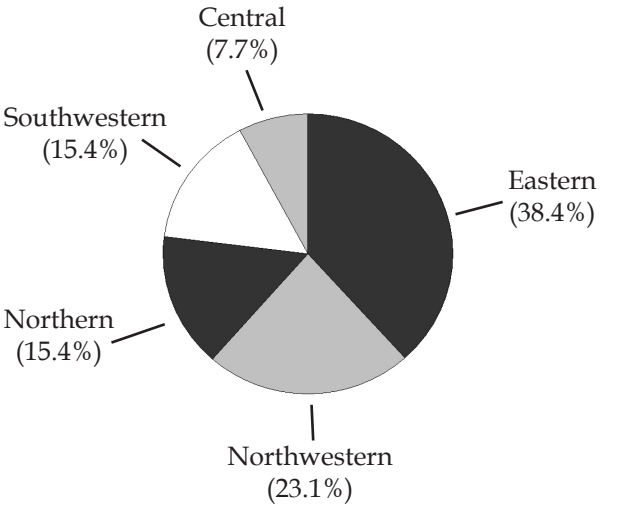
In eleven of the thirteen deaths, the child's parent was responsible for supervision of the child at the time of the entrapment.

- In seven deaths, the mother was the responsible parent. In four deaths, the father was responsible for the child.
- A babysitter had responsibility for the child in two instances.
- Caretaker ages ranged from 20 years to 48 years with a mean age of 32 years.
- Two caretakers (one parent and one babysitter) assigned the responsibility of removing a child from a safety seat and vehicle to an older child. These children were 12 and 17 years, respectively. The Team noted that because of the young age of the children placed in supervisory roles, the adult caretakers were ultimately responsible for ensuring the children's safety and welfare.

OCME DISTRICT AND HEALTH PLANNING REGION[2]

The Office of the Chief Medical Examiner investigated each of these heat-related deaths to children. The OCME has four district offices: Central, Northern, Tidewater, and Western. Among OCME Districts, the Northern District investigated five cases, the Tidewater District investigated five cases, the Western District investigated two cases, and the Central District investigated one case. The place of fatal injury for these child deaths is described by Health Planning Region. Five cases occurred in the Eastern Health Planning Region, three cases in the Northwestern Region, two cases in each of the Northern and Southwestern Regions, and one case in the Central Region. Figure 1 portrays the distribution of child entrapment deaths by Health Planning Region.

FIGURE 1: Percent of Child Deaths from Heat-Related Vehicle Entrapment by Health Planning Region - Virginia, 1988-2003, N=13



[2] See Appendix C for a listing of localities in Virginia's Medical Examiner Districts and Health Planning Regions.

SECTION II: Heat-Related Child Deaths from Vehicle Entrapment

CIRCUMSTANCES OF CHILD DEATHS

The Team categorized the circumstance in which the injury or death occurred. Among the twelve incidents of motor vehicle entrapment, 75% occurred when caretakers left children unattended in a vehicle or became incapacitated and could not care for children in the vehicle. These cases were described in further detail according to caretaker intent when leaving the children. Three other incidents, 25%, occurred when children gained access to a vehicle on their own and without their caretaker's knowledge. These patterns are similar to national statistics, which show that between 1995 and 2002, 73% of children who died from heat-related motor vehicle entrapments were left by a caretaker and 27% were playing in the vehicle [3]. The major difference in child characteristics between those who were left in vehicles and those who gained access on their own was age. Older children were more likely to climb into vehicles on their own while younger children were more often left behind.

Considering all of theses incidents, the Team recommended strategies to minimize or eliminate the possibility that children are left unattended in a vehicle or gain access to a vehicle. For example, the Team recommended a statewide media campaign with a unifying message urging caretakers to look around inside a vehicle upon exit to ensure that a child is not left or has not inadvertently climbed into the vehicle. The caretaker should then lock the vehicle to ensure that children do not climb into the vehicle on their own.

Children Left in Motor Vehicles. The ten child deaths where caretakers left children are further described by caretaker intent below.

- All ten children left in vehicles were confined to a child safety seat.
- Ages ranged from 8.1 months to 28 months with an average age of 15.9 months.
- Four parents forgot to remove children from the vehicle. All of these caretakers left for work with the intention of taking their children to a sitter or to a daycare center. These caretakers forgot that the child was in the vehicle or believed that they had already stopped at the child care center before proceeding to their place of employment. Caretakers indicated that the children must have been sleeping and were therefore not heard or noticed when exiting the vehicle.
  - The children who were forgotten in vehicles ranged in age from 8.2 months to 26 months with the average age being 15.8 months.
  - The children were left in the vehicle between 4 hours and 9.5 hours with an average of 7.3 hours.
  - All four vehicles were parked in a parking lot.
  - Outside temperatures ranged from a high of 83 degrees to 90 degrees during the period of entrapment.
  - Two of these caretakers again entered and exited the vehicle to run an errand before noticing the child.
- Two deaths resulted when parents intentionally left children in a vehicle. One parent left the child in a vehicle while at work. In another death, the parent was detained by a phone call in the home after placing the child in a car seat in the vehicle in the driveway.
- Another two deaths occurred when a parent or caretaker asked older children to take responsibility for removing the younger children from the vehicle.
  - The children were left for 6.8 hours and 1.5 hours, respectively, before being found by passers-by.
- One incident resulted in two children's deaths. In this situation, the caretaker became medically incapacitated while in a parked vehicle and was unable to protect or care for the children.

