

CHILD ABUSE DEATH REVIEW- PERPETRATOR RISK FACTOR STUDY

Ilene R. Berson, Ph.D.
Svetlana Yampolskaya, Ph.D.
Mary Ann Kershaw, B.S.
Paul Zandbergen, Ph.D.
Nancy Lemrow, M.S.

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Louis de la Parte Florida Mental Health Institute

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EXECUTIVE SUMMARY

This study, developed and implemented by the Louis de la Parte Florida Mental Health Institute in collaboration with the Florida Department of Health Children's Medical Services Division for Prevention and Interventions, examined fatal child maltreatment cases that occurred over a four year period (1999-2002) in the State of Florida. Mental health risk and protective factors associated with perpetrators and child victims were explored to better understand the etiology of child abuse.

The study design consisted of a two-group comparison. The first cohort was comprised of data collected through reviews of the records of children who died in Florida during the period January 1, 1999 to December 30, 2002 as a result of child abuse or neglect and who also had at least one prior report of child maltreatment. All fatal child maltreatment cases that occurred over a four year period (1999-2002) in the State and were reviewed by the Florida child death review system were included in the analyses and totaled 126 cases. These child death review files consisted of Department of Children and Family (DCF) records as well as other available documentation, such as the autopsy report, medical records, law enforcement report, social services history, and media coverage. Variables from the review process included the child's cause of death, perpetrator characteristics, family dynamics, and history of involvement with social services. The second cohort included DCF records of child victims of maltreatment in which (a) the child was removed and subsequently reunification with parents or caregivers, or (b) services were provided to the family while the child continued to live with his/her parents or caregivers.

The researchers triangulated the case record data with information from administrative datasets (i.e., Medicaid claims data and Baker Act data) to better gauge existing risk and protective factors among perpetrators of child maltreatment as well as the child victims (e.g., mental health issues or substance abuse). Additionally, a Geographic Information System (GIS) Analysis was used to compile, process, and analyze the data for the study.

Statistical analyses consisted of logistic regression to examine the probabilities of being involved in abuse or neglect cases that resulted in death. Bivariate descriptive analyses were performed to describe the sample and the association between each predictor with the outcome for the child. Odds ratios were calculated to estimate the likelihood of being involved in a maltreatment incident that resulted in child death with each predictor. Multivariate analyses were performed to test the multiple risk factors effect on the outcome of interest. All statistical tests were performed at the alpha = .05 level of significance.

The research results suggested that there are some general characteristics that perpetrators of child maltreatment tend to share, but no single profile

differentiated a fatal abuser from a perpetrator of nonfatal child maltreatment. Fatal child maltreatment was more prevalent if the perpetrator did not live in the home with the child and was not the child's legal parent. Substance abuse and a history of DJJ involvement also increased risk for the incident to result in a fatality. Conversely, the age of the perpetrator, minority status, level of education, presence of a history of mental health issues, child maltreatment history, criminal history, or number of arrests did not differentiate perpetrators of fatal from nonfatal cases.

The GIS analysis showed that child fatality rates for rural counties were nearly twice as high as for urban counties; however, this did not appear to be a result of differential availability of services in rural versus urban areas. The disparities that exist between rural and urban locales seem to highlight the barriers to care that exist in rural areas, including geographical isolation, poverty, transportation problems, and stigma. Although services may be available, utilization may be hindered as a result of a greater sense of autonomy in a more remote area and limited access to quality case management. Parenting in a context of psychosocial stress, isolation, and limited support can contribute to a set of necessary conditions for abuse.

When other perpetrator characteristics were examined, presence of domestic violence history and previous abuse reports were significantly associated with the type of child death. In particular, perpetrators who had a history of domestic violence, regardless of whether they were the target of the aggression or had instigated the violence, were more likely to be responsible for a child fatality due to neglect than abuse. However, when perpetrators who had a history of initiating domestic violence were examined as a separate group from individuals who were victims of violence, perpetrators with a history of committing domestic violence were four times more likely to fatally abuse a child. Analysis of child level characteristics also was conducted and revealed differential patterns of abuse and neglect that resulted in fatal maltreatment incidents.

The death of a child is a sentinel event in a community that can mobilize action and foster a response to the contributory factors associated with these incidents. Although fatal victimization of children comprises a heterogeneous class of events, services and policies can be implemented that respond to the complex interplay of correlates. Recommendations provided seek to mobilize communities to take notable action in the form of support, education, and organizational practices for the benefit of children and their families.

Child Abuse Death Review— Perpetrator Risk Factor Study

INTRODUCTION

Child maltreatment fatalities have been a significant problem, placing child protective agencies under intense scrutiny. Despite the persistence of the problem, most research in the field has focused on analyzing the phenomenon at the child level. However, perpetrator characteristics may influence the probability and timing of fatal abuse. Information about perpetrators, such as criminal history, poverty level, and history of abuse, may represent more influential predictors of fatal maltreatment than child or case characteristics alone. Nonetheless, there is a paucity of research to identify the socio-demographic characteristics of perpetrators of fatal child maltreatment and the social, cultural, and economic factors that precipitate these child deaths.

In 2004, it was confirmed that 1,490 children in the United States died as a result of maltreatment by their parent or caretaker; 36% of these deaths were from neglect, 28% from physical abuse, and 30% from multiple maltreatment types (U.S. Department of Health and Human Services, 2006). This number is not inclusive of those children whose deaths had some indicators of abuse or neglect but could not be confirmed as homicides. Estimation procedures and mathematical models have been used to approximate the actual number of child victims of fatal child maltreatment, and research suggests that child abuse deaths are underreported by 60%-85% (Peddle, Wang, Diaz, & Reid, 2002).

