

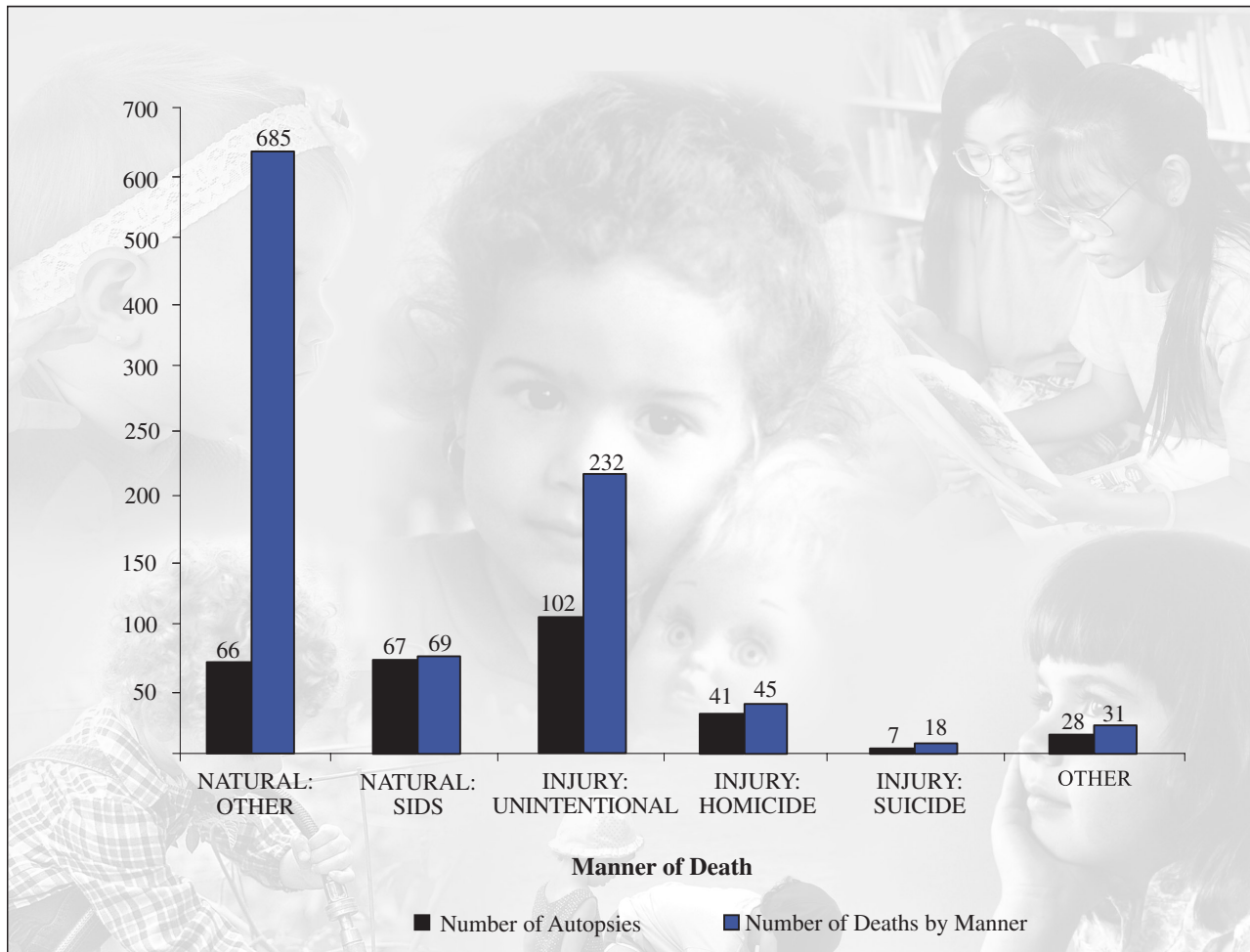
SECTION FIVE: Appendices

Appendix 1. Autopsies

The autopsy is a critical component in accurately determining the cause of death, especially in the case of sudden infant deaths. RSMo 194.117 requires that an autopsy be performed for all children from 1 week to 1 year of age who die in a sudden, unexplained manner.