Team members noted that these parents had a change in routine or were coping with significant social, occupational, and/or family stressors. They recommended that caretakers utilize reminder-recall strategies and non-breakable mirrors within a vehicle to observe the backseat of a vehicle without turning around. The Team also suggested that, had the daycare or sitter called the parent when the expected children did not show up, these deaths may have been averted.

Children Gaining Access to Motor Vehicles on Their Own. Three deaths resulted when children entered a vehicle on their own, by either climbing into the interior or into the trunk of the vehicle.

- All of these children were males who had gained access to their family's vehicle in a residential driveway.
- These three children ranged in age from 18 months to 59 months with an average age of 39.6 months.
- One child entered the trunk of the vehicle and became entrapped.
- Two children climbed into an interior passenger compartment of a vehicle without the caretaker's knowledge.
- These children were known to be missing for .65 hours to approximately 1.5 hours prior to being found.

Team members noted the importance of diligent supervision and of locking both homes and vehicles to keep children safe. Federal standards for automobiles were updated in 2002 to include a trunk release latch as standard on all vehicles. Older model vehicles can be retrofitted for these trunk release latches, and Team members concluded that such technology may prevent future injuries or deaths from trunk entrapments.

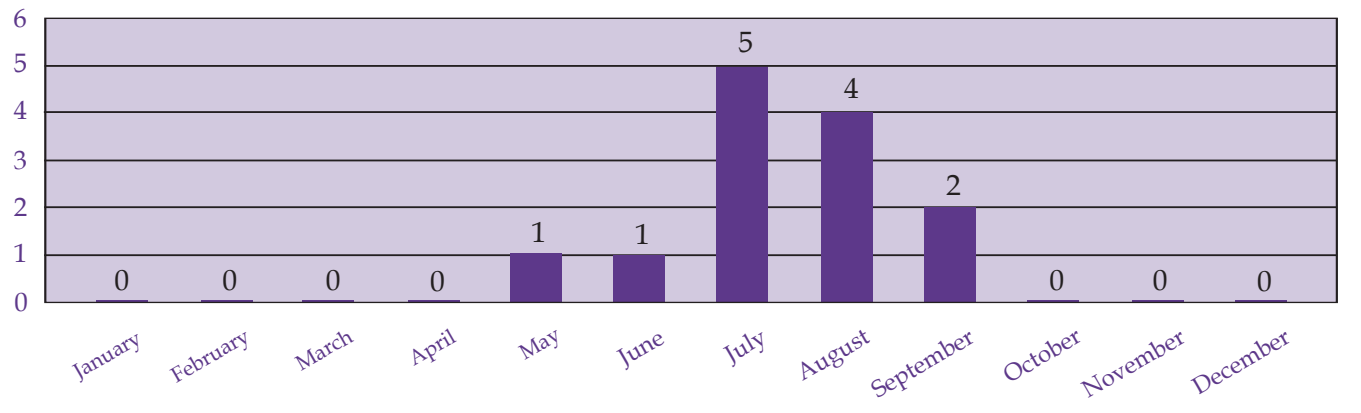
RISK FACTORS

Time, Temperature, and Setting. Child deaths by entrapment in motor vehicles clustered around the summer months, from May to September. See Figure 2. Outside air temperatures ranged from a high of 80°F to 94°F. Five child deaths occurred in July and four in August. In four incidents, law enforcement recreated the scene and recorded the interior temperature of the vehicle. The average vehicle temperature was 124°F with temperatures ranging from 109°F to 140°F. When outside temperatures reach from 80°F to 100°F, car internal temperatures can reach from 131°F to 172°F depending on the degree of direct sunlight and ventilation [4, 5].

The child's core body temperature was obtained in 10 cases. In all 10 cases, the mean core body temperature was 106°F; heat stroke occurs when core temperature reaches 105°F. Since Emergency Medical Services personnel were first to respond to most incidents and are therefore critical to these injury and death investigations, Team members recommend that technicians assess the core temperature of children at the scene.

Most temperature increases in a motor vehicle will occur in the first 15 minutes after doors and windows are closed [4]. Children in this review were left for significantly longer periods of time. The average time a child was left unattended or confined within a vehicle was four hours, and entrapment time ranged from forty-five minutes to nine and one-half hours. Children who were forgotten were left for longer periods of time than children who were intentionally left or those

FIGURE 2: Month of Heat-Related Vehicular Entrapment Deaths to Children - Virginia, 1988-2003 (N=13)



who had climbed into the vehicle of their own. Team members noted that several children made attempts to cool down by removing shoes, socks, or jackets. Unfortunately, their young ages precluded them from exiting the child safety seat or the vehicle. Young children are particularly vulnerable to heat related illness because their organ systems are more sensitive to heat and the effects of dehydration [4, 5]. Indeed, research suggests that a child's core body temperature can increase three to five times faster than that of an adult [6].