Age of the child victim has often been cited as a factor associated with greater risk for severe physical abuse and fatality (Finkelhor & Ormrod, 2001; Hegar, Zravin, & Orme, 1994; Lawrence, 2004). Fatal outcomes of child abuse are significantly more pervasive among young children. Young children are both physically more vulnerable to fatal trauma from abuse and more demanding on their caregivers. Although there is not conclusive evidence of a single antecedent, the temperament and behavior of the child combined with the caregiver's expectations can contribute to adverse parent-child interactions. Common triggers of fatal maltreatment are young children's crying or toileting accidents (Kasim, Cheah, & Shafie, 1995; U.S. Advisory Board on Child Abuse and Neglect, 1995). However, some rage-based assaults are triggered by stimuli other than the child, with domestic violence appearing to be a significant factor in abuse deaths (Lucas et al., 2002; U.S. Advisory Board on Child Abuse and Neglect, 1995). After the age of 5 years, children are less likely to be killed by their caregiver (Lyman, et al., 2003; McClain et al., 1994). In 2004, over four-fifths (81%) of victims in the U.S. were less than four years of age, with 45% of all victims being under one year of age. Only 7.5% of child fatality victims are older than eight years of age (U.S. Department of Health and Human Services, 2006).

The findings are less clear about gender differences in child fatalities due to child maltreatment. The 2004 data indicate that slightly more males are victims than females (55.5% and 44.5% respectively) (U.S. Department of Health and Human Services, 2006). Moreover, an analysis of the research literature indicates that throughout

childhood boys are more prone to severe physical child abuse injury and that those injuries are more likely to be perpetrated by males (Lucas et al., 2002; Hegar, Zravin, & Orme, 1994). However, this trend is not consistent for all age groups, and more victims (63%) between the ages of 6 and 9 are likely to be female (U.S. Department of Health and Human Services, 2006).

In studies of fatal child maltreatment cases, a child's race has been identified as a factor associated with severity of abuse-related injuries (Hegar, Zravin, & Orme, 1994; Lucas et al., 2002). African-American children are disproportionately over-represented in the child welfare system and among child maltreatment fatalities. The 2004 data reports that African American children comprised 27% of the child fatalities found to be due to abuse (U.S. Department of Health and Human Services, 2006). However, Hutchison, Fabelo, Kendal-Wilson, and Schwarz (2002) note that "it is not clear whether this finding of over-representation is due to the increased vulnerability of African-American children, or to race-based bias in reporting and investigation" (p. 4).

No clear profile of the perpetrator emerges from the research literature (Milner & Chilamkurti, 1991). The 2004 data indicate that fatality victims of child maltreatment are most frequently maltreated by one or both of their biological parents (78.9%), with 31.3% of the deaths attributed to either the male or female parent acting alone (U.S. Department of Health and Human Services, 2006). The presence of a biologically unrelated adult in the home increases the risk of maltreatment, but no risk has been associated with related adults in the household (Smithey, 1998; Stiffman, Schnitzer, Adam, Krus, & Ewigman, 2002; Stiffman et al., 1999). National data for 2004 indicate that the perpetrators of fatalities are considerably younger than maltreatment perpetrators in general. Nearly two-thirds (62.3%) are younger than 30 years of age, compared with 38.7% of all maltreatment perpetrators (U.S. Department of Health and Human Services, 2006). No significant gender differences have been found when perpetrators of maltreatment fatalities are compared with maltreatment perpetrators in general. Females are more likely to be the perpetrators in both instances, with 59.7% of the fatalities being perpetrated by females and 60.2% of maltreatment perpetrators in general being female (U.S. Department of Health and Human Services, 2006). Fatalities in which the mother is implicated tend to be attributed to negligence (i.e., inadequate supervision resulting in a preventable accident) or neglect (i.e., failure to provide food or medical attention). Females are most often held responsible when the death of the child is due to bathtub drowning, a fire started by unsupervised children, dehydration, and starvation (Margolin, 1990).

Although several family characteristics have been associated with fatal injury in children, there are some inconsistencies in findings. Family characteristics that have been associated with child maltreatment fatalities include young parental age (Adinkrah, 2000); unemployment or poverty (Lawrence, 2004); less than 12 years of education (Adinkrah, 2000); unmarried parents (Adinkrah, 2000); small social networks with fewer contacts or connections outside the home (Lawrence, 2004); and life stressors causing disruption in the family structure (Lucas et al., 2002). Stiffman et al. (2002) have reported in their research findings that living with only one biological parent does not increase the risk of fatal child maltreatment. Conversely, the mental health status of the

caregiver and substance abuse have been found to be associated with fatal child maltreatment, hindering the caregiver's capability to adequately gauge and mediate his/her intentions and actions (Dobson & Sales, 2000; Kunst & Reed, 1999; Lawrence, 2004; Mugavin, 2005; Reder & Duncan, 1999; Stanton, Simpson, & Wouldes, 2000). A review of the data on fatalities due to maltreatment suggests that poverty is a predictor of child abuse and neglect, and there is no empirical evidence that these findings are merely the product of a bias predisposing toward overestimates of child maltreatment among those with lower socioeconomic status (Drake & Zuravin, 1998).

Research indicates that the majority of child fatalities due to maltreatment involve children and families that have never come to the attention of the local child protective agencies (Hicks & Gaughan, 1995; Sorenson & Peterson, 1994; U.S. Department of Health and Human Services, 2006). When the aggregate statistics for prior contact with CPS agencies are examined, it is found that only 3.9% of the children had been returned to their family immediately prior to their death, and only 2.7% of the victims were reported to be in foster care at the time of the fatal incident. In addition, 18.7% of the families of child maltreatment fatalities had received family preservation services in the five years prior to the deaths (U.S. Department of Health and Human Services, 2006). These cases involving a single fatal episode of maltreatment cannot be prevented through the traditional child protection approach. In fact, under-utilization of community support services has been found to be associated with child maltreatment fatalities (Hicks & Gaughan, 1995; Sorenson & Peterson, 1994).