Missouri’s Certified Child-Death Pathologist Network ensures autopsies performed on children, birth through age 17, are performed by professionals with expertise in forensic pediatrics. Additionally, network members are available to consult with coroners and others investigating child deaths. A listing of network members can be obtained through STAT or on the Internet at www.dss.state.mo.us/stat/cpn.htm

Figure 43. Number of Autopsies by Certified Child Death Pathologist for 2002



Appendix 2. Mandated Activities for Child Fatalities

Every county must have a multidisciplinary child fatality review panel (114 counties and City of St. Louis).

The county panel must consist of at least the following seven core members: prosecuting attorney, coroner/medical examiner, law enforcement representative, Children's Division representative, public health representative, juvenile officer and emergency medical services representative. Panels may elect to have additional members.

All deaths, ages birth to 17, must be reported to the coroner/medical examiner.

Children, age 1 week to 1 year, who die in a *sudden, unexplained* manner must have an autopsy.

A state CFRP must meet at least twice per year to review the program's progress and identify systemic needs and problems.

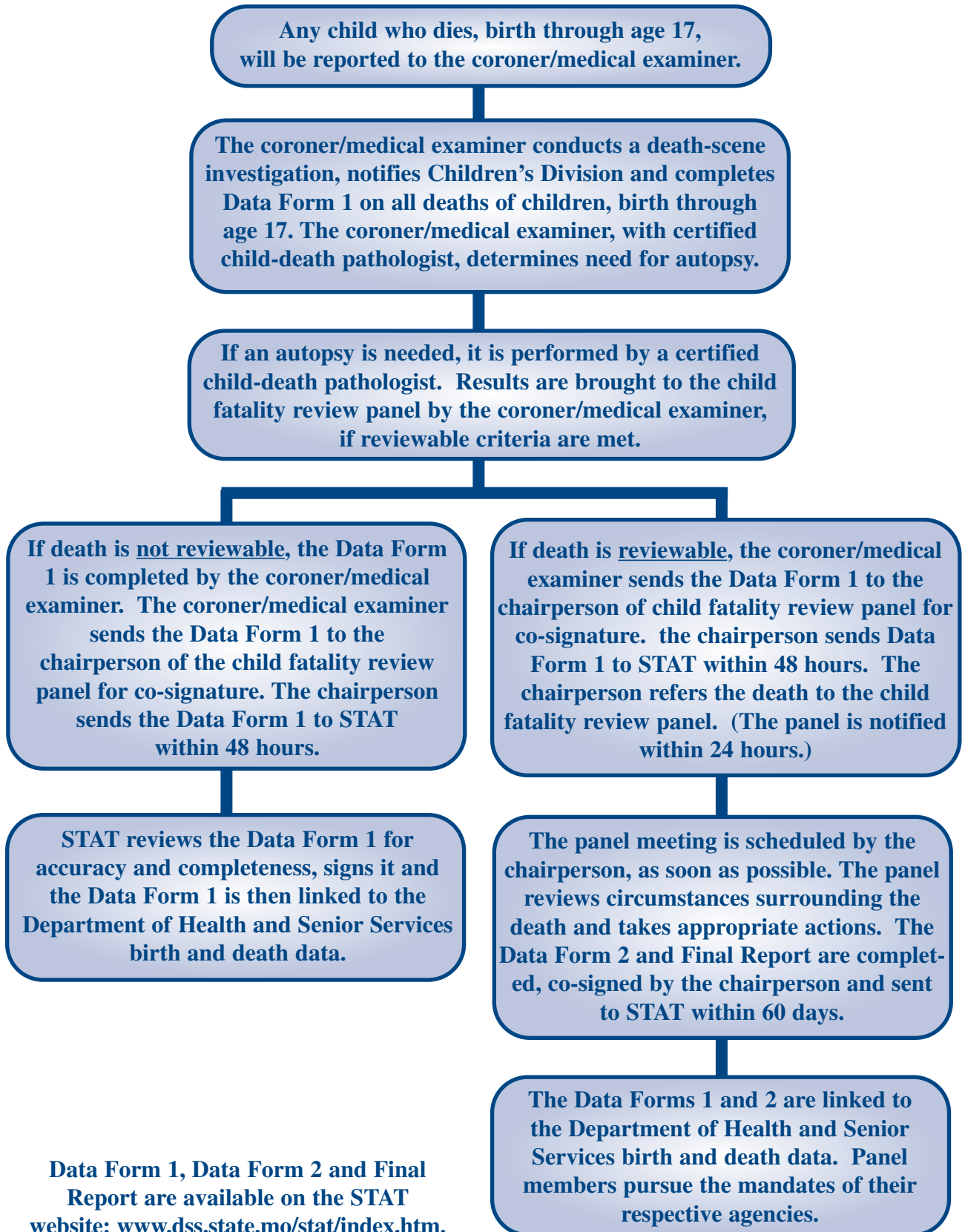
Panels must use uniform protocols and data collection forms.