Ten of the thirteen children were pronounced dead at the scene or upon arrival at the hospital. Three children survived for a brief period of time, less than one week, before succumbing to the effects of heat-related stress, including brain damage and multiple organ failure.

The majority of cases occurred in a parking lot setting which compounded the effects of the ambient high temperature since asphalt paving radiates heat and parking lots are frequently in the full sun. Due to the large number of incidents occurring on business property and because a bystander noticed the child playing in the vehicle in some cases, the Team recommended that businesses establish a clear policy that children are not to be left unattended in vehicles and that such incidents should be reported to the business who can promptly locate the caretaker or contact security or police.

Type of Motor Vehicle. Team members noted the significance of the vehicle in these child entrapment cases. Of the four children who were forgotten by a caretaker, three were transported in a larger model vehicle, such as a sports utility vehicle or a van. These vehicles also tended to have tinted windows, which prevented the caretaker from observing the child when exiting the vehicle. Among children who were forgotten, the child safety seat was placed in the back seat directly behind the driver, once again preventing the caretaker from seeing the child. Among the children who climbed into the vehicle on their own, all three vehicles were models which were low to the ground, allowing the child to gain easy access by reaching for the door handle or trunk latch to climb in.

Caretaker Stress. Case review showed that parents were often undergoing significant life events, had an abnormal routine, or both. This was most apparent among parents who forgot to take their children to a babysitter. Factors indicating extreme stress included a recent divorce, legal proceedings, financial hardships, and the challenge of a large family. Neighbors, coworkers, and friends described several caretakers as individuals attempting to balance their busy schedules of full time work and extracurricular activities with their family life.

In 75% of the cases where a parent forgot to take children to a sitter, this task was a change in their normal routine. Some did not typically take the child to the daycare and were therefore not accustomed to having their children in the vehicle. Others had recently switched sitters or had multiple sitters. These routine changes exacerbated stressed and busy parents' capacity for concentration, leading them to forget about their children.

Supervision. Team members noted a lack of adequate supervision in several children's deaths. Supervision issues were noted among all cases where children climbed into the vehicle on their own. Some children were allowed to play alone outside for many hours before the caretaker checked on their welfare or noted they were missing. Others were distracted on the telephone.

In several cases, neighbors or acquaintances reported that children had been left in a vehicle for long periods of time on previous occasions and that the caretakers had been notified and warned of the dangers that such a situation could present. The Team discussed the significance of the community and neighbors in reporting such instances to their local child protective services and to law enforcement agencies.

PREVENTABLE DEATHS

The Team determined that the majority of these children's deaths were preventable. Six deaths were definitely preventable (50%), five were probably preventable (42%), and two were not preventable (8%).

DEATH INVESTIGATIONS

Office of the Chief Medical Examiner (OCME). All thirteen cases were investigated by the OCME, and autopsies were performed in ten cases. The cause of death was hyperthermia in eight cases and heat stroke

in two cases. The remaining deaths were attributed to systemic hyperthermia, hyperthermic brain damage, and brain damage. Twelve cases were ruled an accident and one case was ruled a homicide. Records indicated that there were no traumatic physical findings indicative of previously inflicted injuries on twelve of the children. One child had evidence of an old injury suggestive of maltreatment.

Records included toxicology requests and findings as well as other measures to detect potential signs of abuse, neglect, or natural disease—including x-rays, cultures, screens for inborn errors of metabolism, and an analysis of gastric contents. Team members noted that there was no uniform standard for which tests were requested in all child death cases, and therefore recommended that the OCME establish measures to ensure that a complete and thorough medicolegal death investigation is conducted in every unexplained, unexpected, or sudden child death.

Law Enforcement. Team members also found that there was no uniform standard for investigating these deaths among law enforcement agencies in the Commonwealth. Law enforcement officers conducted interviews with parents, coworkers, neighbors, sitters, relatives, and siblings; yet, it was not clear if interviews were conducted with individuals or in groups. Evidence collected included information about the vehicle, vehicle measurements, the child safety seat, fingerprints, and toxicology on the caretaker. A scene reconstruction was rare but included assessing the temperature of the vehicle under similar conditions, creating and verifying time lines, and driving the caretaker's route.

The depth of investigation was dependent upon the circumstances of the event. Law enforcement investigations were more thorough for incidents with a higher index of suspicion, where a caretaker forgot to take the child to a sitter and where neighbors reported that the parent had left the child unattended in a vehicle on previous occasions. They were least thorough for the incidents where children climbed into the vehicle of their own volition and where the caretaker experienced a medical emergency.

At the same time, Team members noted the lack of collaboration between law enforcement officers and child protective services (CPS) case workers. Of the twelve incidents, law enforcement officials failed to contact or notify CPS in 67% of the incidents. Even when law enforcement officials notified CPS, there was little indication that the two investigative bodies worked together. Efforts were often duplicated and findings were rarely shared.