Although few conclusions can be drawn from existing research on child fatalities due to maltreatment, conceptual models have identified three central factors that can serve as a fundamental determinant of injury, including human characteristics, the environmental context, and the motivation behind the action (Cubbin & Smith, 2002). Each of these factors can provide an important area of focus for study. The presence of a biologically unrelated adult in the home appears to increase the likelihood of maltreatment leading to fatality, as does substance abuse by adults caring for the child. However, the interaction between these risks as well as the impact of other variables warrant further study. This includes the potential harm associated with adults in the home with mental health-related problems as well as variance in risk factors based on the child and perpetrator's demographic characteristics. Additionally, little attention has been given to neighborhood and regional differences in child maltreatment fatalities, although community characteristics such as high concentrations of poverty have been linked to limited access to services, diminished residential stability, increased crime, and social norms that promulgate risk to children's well being (Cubbin & Smith, 2002). More in-depth exploration of these variables may enhance the understanding of the problem of fatalities due to child maltreatment and may facilitate the development of effective strategies for preventing such fatalities.

An ongoing study, involving a collaboration between the University of South Florida Louis de la Parte Florida Mental Health Institute and the Children's Medical Services in the Florida Department of Health, has been examining specific adult characteristics and how they relate to becoming a child abuse perpetrator. This study provides an overview of the Florida statewide multidisciplinary, multi-agency child death review system, and

explores results of the research on fatal child maltreatment cases that occurred over a four year period (1999-2002) in the State. The variables that were identified in the literature as having the highest contribution to child fatality incidents were included in the protocol to determine if there are case characteristics that differentiate patterns of harm for children involved in the child protection system. Mental health risk and protective factors associated with perpetrators and child victims also were examined. These factors have been explored to better understand the etiology of child abuse. Such information may be useful in reviewing alleged abuse cases and in determining appropriate interventions. This knowledge may assist professionals in designing prevention programs that have a higher likelihood of being effective.

STUDY 1: A COMPARATIVE ANALYSIS OF CHILD MALTREATMENT PERPETRATORS

RESEARCH DESIGN

Participants

Participants in the study were 350 perpetrators involved in child maltreatment cases in Florida during 1999-2002. Of this sample 54 perpetrators were involved with the same child. The primary group of perpetrators consisted of 290 persons. The analyses were done separately for these two groups of perpetrators. Primary perpetrator ages at the time of the incident ranged from 16 to 80 ($M = 32.97$, $SD = 11.08$). Secondary perpetrator ages at the time of the incident ranged from 18 to 50 ($M = 32.42$, $SD = 7.98$). Race/ethnicity of primary perpetrators was 39% African American, 57% Caucasian, and 4% Hispanic. Gender distribution consisted of 43% males and 57% females. Similarly, the majority of secondary perpetrators were Caucasian (59%), followed by African American (35%), and Hispanic (6%).

Forty-six percent of all perpetrators did not finish high school, and only about 6% had some college and training. However, almost 15% of primary perpetrators graduated from college.

Design and Procedure

The study design consisted of a two-group comparison. The first cohort was comprised of data collected through reviews of the records of children who died in Florida during the period January 1, 1999 to December 30, 2002 as a result of child abuse or neglect and who also had at least one prior report of child maltreatment. All fatal child maltreatment cases that occurred over a four year period (1999-2002) in the State and were reviewed by the Florida child death review system were included in the analysis and totaled 126 cases. These child death review files consisted of Department of Children and Family (DCF) records as well as other available documentation, such as the autopsy report, medical records, law enforcement report, social services history, and media coverage. Variables from the review process included the child's cause of death, perpetrator characteristics, family dynamics, and history of involvement with social

services. The second cohort included DCF records of child victims of maltreatment in which (a) the child was removed and subsequently reunification with parents or caregivers, or (b) services were provided to the family while the child continued to live with his/her parents or caregivers.

The researchers triangulated the case record data with information from administrative datasets (i.e., Medicaid claims data and Baker Act data) to better gauge existing risk and protective factors among perpetrators of child maltreatment as well as the child victims (e.g., mental health issues or substance abuse). Additionally, a Geographic Information System (GIS) Analysis was used to compile, process, and analyze the data for the study. Most of this data was at the level of individual counties, but more detailed enumeration areas or locations were used where available and deemed pertinent. The GIS database consisted of the following datasets: number of child abuse death cases (total and by type); crimes and arrests (total and by type), domestic violence offenses and arrests (by type); maltreatment cases (reported and substantiated); demographics (i.e., total population, age, race, income, education and employment); and social services (number of type of social services, such as daycare facilities, counseling, crisis intervention, social workers, etc.).

The target time period for these datasets was 1999 – 2002, although some data were only available for a single year (e.g., census demographics for 2000 only). Where needed, data were aggregated to the level of individual counties for further analysis. Datasets available for multiple years were modified to ensure they could be meaningfully analyzed in conjunction with data available for a single year. Those variables identified as being most relevant for detailed analysis were normalized where necessary by using total population, total number of families, total number of children, or other variables to create ratio type data that could be compared across all counties in statistical analysis.

Selection of Controls

Because randomization was not possible and it was hypothesized that characteristics of the victims might affect the case outcomes, the propensity score method was used to control for initial differences across multiple background child characteristics (Rosenbaum & Rubin, 1984) and achieve group equivalence. Propensity scoring is a statistical means to ensure that observed differences between groups are not due to the influence of confounding variables. The objective was to select comparison samples that were similar to the fatal child maltreatment cohort on the demographic covariates (i.e., the log-odds probability). Subjects in the two latter cohorts were matched with a corresponding subject from the death review cohort based on the proximity of their propensity scores, thus balancing the effects of the confounding variables. As a result, any significant differences that were identified in the results could be attributed to true differences between the cohorts and not differences in these baseline covariates.

This method can simultaneously accommodate several divergent variables by allowing for summation of all background and other relevant characteristics to a single composite

score (Rubin, 1997). The propensity score was calculated using logistic regression to obtain the predicted probability of being in a particular group (i.e., cases that resulted in the child's death) given the demographic covariates. Thus, every child in the database had an estimated probability of being in the "exposure" group.