Certified child-death pathologists must perform the autopsies.

Knowingly violating reporting requirements is a Class A misdemeanor.

When a child's death meets the criteria for review, activation of the panel must occur within 24 hours of the child's death, with a meeting scheduled as soon as practical.

Appendix 3. Review Process



Appendix 4. Missouri Incident Child Fatalities (Age less than 18) by County 2000-2002

County of Event	All Deaths			Reviewed Deaths			Injury Deaths			Census Population
	2000	2001	2002	2000	2001	2002	2000	2001	2002	
ADAIR	0	0	0	0	0	0	0	0	0	4,796
ANDREW	4	2	0	2	1	0	1	2	0	4,348
ATCHISON	1	0	0	0	0	0	0	0	0	1,547
AUDRAIN	6	2	3	3	1	2	3	1	2	6,360
BARRY	3	3	3	1	1	2	3	2	2	8,875
BARTON	0	2	0	0	1	0	0	2	0	3,445
BATES	3	2	4	3	1	2	3	1	2	4,419
BENTON	3	2	4	3	2	3	3	1	2	3,516
BOLLINGER	1	0	1	0	0	0	0	0	1	3,151
BOONE	50	38	50	15	13	9	10	11	6	30,902
BUCHANAN	14	13	12	8	6	6	7	4	4	20,937
BUTLER	9	7	19	5	1	5	3	2	2	9,886
CALDWELL	1	2	2	1	2	0	1	1	1	2,428
CALLAWAY	9	9	7	4	6	6	4	4	4	10,371
CAMDEN	6	7	6	3	5	0	2	5	4	7,508
CAPE GIRARDEAU	10	6	12	0	5	7	1	4	3	16,097
CARROLL	0	0	1	0	0	0	0	0	1	2,589
CARTER	0	1	0	0	1	0	0	1	0	1,493
CASS	11	5	11	5	3	8	4	1	5	23,307
CEDAR	2	2	2	2	2	1	2	2	1	3,382
CHARITON	1	1	1	0	1	0	1	1	0	1,997
CHRISTIAN	6	4	5	3	3	2	3	1	1	15,114
CLARK	0	1	1	0	1	0	0	1	0	1,852
CLAY	23	22	20	12	9	12	5	4	9	47,530
CLINTON	4	1	4	0	1	3	3	1	2	5,079
COLE	21	11	11	10	9	4	8	4	3	17,294
COOPER	1	3	4	0	3	3	0	3	4	3,801
CRAWFORD	6	1	2	5	0	2	6	1	1	5,990
DADE	0	2	1	0	2	1	0	2	1	1,928
DALLAS	4	6	1	3	2	1	2	1	1	4,302
DAVISS	2	2	1	1	2	1	1	2	1	2,162
DE KALB	2	1	0	2	1	0	2	0	0	2,403
DENT	0	1	1	0	0	0	0	0	0	3,716
DOUGLAS	0	5	0	0	2	0	0	2	0	3,382
DUNKLIN	10	2	6	5	0	3	2	0	2	8,613
FRANKLIN	12	12	14	6	11	11	5	9	7	25,661
GASCONADE	2	2	2	1	1	2	2	1	2	3,800
GENTRY	1	0	0	0	0	0	0	0	0	1,782
GREENE	52	55	53	6	12	16	7	10	11	53,501
GRUNDY	1	3	0	0	1	0	1	1	0	2,424
HARRISON	1	1	0	1	1	0	1	0	0	2,103
HENRY	6	3	1	4	3	1	4	1	0	5,220
HICKORY	1	1	4	0	1	2	1	1	4	1,782
HOLT	0	0	1	0	0	0	0	0	0	1,272
HOWARD	0	1	1	0	1	0	0	1	0	2,451
HOWELL	8	4	9	4	3	6	5	3	3	9,676
IRON	3	2	2	3	2	1	2	2	0	2,673
JACKSON	130	181	169	65	71	73	32	45	39	168,766
JASPER	11	12	12	3	9	6	6	5	4	26,952
JEFFERSON	29	16	23	18	12	12	15	10	9	55,270
JOHNSON	6	9	7	4	6	5	4	5	4	12,124