Child Protective Services. A local child protective services agency initiated a file in nine of the twelve incidents. After an investigation, which included interviews with the parents, babysitters, siblings, neighbors, acquaintances, and coworkers, six caretakers were found to have inadequately supervised or physically neglected the child. One child and one caretaker were already known to the local child protective services agency. Six caretaker investigations were determined to be founded and two were determined to be unfounded; records were not supplied or reviewed in the remaining case. The Team recommended that CPS investigate all child injuries and fatalities suspicious for child abuse or neglect, including those where a lack of supervision is suspected and where no other children are in the home.

Prosecution. Charges were filed against four caretakers in conjunction with a child being left unattended in a vehicle. These include all instances where the child was intentionally left in a vehicle, one instance of an older child being given responsibility for removing the younger child, and one instance of a parent forgetting a child. Three cases resulted in convictions and one case was dismissed. While these incidents reflected the tragedy of child death, lack of criminal intent or action on the part of the caretaker usually resulted in no criminal charges.

SECTION III: Recommendations

LEGISLATION

1. The Virginia General Assembly should consider developing legislation that prohibits leaving children unattended and at risk in motor vehicles.

PUBLIC EDUCATION INITIATIVES

1. The Office of Family Health Services should establish a task force to develop and promulgate an ongoing statewide public awareness campaign to educate parents, caretakers, children, and citizens of the dangers of leaving a child unattended in and around a vehicle.

2. Agencies and organizations that provide babysitting and/or childcare training courses, such as the American Red Cross and middle and high schools (through the Virginia Department of Education) should provide age-appropriate child passenger safety materials in these courses. This should include messages about never leaving a child unattended in or around a vehicle.

PRIMARY PREVENTION

1. Virginia businesses should establish and enforce a policy that prohibits leaving an unsupervised child in a vehicle on business property. Such instances should be reported to the employer.
2. Community Seat Check events should include Virginia automotive dealers to arrange appointments with caretakers to install retrofitted trunk release latches on vehicles manufactured before 2002.
3. Child safety seat manufacturers should permanently affix advisory labels to all child safety seats warning of the dangers of temperature extremes and of leaving a child unsupervised in or around a vehicle. This advisory notice should also be included in all safety seat instruction manuals.
4. Automotive manufacturers and car safety seat manufacturers should incorporate new technologies into their products aimed at preventing children from being left unsupervised in and around a vehicle.
5. The Board of Social Services and the Child Day-Care Council should continue to encourage all child day care providers under their purview to call parents or caretakers if a child who is expected at a child day center or family day care home does not arrive at the expected time.

6. The Department of Defense should ensure the availability of affordable and accessible daycare for military families. This daycare should be available twenty-four hours a day, seven days a week, and should include assistance in arranging long-term care for children whose caretakers are deployed.

7. The National Highway Traffic Safety Administration (NHTSA) should investigate permitting firmly attached, non-breakable reflective devices within a vehicle. Such devices would serve as reminder-recall to caretakers by allowing the driver to observe a child in the back seat of a vehicle.

PARENTS AND CARETAKERS

1. Parents and caretakers should always "look and lock" their vehicle upon exit. This will help to ensure that children are not left behind and cannot gain access to the vehicle.
2. Parents and caretakers should utilize specific reminder-recall strategies to ensure that infants or children are not left behind in a vehicle. Reminder-recall strategies include putting an item such as a jacket, coat, or briefcase in the back seat of the car near the child or placing a stuffed animal or diaper bag on the front passenger seat to remind drivers that a child is in the vehicle.
3. Parents and caretakers should retrofit older model vehicles with trunk release latches.

SECTION III: Recommendations

CHILD INJURY AND DEATH INVESTIGATION

1. Local law enforcement agencies and the Office of the Chief Medical Examiner should establish/enhance and follow quality assurance criteria to ensure that a complete and thorough investigation is conducted in every unexplained, unexpected, or sudden child death.
2. Local law enforcement agencies and local child protective services should receive cross training to facilitate a thorough child injury or death investigation, to improve response time, and to establish written protocols for working together on investigations.
3. Child protective services should investigate all child injuries and fatalities in which child abuse or neglect, including lack of supervision by a caretaker, is suspected.
4. The Virginia State Board of Medicine should require as a condition of licensure that all physicians, nurse practitioners, and physician assistants receive at least eight hours of CME training in identifying and reporting child abuse and neglect-related injuries and fatalities. This training should be readily accessible to providers through internet-based courses which provide CME credit.
5. The Virginia State Board of Health should amend Virginia EMS Regulations, *Required Vehicle Equipment 12 VAC 5-31-18, Section D, Patient Assessment Equipment* to require that all licensed emergency medical services transport, first response vehicles, and ambulances carry digital thermometers capable of measuring pediatric body temperature.
6. Medical Directors in pre-hospital patient care settings should encourage technicians and certified emergency medical services personnel to assess the temperature of pediatric patients as a part of obtaining basic vital signs.
7. The Department of Motor Vehicle should collect, analyze and incorporate into its annual *Traffic Crash Facts* information on non-crash related vehicular injuries and fatalities. This report should distinguish child injuries and deaths.