The cohorts were stratified by the following child variables (i.e., covariates): (a) age on the date when the case was open, (b) gender, (c) minority status, (d) county where the case was opened, and (e) presence of behavioral health problems in the child. Using propensity scoring, cases were matched to adjust for demographic differences in the samples. Specifically, propensity scores were reduced to five subclasses, which removed over 90% of the bias due to the subclassifying variables (Cochran, 1965). Random sampling procedures then were used at each level of subclassification to select cases for the comparison groups. Since the propensity scoring method can be applied to only two groups at a time, a separate propensity score was calculated for each of the two nonfatal maltreatment cohorts.

Because sociodemographic characteristics are believed to be among the most important covariates that might affect outcomes, race/ethnicity, gender, and age were included in the calculation of the propensity score. Furthermore, Cochran (1965), Rosenbaum (1995), and Rubin and Thomas (1996) suggest that any pretest variables that differentiate between nonequivalent groups also should be added to the equation. Therefore, county where the case was open and the year the maltreatment incident occurred were also included in the propensity score calculation. Once the propensity score was obtained, all cases were ranked according to their predicted value obtained from logistic regression analysis. Cases then were matched by using the nearest neighbor matching technique (Sianesi, 2001). Cases from the comparison site that were the least discrepant according to their score with each maltreatment cases that resulted in the child fatality were selected. Although there were twice as many comparison (i.e., non-fatality) cases selected, only 170 nonfatal cases became available for the analysis due to difficulties related to locating and finding actual files for the review. The resulting sample included 126 cases with child fatalities and 170 non-fatality child maltreatment cases.

Data Analysis

Statistical analyses consisted of survival analyses (Cox, 1972) and logistic regression to examine the probabilities of being involved in abuse or neglect cases that resulted in death. Odds ratios were calculated to estimate the likelihood of being involved in a maltreatment incident that resulted in a child fatality with each predictor. Bivariate descriptive analyses were performed to describe the sample and the association between each predictor with the outcome (i.e., maltreatment that resulted in a child fatality or a nonfatal event). Multivariate analysis was performed to test the multiple risk factors effect on the outcome of interest. All statistical tests were performed at the alpha = .05 level of significance.

For the GIS analysis pertinent variables were mapped to visualize the datasets as well as to assist in the development of more specific hypotheses. Various types of multivariate and spatial statistical techniques were employed to identify patterns among the most relevant variables; patterns to be explored included statistical correlation as well as spatial clustering.

RESULTS

Cohort Comparison

A multitude of variables contribute to the occurrence of child maltreatment, and, more specifically, to fatal maltreatment. Risk factors identified in the literature include: single female heads of household, multiple male father figures in and out of the home, low socioeconomic status, high stress levels, parental medical problems, parental substance abuse, parental mental health concerns, child medical problems, child behavior disorders, child developmental disorders, and frequent or recent moves (Anderson et al., 1983; Brewster et al., 1998; Cubbin & Smith, 2002; Gellert, Maxwell, Durfee, & Wagner, 1995; Hicks & Gaughan, 1995; Margolin, 1990; Somander & Rammer, 1991; Sorenson et al., 1997). For this study potential risk factors for fatal child abuse and neglect focused on perpetrator characteristics.

Perpetrator Characteristics

Similar to prior studies this research suggested that there are some general characteristics that perpetrators of child maltreatment tend to share, but no single profile differentiated a fatal abuser from a perpetrator of nonfatal child maltreatment. Although most perpetrators of both fatal and nonfatal maltreatment were biological relatives of the victim, if the perpetrator did not live at home with the victim, the maltreatment incident was five times more likely (Odds Ratio = 5.43) to result in the child's fatality. Conversely, if a perpetrator was a natural parent of the victim the maltreatment incident was almost 18 times less likely to result in the child's death (Odds Ratio = 17.86). Additionally, if a perpetrator was a legal parent of the victim (i.e., natural parent, adoptive parent, or step parent) the maltreatment incident was 45 times less likely to result in the child's fatality (Odds Ratio = 45.45). Males were (Odds Ratio = 2.86) almost three times as likely to be involved in a fatal maltreatment incident.

Substance abuse was indicated as a risk factor in that perpetrators with substance abuse histories were twice as likely to be involved in a maltreatment incident that resulted in the child's fatality (Odds Ratio = 2.16). Having a DJJ history also was associated with a fatal child maltreatment incident. If a perpetrator had a DJJ history, the maltreatment incident was five times more likely (Odds Ratio = 4.98) to result in the child's fatality. The results were supported by the multivariate model.

Although many studies have found an association between the perpetrator's age and involvement in fatal child maltreatment cases (Cubbin & Smith, 2002), age did not affect the outcome in this study. Similarly unemployment has been linked to fatal

maltreatment; however, results indicated that if a perpetrator had a stable job, the maltreatment incident was 13 times more likely to result in the child's fatality (Odds Ratio = 12.71). In fact, the proportion of child maltreatment fatalities in which the perpetrator had job stability was high. Conversely, the primary caregiver (oftentimes a single mother) frequently was unemployed and socioeconomic status of the family had an inverse association with the risk of fatal child maltreatment. For nonfatal abuse cases low SES was associated with an increased risk of severe injury in the child. Physically healthy perpetrators also were more likely to be involved in child maltreatment that resulted in the child's death (Odd ratio = 5.62).

Although a number of concerns have been identified in looking at the psychosocial histories of parents in fatality cases, presence of a history of mental health issues, child maltreatment history, criminal history, or number of arrests did not differentiate perpetrators of fatal from nonfatal cases. Similarly, minority status, age, and level of education were not identified as risk factors for fatal child maltreatment.