Appendix 4. Missouri Incident Child Fatalities (Age less than 18) by County 2000-2002

KNOX	1	0	0	1	0	0	0	0	0	1,087
LACLEDE	5	7	10	4	3	6	1	1	3	8,675
LAFAYETTE	5	3	2	4	2	0	4	1	0	8,636
LAWRENCE	8	2	6	4	1	6	3	1	1	9,578
LEWIS	2	0	0	0	0	0	2	0	0	2,627
LINCOLN	10	6	4	6	4	3	4	4	3	11,691
LINN	0	0	3	0	0	3	0	0	3	3,489
LIVINGSTON	1	4	4	1	1	2	0	1	3	3,553
MCDONALD	8	3	8	8	3	7	5	2	7	6,259
MACON	2	7	1	2	4	0	0	2	0	3,820
MADISON	1	1	2	1	0	1	0	0	1	2,904
MARIES	1	1	1	1	1	1	1	1	0	2,318
MARION	3	4	5	1	0	2	1	0	2	7,269
MERCER	1	1	0	1	1	0	1	1	0	864
MILLER	3	0	1	1	0	0	1	0	0	6,198
MISSISSIPPI	4	2	2	2	1	2	2	1	1	3,534
MONITEAU	6	2	1	6	2	1	5	2	0	3,836
MONROE	3	1	1	1	1	1	2	1	0	2,410
MONTGOMERY	3	2	1	2	2	1	2	2	1	3,085
MORGAN	2	2	3	1	2	3	0	1	1	4,595
NEW MADRID	2	6	2	0	0	0	2	4	2	5,223
NEWTON	20	16	29	6	4	6	6	4	8	13,819
NODAWAY	2	1	1	0	0	1	2	0	1	4,245
OREGON	2	0	0	1	0	0	0	0	0	2,515
OSAGE	2	5	2	0	2	2	2	4	0	3,437
OZARK	2	1	0	2	0	0	1	0	0	2,107
PEMISCOT	6	1	3	2	1	1	1	1	0	6,015
PERRY	3	3	2	3	1	0	3	1	0	4,715
PETTIS	5	6	8	3	4	6	2	3	4	10,377
PHELPS	12	3	9	6	3	1	8	0	1	9,442
PIKE	2	1	2	1	0	1	0	1	1	4,293
PLATTE	17	5	7	3	2	5	3	2	2	19,026
POLK	5	2	0	0	2	0	2	0	0	6,947
PULASKI	4	6	4	2	4	3	2	3	1	11,338
PUTNAM	1	0	0	0	0	0	1	0	0	1,254
RALLS	1	4	0	1	2	0	1	3	0	2,429
RANDOLPH	2	0	5	1	0	0	1	0	3	5,874
RAY	2	3	6	0	2	4	1	2	2	6,433
REYNOLDS	0	4	2	0	2	1	0	1	1	1,608
RIPLEY	1	0	3	1	0	2	1	0	2	3,352
ST CHARLES	31	26	28	15	12	10	9	9	7	82,248
ST CLAIR	1	1	0	1	0	0	0	1	0	2,219
ST FRANCOIS	14	9	7	11	7	4	3	4	3	13,335
ST LOUIS COUNTY	186	193	190	62	54	54	26	32	29	255,991
STE GENEVIEVE	3	3	2	1	2	0	2	2	1	4,749
SALINE	3	6	5	1	3	2	1	3	1	5,773
SCHUYLER	1	1	1	0	0	1	1	0	1	1,027
SCOTLAND	1	0	0	0	0	0	0	0	0	1,423
SCOTT	7	8	10	4	3	8	4	1	7	11,085
SHANNON	0	1	0	0	1	0	0	1	0	2,199
SHELBY	1	0	0	1	0	0	1	0	0	1,729
STODDARD	3	4	1	2	2	0	2	0	1	7,093
STONE	4	7	6	4	4	6	1	2	3	6,138
SULLIVAN	1	0	1	0	0	1	0	0	0	1,807
TANEY	6	3	3	3	1	2	5	1	2	8,912
TEXAS	6	4	2	2	2	2	3	1	0	5,734
VERNON	3	4	9	1	2	5	1	1	4	5,436