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APPENDIX A: Virginia State Child Fatality Review Team Statute

§ 32.1-283.1. State Child Fatality Review Team established; membership; access to and maintenance of records; confidentiality; etc.

A. There is hereby created the State Child Fatality Review Team, hereinafter referred to as the "Team," which shall develop and implement procedures to ensure that child deaths occurring in Virginia are analyzed in a systematic way. The Team shall review (i) violent and unnatural child deaths, (ii) sudden child deaths occurring within the first 18 months of life, and (iii) those fatalities for which the cause or manner of death was not determined with reasonable medical certainty. No child death review shall be initiated by the Team until conclusion of any law-enforcement investigation or criminal prosecution. The Team shall (i) develop and revise as necessary operating procedures for the review of child deaths, including identification of cases to be reviewed and procedures for coordination among the agencies and professionals involved, (ii) improve the identification, data collection, and record keeping of the causes of child death, (iii) recommend components for prevention and education programs, (iv) recommend training to improve the investigation of child deaths, and (v) provide technical assistance, upon request, to any local child fatality teams that may be established. The operating procedures for the review of child deaths shall be exempt from the Administrative Process Act (§ 2.2-4000 et seq.) pursuant to subdivision 17 of subsection B of § 2.2-4002.

B. The 16-member Team shall be chaired by the Chief Medical Examiner and shall be composed of the following persons or their designees: the Commissioner of the Department of Mental Health, Mental Retardation and Substance Abuse Services; the Director of Child Protective Services within the Department of Social Services; the Superintendent of Public Instruction; the State Registrar of Vital Records; and the Director of the Department of Criminal Justice Services. In addition, one representative from each of the following entities shall be appointed by the Governor to serve for a term of three years: local law-enforcement agencies, local fire departments, local departments of social services, the Medical Society of Virginia, the Virginia College of Emergency Physicians, the Virginia Pediatric Society, Virginia Sudden Infant Death Syndrome Alliance, local emergency medical services personnel, Commonwealth's attorneys, and community services boards.

C. Upon the request of the Chief Medical Examiner in his capacity as chair of the Team, made after the conclusion of any law-enforcement investigation or prosecution, information and records regarding a child whose death is being reviewed by the Team may be inspected and copied by the Chief Medical Examiner or his designee, including, but not limited to, any report of the circumstances of the event maintained by any state or local law-enforcement agency or medical examiner, and information or records maintained on such child by any school, social services agency or court. Information, records or reports maintained by any Commonwealth's Attorney shall be made available for inspection and copying by the Chief Medical Examiner pursuant to procedures which shall be developed by the Chief Medical Examiner and the Commonwealth's Attorneys' Services Council established by § 2.2-2617. Any presentence report prepared pursuant to § 19.2-299 for any person convicted of a crime that led to the death of the child shall be made available for inspection and copying by the Chief Medical Examiner pursuant to procedures which shall be developed by the Chief Medical Examiner. In addition, the Chief Medical Examiner may inspect and copy from any Virginia health care provider, on behalf of the Team, (i) without obtaining consent, the health and mental health records of the child and those perinatal medical records of the child's mother that related to such child and (ii) upon obtaining consent from each adult regarding his personal records, or from a parent regarding the records of a minor child, the health and mental health records of the child's family. All such information and records shall be confidential and shall be excluded from the Virginia Freedom of Information Act (§ 2.2-3700 et seq.) pursuant to subdivision 9 of § 2.2-3705.5. Upon the conclusion of the child death review, all information and records concerning the child and the child's family shall be shredded or otherwise destroyed by the Chief Medical Examiner in order to ensure confidentiality. Such information or records shall not be subject to subpoena or discovery or be admissible in any criminal or civil proceeding. If available from other sources, however, such information and records shall not be immune from subpoena, discovery or introduction into evidence when obtained through such other sources solely because the information and records were presented to the Team during a child death review. Further, the findings of the Team may be disclosed or published in statistical or other form which shall not identify individuals. The portions of meetings in which individual child death cases are discussed by the Team shall be closed pursuant to subdivision A 21 of § 2.2-3711. In addition to the requirements of § 2.2-3712, all team members, persons attending closed team meetings, and persons presenting information and records on specific child deaths to the Team during closed meetings shall execute a sworn statement to honor the confidentiality of the information, records, discussions, and opinions disclosed during any closed meeting to review a specific child death. Violations of this subsection shall be punishable as a Class 3 misdemeanor.

D. Upon notification of a child death, any state or local government agency maintaining records on such child or such child's family which are periodically purged shall retain such records for the longer of 12 months or until such time as the State Child Fatality Review Team has completed its child death review of the specific case.

E. The Team shall compile annual data which shall be made available to the Governor and the General Assembly as requested. These statistical data compilations shall not contain any personally identifying information and shall be public records.