Table 1. Logistic Regression Analyses of Predictors for Maltreatment Incidents Resulting in Child Fatality (N = 196)

Predictors for Perpetrator 1	Beta	Wald $\chi^2(1)$	Odds Ratio	95% Confidence interval for risk ratio	
				Lower	Upper
Gender	-1.05	10.62*	0.35	0.19	0.66
Minority status	-0.12	0.17	0.88	0.49	1.60
Age	0.01	0.38	1.01	0.98	1.04
Living at home with the victim	-1.69	9.27*	0.18	0.06	0.55
Educational level	0.21	0.51	1.24	0.69	2.21
Number of prior abuse reports	-0.05	0.31	0.95	0.79	1.14
Presence of DV history	0.04	0.01	0.96	0.44	2.09
Natural parent as a caregiver	-2.88	21.85*	0.06	0.02	0.19
Legal parent as a caregiver	-3.82	13.90*	0.02	0.01	0.16
Employment status	0.35	1.05	1.42	0.73	2.79
Job stability	2.54	5.39*	12.71	1.49	108.53

Substance abuse history	0.77	4.42*	2.16	1.05	4.43
MH history	0.07	0.03	1.07	0.51	2.28
Health problems	-1.72	18.33*	0.18	0.08	0.39
Criminal history	-0.47	2.07	0.62	0.33	1.18
DJJ history	1.61	8.88*	4.98	1.73	14.31
Number of arrests	0.13	1.86	1.14	0.94	1.39
Child Maltreatment history	-0.43	1.02	0.65	0.28	1.50

GIS Analysis

Geographic and sociocultural factors can have an associated effect on social phenomenon, such as child maltreatment fatalities. Empirical research on child maltreatment has typically emphasized urban areas where the incidents of abuse and neglect are largest; however, studies suggest that exploration of rural/urban characteristics may help explain differences in the prevalence of child maltreatment, the services available in areas based on their urbanicity, and the use and effectiveness of services.

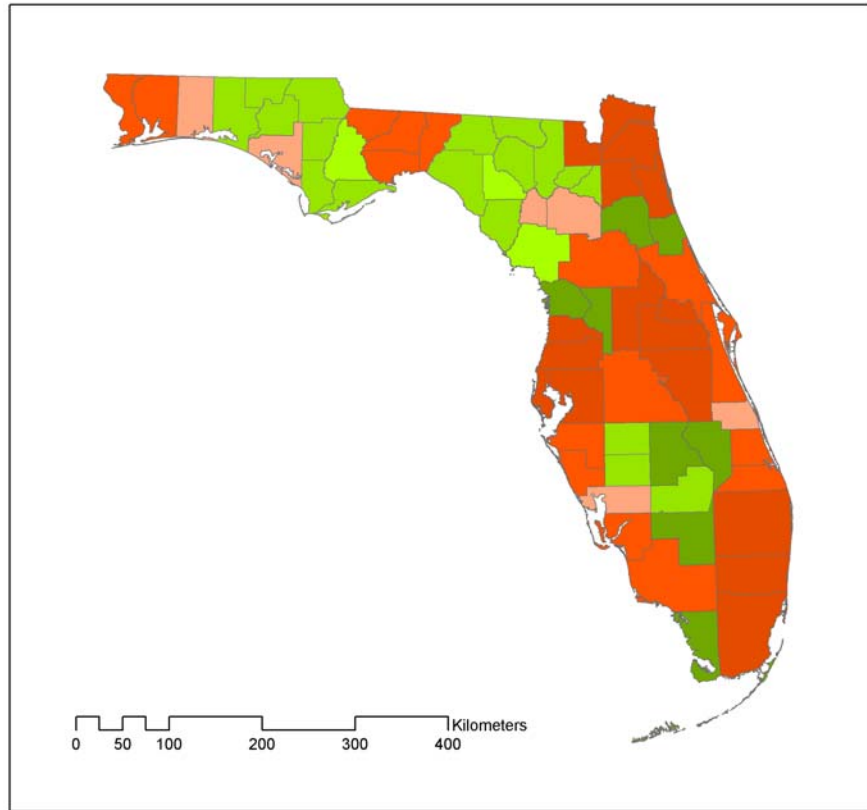
Pertinent variables were mapped to visualize the datasets as well as to assist in the development of more specific hypotheses. GIS was used to integrate and relate data collected with a spatial component. Various types of multivariate and spatial statistical techniques were employed to identify patterns among the most relevant variables, including statistical correlation as well as spatial clustering.

Urban/Rural Character of Florida Counties

Florida counties were grouped by their urban/rural character according to the 2003 Rural-Urban Continuum Codes (RUCC) by the United States Department of Agriculture. Areas designated as 1, 2, and 3 are considered “metro” while higher codes are considered “non-metro”. Figure 1 shows a map of the RUCCs for each county in Florida.

Figure 1.

Rural-Urban Continuum Codes 2003



Rural-Urban Continuum Codes

- County in metro area with 1 million population or more
- County in metro area of 250,000 to 1 million population
- County in metro area of fewer than 250,000 population
- Nonmetro county with urban population of 20,000 or more, adjacent to a metro area
- Nonmetro county with urban population of 2,500-19,999, adjacent to a metro area
- Nonmetro county completely rural or less than 2,500 urban population, adj. to metro area

Child Maltreatment Fatality Perpetrators by County and by Urban/Rural character

Based on an analysis of the number of perpetrators (n=150) associated with child death review cases (n=126) by county for Florida, no clear pattern emerges, other than the fact that some of the major urban centers (i.e., Miami, Tampa, Orlando) logically had higher numbers of perpetrators. For comparison purposes, counties were grouped by their RUCC code. Total population for 2003 and number of perpetrators were determined for each group of counties based on the RUCC, and the rate per 100,000

residents was calculated. The prevalence rate for the rural counties was consistently higher, reaching nearly double the rate calculated for urban areas.