**Appendix 4. Missouri Incident Child Fatalities (Age less than 18)
by County 2000-2002**

WARREN	2	1	8	2	1	8	2	1	6	6,586
WASHINGTON	2	5	3	1	5	1	1	4	1	6,205
WAYNE	1	1	1	1	1	0	0	0	0	3,079
WEBSTER	4	3	4	1	2	3	2	1	1	8,957
WORTH	0	0	0	0	0	0	0	0	0	579
WRIGHT	5	0	4	2	0	2	1	0	3	4,877
ST LOUIS CITY	160	169	162	70	72	72	31	43	31	89,657
STATE TOTAL	1,081	1,032	1,080	475	452	471	334	318	303	1,427,692

Appendix 5. Missouri Incident Child Fatalities (Age less than 18) by Age, Sex and Race 2000-2002

Characteristic	All Deaths			Reviewed Deaths			Injury Deaths		
	2000	2001	2002	2000	2001	2002	2000	2001	2002
Age of Child									
0	616	611	673	192	166	186	44	52	47
1	32	35	45	17	17	30	9	14	14
2	31	26	31	22	17	21	17	15	13
3	25	27	17	19	15	13	14	11	11
4	12	14	15	8	12	7	7	10	5
5	21	12	15	13	8	8	13	7	10
6	21	9	13	13	5	9	12	5	10
7	20	14	14	11	9	10	11	8	7
8	17	16	9	10	9	5	10	7	4
9	16	8	10	8	4	7	6	4	6
10	22	17	19	12	10	11	10	11	11
11	14	15	14	10	10	11	7	9	8
12	13	10	14	10	6	7	7	4	7
13	20	15	23	13	8	16	12	7	13
14	35	30	22	15	24	14	22	22	14
15	37	47	27	26	35	23	24	33	22
16	63	52	55	33	37	44	52	39	46
17	65	73	63	42	59	48	56	59	54
20*	0	0	1	0	0	1	0	0	1
21**	1	0	0	1	0	0	1	0	0
Unknown***	0	1	0	0	1	0	0	1	0
	1,081	1,032	1,080	475	452	471	334	318	303
Sex of Child									
Male	618	612	616	275	269	287	215	199	186
Female	463	420	464	200	183	184	119	119	117
	1,081	1,032	1,080	475	452	471	334	318	303
Race of Child									
White	787	706	758	320	306	311	262	221	224
Black	284	310	303	152	141	153	69	93	73
Other	10	16	19	3	5	7	3	4	6
	1,081	1,032	1,080	475	452	471	334	318	303

* Child disappeared at age 16, remains were found 4 years later in 2002.

** Child disappeared at age 15, remains were found 6 years later in 2000.

*** Child believed to be 3 years old at time of death.

Appendix 6. Definitions of Important Terms and Variables

Certified Death:

Death included in the Department of Health and Senior Services, Missouri Center for Health Statistics (MCHS) mortality file, **reported by the death certificate.**

Missouri Incident Death:

Death within Missouri of a child younger than 18 years. On the basis of data from the CFRP Data Form 1 or Data Form 2, one of the following is true:

- The child died as a result of an injury which occurred in Missouri.
- The child died as a result of a natural (non-injury) cause which occurred, or is assumed to have occurred, within Missouri. (This excludes deaths due to illness or other natural cause which occurred outside Missouri; e.g., a non-Missouri residence.)
- The child was born in Missouri and died as a newborn (within ten days of birth) without having left the state.