APPENDIX B: Review Protocol for Virginia's Child Fatality Review Team

The Team analyzes child deaths provided by the Virginia Department of Health's Division of Health Statistics and/or Office of the Chief Medical Examiner to identify groups of death meeting the criteria for review established by the General Assembly. The Team may review violent and unnatural child deaths, sudden deaths occurring in the first eighteen months of life, and fatalities where cause or manner has not been clearly determined. A group of deaths from a specific time period are selected. All reviews are retrospective and the Team reviews only resident deaths. The Coordinator obtains a database from the Center for Health Statistics and a database from the Medical Examiner System to verify that all records have been identified.[3] A case file is created for each death to include the Medical Examiner record, certificate of death, and other records requested for review.

The Team is authorized by statute to review records from agencies or persons who provided services to the child whose death is under review. This may include, but is not limited to, records from the Department of Social Services, Child Protective Services, Emergency Medical Service providers, hospitals, physicians, police and sheriff departments, counselors, schools, Community Services Boards, Juvenile and Domestic Relations District Courts, and Court Services Units of the Department of Juvenile Justice. Each agency receives a cover letter and request form from the Chair. Initial letters are sent to law enforcement, physicians, hospitals, and departments of social services. In addition, a list is provided to the Virginia Department of Social Services and to its Child Protective Services Unit in order to conduct a record search in their databases. When additional service providers are identified in the child's record – mental health providers or pediatricians, for example - requests for those records are also sent. Once the case file is complete, the death is assigned to two Team members who review the materials, discuss them, and prepare a summary of the case for presentation at the Team meeting.

The Team meets every other month for case review. The business portion of these meetings is open to the public. The meeting becomes a closed and confidential session when specific cases are under review. A team member of the subgroup that reviewed the case file presents the facts of the case, as well as suggestions for education, training, or prevention. In each case, the Team considers whether there may have been opportunities to prevent the death, drawing a conclusion about whether or not the death was preventable. Ideas for education, prevention, and training are also discussed. The subgroup is responsible for completing a Child Fatality Review form that will be entered into a database.

Data are entered into a database for summary and analysis of cases reviewed. At the conclusion of a review, the Team summarizes its findings, makes recommendations, and presents a report to the General Assembly and to the public.

Confidentiality is protected in three ways. First, the records that the Team obtains are excluded from the Virginia Freedom of Information Act and a third party cannot obtain them. Second, each Team member signs a sworn confidentiality statement. Violations of confidentiality are a Class 3 misdemeanor. Third, the records are destroyed once the review is completed.

[3] Differences in coding systems used by the two systems necessitate this cross-referencing. Coding errors may also account for some discrepancies.

Appendix C

Virginia Localities by Medical Examiner District and Health Planning Region

LOCALITY	MEDICAL EXAMINER DISTRICT (OCME)	HEALTH PLANNING REGION
Accomack County	Tidewater	5. Eastern
Albemarle County	Central	1. Northwest
Alexandria City	Northern	2. Northern
Alleghany County	Western	3. Southwest
Amelia County	Central	4. Central
Amherst County	Western	3. Southwest
Appomattox County	Western	3. Southwest
Arlington County	Northern	2. Northern
Augusta County	Western	1. Northwest
Bath County	Western	1. Northwest
Bedford City	Western	3. Southwest
Bedford County	Western	3. Southwest
Bland County	Western	3. Southwest
Botetourt County	Western	3. Southwest
Bristol City	Western	3. Southwest
Brunswick County	Central	4. Central
Buchanan County	Western	3. Southwest
Buckingham County	Central	4. Central
Buena Vista City	Western	1. Northwest
Campbell County	Western	3. Southwest
Caroline County	Central	1. Northwest
Carroll County	Western	3. Southwest
Charles City County	Central	4. Central
Charlotte County	Central	4. Central
Charlottesville City	Central	1. Northwest
Chesapeake City	Tidewater	5. Eastern
Chesterfield County	Central	4. Central
Clarke County	Northern	1. Northwest
Colonial Heights City	Central	4. Central
Covington City	Western	3. Southwest
Craig County	Western	3. Southwest
Culpeper County	Northern	1. Northwest
Cumberland County	Central	4. Central
Danville City	Western	3. Southwest
Dickenson County	Western	3. Southwest
Dinwiddie County	Central	4. Central
Emporia City	Central	4. Central
Essex County	Central	5. Eastern
Fairfax City	Northern	2. Northern
Fairfax County	Northern	2. Northern
Falls Church City	Northern	2. Northern
Fauquier County	Northern	1. Northwest
Floyd County	Western	3. Southwest
Fluvanna County	Central	1. Northwest