Table 2. Child Maltreatment Fatality Perpetrator Rates by Urban/Rural character

RUCC	Description	Pop. 2003	No. Perpetrators	Rate per 100,000
1	Counties in metro areas of 1 million population or more	10823056	94	0.869
2	Counties in metro areas of 250,000 to 1 million population	4259612	33	0.775
3	Counties in metro areas of fewer than 250,000 population	846973	6	0.708
Urban		15929641	133	0.835
4	Urban population of 20,000 or more, adjacent to a metro area	562689	8	1.422
6	Urban population of 2,500 to 19,999, adjacent to a metro area	451868	8	1.770
8	Completely rural or less than 2,500 urban population, adjacent to a metro area	51532	1	1.941
Rural		1066089	17	1.595

Distribution of Perpetrators based on Homicide vs. Accidental Death

For each child death review case (n=126) a determination was recorded in the file specifying if the manner of death was homicide, accidental, or other (including medical, undetermined and suicide). The category of homicide included cases involving shaken baby syndrome, blunt force trauma, suffocation or strangulation, and intentional or dangerous acts. Conversely, accidental deaths typically involved child neglect events, such as lack of supervision, failure to protect, and alcohol related neglect. Perpetrator rates were determined separately for homicide and accidental death cases for groupings of urban/rural counties (Table 3). While rates for homicide and accidental death cases were almost identical for urban counties, for rural counties the rate for homicide cases was more than double the rate for accidental death cases. The rate for accidental deaths was slightly higher for rural counties compared to urban counties.

Table 3. Perpetrator Rates for Homicidal and Accidental Child Fatalities

RUCC	Description	Population 2003	Homicide		Accidental Death	
			No. Perpetrators	Rate per 100,000	No. Perpetrators	Rate per 100,000
1	Counties in metro areas of 1 million population or more	10823056	51	0.471	39	0.360
2	Counties in metro	4259612	9	0.211	20	0.470

	areas of 250,000 to 1 million population					
3	Counties in metro areas of fewer than 250,000 population	846973	3	0.354	1	0.118
Urban		15929641	63	0.395	60	0.377
4	Urban population of 20,000 or more, adjacent to a metro area	562689	3	0.533	4	0.711
6	Urban population of 2,500 to 19,999, adjacent to a metro area	451868	7	1.549	1	0.221
8	Completely rural or less than 2,500 urban population, adjacent to a metro area	51532	1	1.941	0	0.000
Rural		1066089	11	1.032	5	0.469

Child Fatality and Abuse Rates

A comparison with child abuse case rates was made by grouping counties based on their RUCC codes. Child fatality rates were determined by comparing the child fatalities with the number of children under 18 based on the 2000 Census. Child abuse rates were calculated by comparing the number of substantiated maltreatment cases for FY 99-00, FY 00-01 and FY 01-02 combined with the number of children under 18. Child fatality rates for the rural counties were nearly twice as high as for urban counties, while the child abuse rates for rural counties were about 20 to 25% higher than for urban counties.

Table 4. Comparison of Child Fatality and Child Abuse Case Rates by Urbanicity

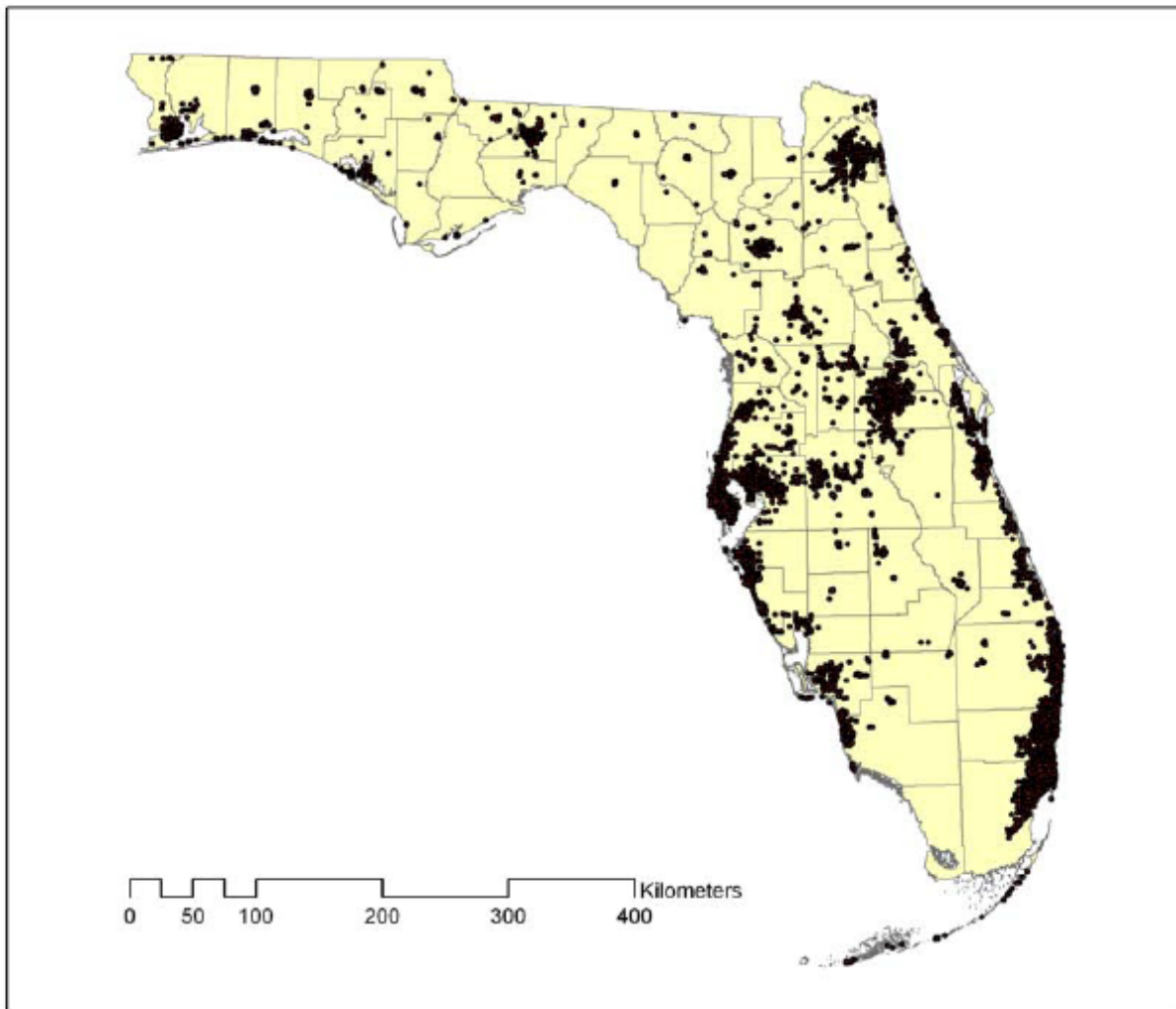
RUCC	Description	Children under 18 (Census 2000)	Child Fatalities	Child fatality rate per 100,000 children	Child abuse cases (1999-2002)	Child abuse rate per 100,000 children
1	Counties in metro areas of 1 million population or more	2400637	80	3.33	144137	6004
2	Counties in metro areas of 250,000 to 1 million population	848580	27	3.18	59619	7026