CFRP Cause of Death:

Cause of death as reported on CFRP Data Forms 1 and 2. The forms include a category for natural cause which includes congenital anomalies, perinatal conditions, and Sudden Infant Death Syndrome (SIDS), sudden unexplained death and injuries classified by the type of agent or force which caused the injury (i.e., vehicular, drowning, firearm, fall, poisoning). The CFRP provides for an indication of whether or not the injury was inflicted, that is, whether it occurred as a result of the action of another person, without regard to intent or purpose of the action. If the case is referred to the CFRP panel for review, Data Form 2 is completed to report the findings of the panel. The Data Form 2 report includes information relevant to possible child abuse and neglect and information related to criminal proceedings.

Mortality File Cause of Death:

The Department of Health and Senior Services Mortality File lists cause of death as reported by the ICD-10 code on Missouri death certificates. The ICD-10 coding classification system includes natural causes such as various diseases, congenital anomalies, perinatal conditions and certain ill-defined conditions (which includes SIDS). The injury classification includes those identified as “accidents” (unintentional), those considered intentional (homicide, suicide) and those with undetermined intent. Injury deaths are further classified by the type of agent or force which caused the injury (i.e., motor vehicle crash, firearm, poisoning, burn, fall, drowning).

Mortality File Manner of Death:

Cause of death reported in mortality file was formatted to conform to “Manner of Death” variable in the death certificate. This includes six categories based on the ICD-10 code: Natural; Accident; Suicide; Homicide; Undetermined; and Pending Investigation.

Appendix 6. Definitions of Important Terms and Variables

Sudden Infant Death Syndrome (SIDS):

Sudden death 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 death scene and review of clinical and social history.

- Mortality File SIDS: Death by SIDS, as defined operationally by being reported in the mortality file associated with the ICD-10 code 7980.
- CFRP SIDS: Death by SIDS, as defined operationally by being reported in the CFRP file, from Data Form 1 and Data Form 2, as due to SIDS.

Sudden, Unexplained Infant Death:

Sudden death of an infant less than one year of age due to unexplained cause, requiring the postmortem examination, scene investigation or review of social and medical history. Defined operationally by being reported as sudden, unexplained death on Data Form 1.

Reviewable Death:

Death which has been reported by Data Form 1 as requiring review by the CFRP panel, whether or not the review has yet been completed and reported. The Data Form 1 report is required for all child deaths that occur in Missouri, and includes an indication of whether a review of that death will be required. If Data Form 1 indicates a reviewable death, Data Form 2 should be completed after the review.

Reviewed Death:

Death that has been reviewed by a local CFRP panel and reported on Data Form 2.

Mortality File County of Death:

The county, reported in the mortality file, in which the death was officially recorded. May be a Missouri or non-Missouri county.

CFRP County of Death:

The county, reported by the Data Form 1 and Data Form 2, in which the death occurred. Only deaths in Missouri are included in the CFRP database.

CFRP County of Incident:

The county, reported by Data Form 1 and Data Form 2, in which the fatal illness, injury or event occurred. If the county of incident is a Missouri county, the death is by definition a Missouri incident death. If the county of incident is outside the state of Missouri, the death is by definition not a Missouri incident death. If the county is in Missouri, but the county of incident is not, only identifying information (Section A of Data Form 1) is requested.

CFRP County of Residence:

The county, reported by Data Form 1 or Data Form 2, as the county of decedent's residence may be a Missouri or non-Missouri county. If the child is a newborn, the newborn's county of residence is the mother's county of residence.

CFRP Region:

Location, reported by Data Form 1 and Data Form 2, in which the fatal illness, injury or event occurred, formatted to conform to the seven geographic regions defined for the CFRP program.