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LOCALITY	MEDICAL EXAMINER DISTRICT (OCME)	HEALTH PLANNING REGION
Franklin City	Tidewater	5. Eastern
Franklin County	Western	3. Southwest
Frederick County	Northern	1. Northwest
Fredericksburg City	Central	1. Northwest
Galax City	Western	3. Southwest
Giles County	Western	3. Southwest
Gloucester County	Central	5. Eastern
Goochland County	Central	4. Central
Grayson County	Western	3. Southwest
Greene County	Central	1. Northwest
Greensville County	Central	4. Central
Halifax County	Central	4. Central
Hampton City	Tidewater	5. Eastern
Hanover County	Central	4. Central
Harrisonburg City	Western	1. Northwest
Henrico County	Central	4. Central
Henry County	Western	3. Southwest
Highland County	Western	1. Northwest
Hopewell City	Central	4. Central
Isle of Wight County	Tidewater	5. Eastern
James City County	Central	5. Eastern
King and Queen County	Central	5. Eastern
King George County	Central	1. Northwest
King William County	Central	5. Eastern
Lancaster County	Central	5. Eastern
Lee County	Western	3. Southwest
Lexington City	Western	1. Northwest
Loudoun County	Northern	2. Northern
Louisa County	Central	1. Northwest
Lunenburg County	Central	4. Central
Lynchburg City	Western	3. Southwest
Madison County	Northern	1. Northwest
Manassas City	Northern	2. Northern
Manassas Park City	Northern	2. Northern
Martinsville City	Western	3. Southwest
Mathews County	Central	5. Eastern
Mecklenburg County	Central	4. Central
Middlesex County	Central	5. Eastern
Montgomery County	Western	3. Southwest
Nelson County	Central	1. Northwest
New Kent County	Central	4. Central
Newport News City	Tidewater	5. Eastern
Norfolk City	Tidewater	5. Eastern
Northampton County	Tidewater	5. Eastern
Northumberland County	Central	5. Eastern
Nottoway County	Central	4. Central