3	Counties in metro areas of fewer than 250,000 population	168555	6	3.56	12297	7296
Urban		3417772	113	3.31	216053	6321
4	Urban population of 20,000 or more, adjacent to a metro area	105290	6	5.70	8725	8287
6	Urban population of 2,500 to 19,999, adjacent to a metro area	100323	6	5.98	7753	7728
8	Completely rural or less than 2,500 urban population, adjacent to a metro area	11187	1	8.94	1094	9779
Rural		216800	13	6.00	17572	8105

Access to Social Services

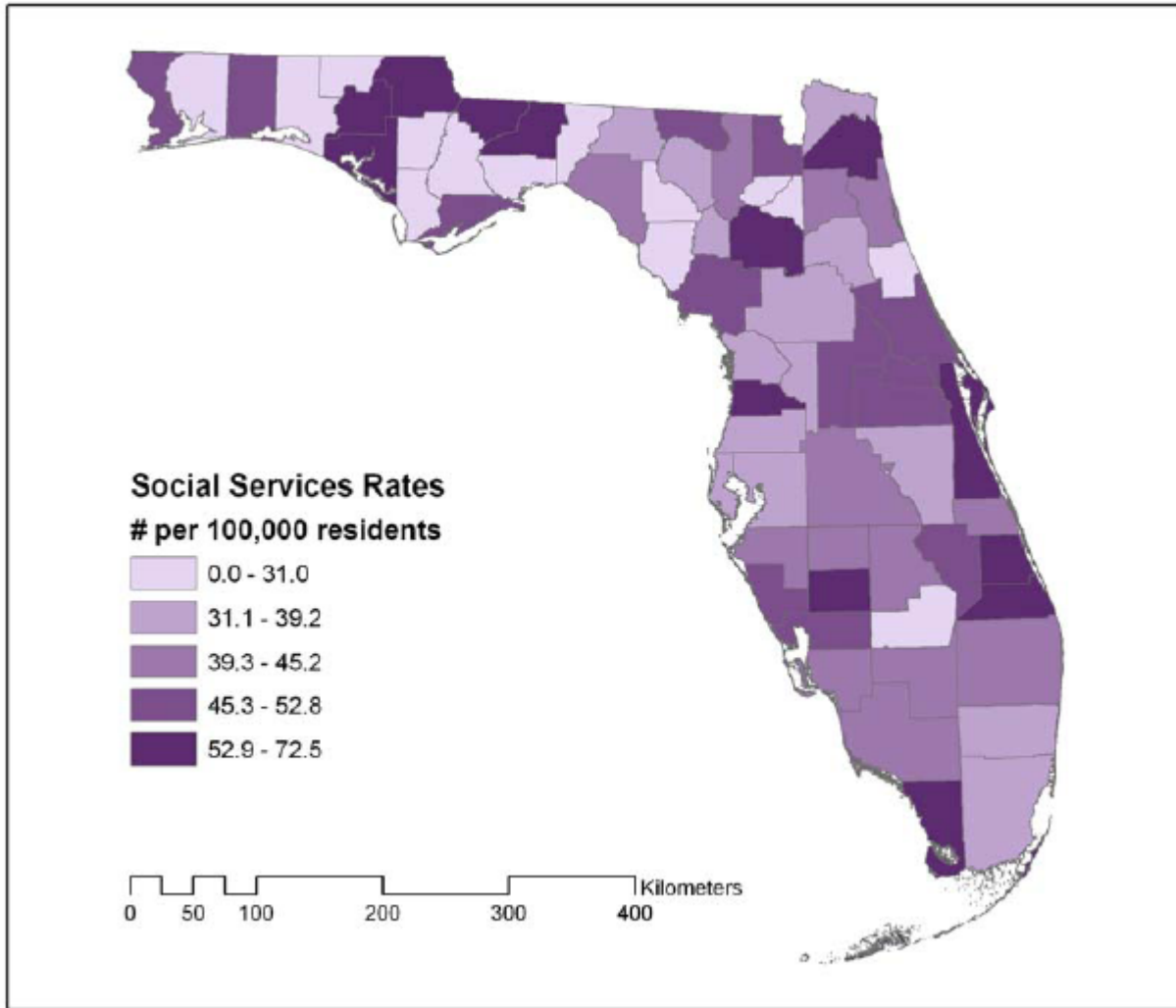
Locations of all social services in Florida were obtained from the Florida Geographic Data Library. This data was derived from the Yellow Pages Online and the Super Pages Online in 2005. A total of 12,882 locations were mapped. Only those social services of greatest relevance to the social and mental health functioning of families with children were selected (see table in Appendix B) for a total of 7,469. The distribution of the services is displayed in Figure 2.

Figure 2. Geospatial Distribution of Social Services



Access to services was determined by calculating the number of services within each county per 100,000 residents in 2003, as shown in Figure 3. The results reveal substantial spatial heterogeneity, with no obvious patterns. Therefore, availability of services was distributed across both urban and rural settings. Barriers to receipt of social services do not appear to be related to limited resources, although social stigma and the need to travel great distances to receive services may still limit usability. Isolation can be a key factor in homes where abuse occurs, and in rural areas, geographic distance can hinder accessibility. This can contribute to a lack of interpersonal support that fosters risk for harm.