Appendix 6. Definitions of Important Terms and Variables

Children’s Division Child Abuse/Neglect (CA/N):

Death for which the Children’s Division reports probable cause findings for child abuse or neglect. Probable cause may result from Children’s Division investigation or court adjudication. Abuse refers to physical, sexual or emotional maltreatment or injury inflicted on a child, other than accidentally, by those responsible for the child’s care, custody and control. Neglect refers to failure by those responsible for the child’s care, custody and control to provide the proper or necessary support, education, nutrition, medical care or other care necessary for the child’s well-being.

CFRP Fatal Child Abuse and Neglect:

Child death resulting directly from inflicted physical injury and/or negligent treatment by parent or caretaker, regardless of motive or intent.

Mortality File Child Abuse/Neglect:

Death for which the ICD-10 code in the mortality file indicates abuse or neglect. Relevant ICD-10 codes are 904.0, 967 and 968.4. these abuse/neglect deaths are usually under-reported relative to those reported by the Children’s Division as substantiated child abuse or neglect.

Mortality File Homicide Death:

Manner of death due to homicide, as reported by ICD-10 codes 960-979.

Mortality File Suicide Death:

Manner of death due to suicide, as reported by ICD-10 codes 950-959.

Mortality File Autopsy:

Indication from mortality file that decedent was autopsied.

CFRP Autopsy:

Indication from CFRP file that decedent was autopsied and how the autopsy was paid for.

Appendix 7. Death Certificate Manner of Death

(Summarized from: *A Guide for Manner of Death Classification*, draft presented to the National Association of Medical Examiners, September 24, 2001, prepared by Randy Hanzlick, M.D., John Hunsaker III, M.D., and Gregory J. Davis, M.D.)

All states have a standard death certificate that is based upon a model certificate called the US Standard Certificate of Death. The *certifier of death* is the physician, medical examiner or coroner who completes the cause of death section of the certificate that also includes details about the circumstances surrounding the death. Manner of death is one of the items that must be reported on the death certificate and a classification of death based on the circumstances surrounding a particular cause of death and how that cause came into play. In most states, the acceptable options for manner of death classification are: Natural, Accident, Suicide, Homicide and Undetermined.

The death certificate is used for two major purposes. One is to serve as legal documentation that a specific individual has died. In general, the death certificate serves as legal proof that death has occurred, but **not** as legal proof of the cause of death. The second major purpose of the death certificate is to provide information for mortality statistics that may be used to assess the nation's health, cause of morbidity and mortality and developing priorities for funding and programs that involve public health and safety issues.

Manner of death is an American invention. A place to classify manner of death was added to the US Standard Certificate of Death in 1910. It was added to the death certificate by public health officials to assist in clarifying the circumstances of death and how an injury was sustained - not as a legally binding opinion. In general, the certifier of death completes the cause of death section and attest that, *to the best of the certifier's knowledge*, the person stated died of the cause(s) and circumstances reported on the death certificate. Information on the death certificate may be changed, if needed.

There are basic, general "rules of thumb" for classifying manner of death.

- Natural deaths are due solely or nearly totally to disease and/or the aging process.
- Accident applies when an injury or poisoning occurred with intent to harm or cause death. In essence, the fatal outcome was unintentional.
- Suicide results from an injury or poisoning as a result of an intentional, self-inflicted act committed to do self-harm or cause the death of one's self.
- Homicide occurs when death results from a volitional act committed by another person to cause fear, harm or death. Intent to kill is a common element but is **not** required for classification as homicide.
- Undetermined is used when the information pointing to one manner of death is no more compelling than one or more other competing manners of death when all available information is considered.

In evaluating the manner of death in cases involving external causes or factors (such as injury or poisoning), injuries are often categorized as "intentional" (such as inflicted injury in child abuse) or "unintentional" (such as falling from a building). Intent is much more apparent in some cases than in others and it is often difficult to assess a victim's or perpetrator's intent. The concept of "voluntary acts" or volition is helpful. In general, if a person's death results at the "hands of another" who committed a harmful volitional act directed at the victim, the death may be considered a homicide from the death investigation standpoint.

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Child Fatality Review Program**

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