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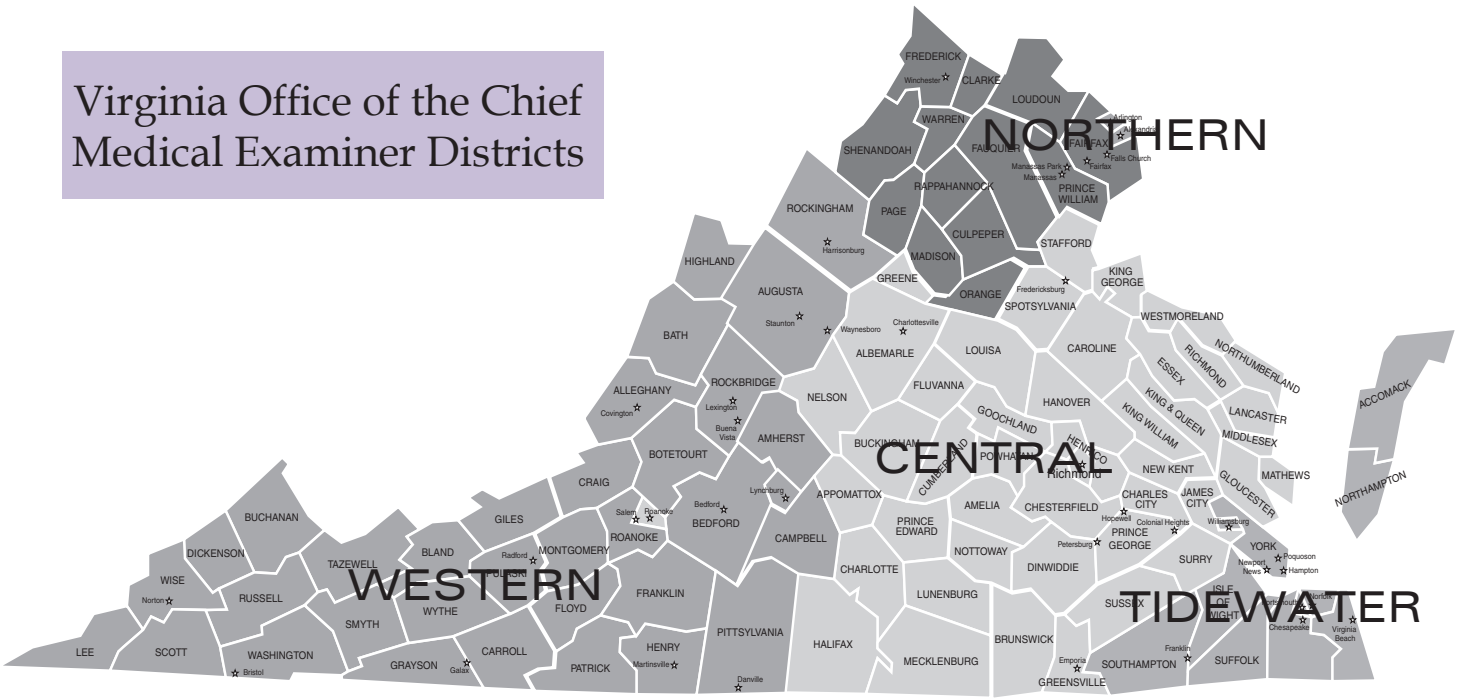
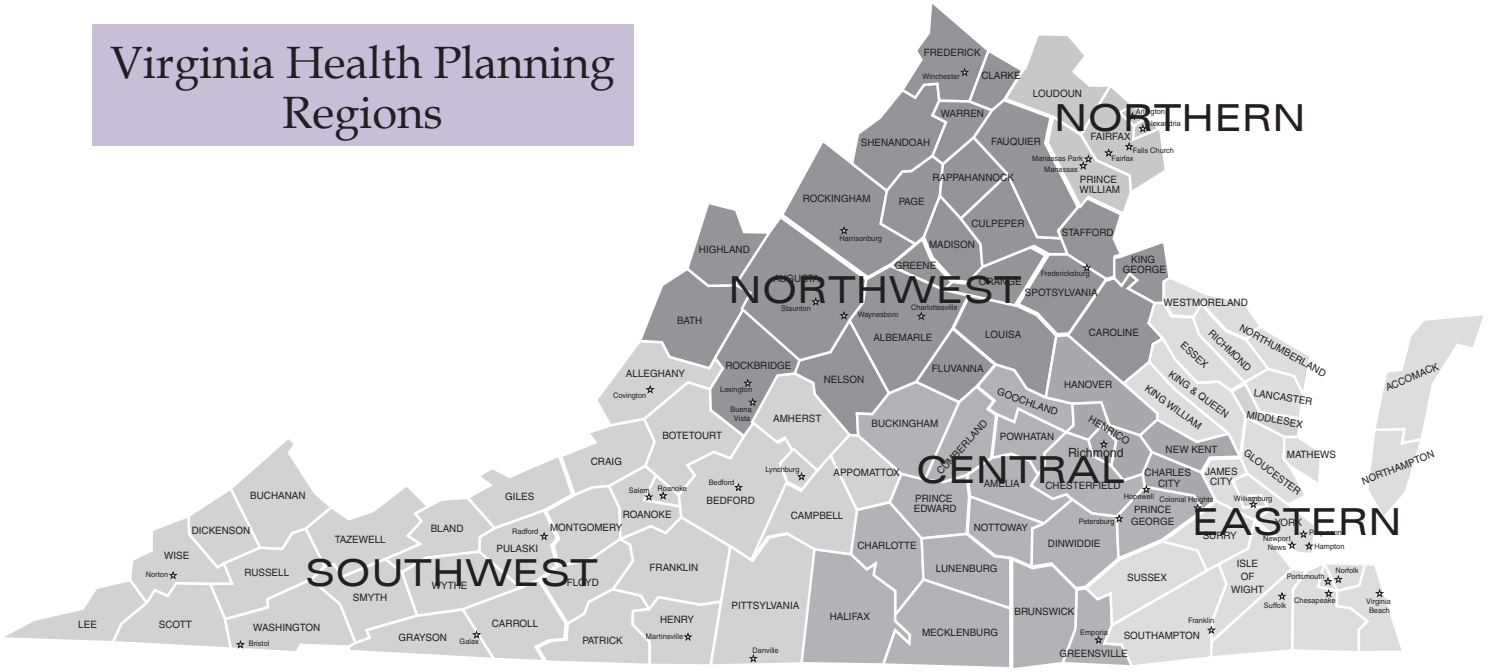
LOCALITY	MEDICAL EXAMINER DISTRICT (OCME)	HEALTH PLANNING REGION
Orange County	Northern	1. Northwest
Page County	Northern	1. Northwest
Patrick County	Western	3. Southwest
Petersburg City	Central	4. Central
Pittsylvania County	Western	3. Southwest
Poquoson City	Tidewater	5. Eastern
Portsmouth City	Tidewater	5. Eastern
Powhatan County	Central	4. Central
Prince Edward County	Central	4. Central
Prince George County	Central	4. Central
Prince William County	Northern	2. Northern
Pulaski County	Western	3. Southwest
Radford City	Western	3. Southwest
Rappahannock County	Northern	1. Northwest
Richmond City	Central	4. Central
Richmond County	Central	5. Eastern
Roanoke City	Western	3. Southwest
Roanoke County	Western	3. Southwest
Rockbridge County	Western	1. Northwest
Rockingham County	Western	1. Northwest
Russell County	Western	3. Southwest
Salem City	Western	3. Southwest
Scott County	Western	3. Southwest
Shenandoah County	Northern	1. Northwest
Smyth County	Western	3. Southwest
Southampton County	Tidewater	5. Eastern
Spotsylvania County	Central	1. Northwest
Stafford County	Central	1. Northwest
Staunton City	Western	1. Northwest
Suffolk City	Tidewater	5. Eastern
Surry County	Central	4. Central
Sussex County	Central	4. Central
Tazewell County	Western	3. Southwest
Virginia Beach City	Tidewater	5. Eastern
Warren County	Northern	1. Northwest
Washington County	Western	3. Southwest
Waynesboro City	Western	1. Northwest
Westmoreland County	Central	5. Eastern
Williamsburg City	Central	5. Eastern
Winchester City	Northern	1. Northwest
Wise County	Western	3. Southwest
Wythe County	Western	3. Southwest
York County	Tidewater	5. Eastern

Virginia Office of the Chief Medical Examiner Districts



Virginia Health Planning Regions



This report is available at the following website:
http://www.vdh.virginia.gov/medexam/childfatality.htm

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HRSA
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