Figure 3. Social Service Rates



Counties were also grouped by their urban/rural character. Rates for urban counties are only slightly higher than for rural counties. This suggests that while variability among county level rates is very high, this is not explained by their urban/rural characters.

Table 5. Social Service Availability Rates Based on Urbanicity

RUCC	Description	Pop. 2003	No. Social Services	Rate per 100,000
1	Counties in metro areas of 1 million population or more	10823056	4606	42.557
2	Counties in metro areas of 250,000 to 1 million population	4259612	1990	46.718
3	Counties in metro areas of fewer than 250,000 population	846973	453	53.485
Urban		15929641	7049	44.251

4	Urban population of 20,000 or more, adjacent to a metro area	562689	221	39.276
6	Urban population of 2,500 to 19,999, adjacent to a metro area	451868	177	39.171
8	Completely rural or less than 2,500 urban population, adjacent to a metro area	51532	20	38.811
Rural		1066089	418	39.209

STUDY 2: STUDY OF CHILD MALTREATMENT FATALITY CASES

RESEARCH DESIGN

Design and Procedure

The study design consisted of a two-group comparison: a group of children who died as a result of abuse and a group of children who died as a result of neglect. Fatalities attributed to abuse included injuries that were directly inflicted by an adult caregiver who was responsible for the child at the time of death. Neglect fatalities were defined as cases in which the caregiver failed to protect the child from hazardous circumstances. The injury circumstances and fatality classifications were based on reviews of the CADR team. When the circumstances of the death were unclear or when the files contained conflicting information, the study team engaged in a review of administrative data (i.e., FDLE arrest records) and media coverage to guide the decision. Cases were excluded when there was insufficient information to classify the death or the circumstances were undetermined. There was no statistically significant difference between the groups when compared by gender, age, minority status, or presence of mental health or any other medical problems.

Data were collected through reviews of the records of children who died in Florida during the period January 1, 1999 to December 30, 2002 as a result of child abuse or neglect and who also had at least one prior report of child maltreatment. This sample included all available records and totaled 126 cases. These child death review files consisted of DCF records as well as other available documentation, such as the autopsy report, medical records, law enforcement report, social services history, and media coverage. Variables from the review process included the child's cause of death, perpetrator characteristics, family dynamics, and history of involvement with social services.

Data Analysis

Bivariate descriptive analyses were performed to describe the sample. Statistical analyses consisted of survival analyses (Cox, 1972) and logistic regression. Specifically, the percentages were obtained from Life Tables using the Kaplan-Meier procedure (Kaplan & Meier, 1958). Among child fatality cases, predictors for abuse versus neglect related death were analyzed using competing-risks survival analysis

(Singer & Willett, 2003). The competing-risks survival analysis allows for modeling the rate in which particular types of events occur in time (Hachen, 1988). We distinguished between two types of child death: death as a result of abuse and death as a result of neglect. These two types of event are examples of competing risks. We assumed conditional independence of these risks, such that the risk of dying from abuse and the risk of dying from neglect are mutually exclusive. In a competing-risks context, censored observations are referred to those participants who either did not experience the event by the end of the study or experienced a competing event. Because all children died by the end of this study only event censored observations were used in the analysis. Specifically, children who experienced a competing event (i.e., died from neglect) were included in the analysis as censored observations. The dependent measure was the number of years between birth and subsequent death of the child as the result of either abuse or neglect. Logistic regression analyses were used to examine the probabilities of experiencing abuse or neglect that resulted in death. Odds ratios were calculated to estimate the likelihood of death related to abuse or death with each predictor. All statistical tests were performed at the $\alpha = .05$ level of significance.

Sample Description

A total of 126 cases were included in the analysis. All cases of fatal child maltreatment in a 4-year period (i.e., 1999 through 2002) that were reviewed by the Florida State Child Abuse Death Review Committee ($N = 126$) were included in the sample. There were considerably more males (61%) than females in the sample (39%). The racial composition of the whole sample was 51% Caucasian, 37% African American, 10% Hispanic, and 2% Other. At the time of death the average age of the children was 4 years ($M = 3.81$, $SD = 4.24$), ranging from birth through 17 years. About 17% of children in the sample were under one year of age. Approximately 12% of children had behavioral health problems, including developmental delays, and approximately 18% of the sample had medical or physical problems. Most children (65%) were seen by community agencies, and one third of children in the sample were enrolled in childcare or attended school in the time period immediately preceding their death. Approximately 64% of cases were known to the child protection system through previous reports, and 41% of cases were previously reported twice or more.

The highest proportion of death cases took place in Broward County (9.5%) and Miami-Dade County (8.7%). The majority of children in the sample (63%) were at home at the time of death, and in 32% of cases either an adult or a child witness was present.

Of 126 perpetrators 26 had partners who also participated in the maltreatment incidents. In contrast to the gender distribution among primary perpetrators, the majority of the secondary perpetrators were females (57%). Primary and secondary perpetrators were similar in terms of race/ethnicity with the highest proportion identified as White (56% and 50% accordingly), followed by Black (40% and 46% respectively), and a relatively small percentage Hispanic (approximately 4%). The average age of primary perpetrators was 32 years ($M = 32.08$, $SD = 12.56$) and the average age of the secondary perpetrators was 30 years ($M = 29.98$, $SD = 7.84$).

Demographic analysis of age and race were performed for all child-perpetrator dyads. Age of the child was calculated as age at the time of the maltreatment event. Minority status and gender of the perpetrator were not associated with minority status or gender of the child. However, there was a positive association between the age of the perpetrator and age of the victim.

The majority of both primary and secondary perpetrators were biological parents of the children they maltreated (57% among primary and 68% among secondary perpetrators). Almost 21% were paramours among primary perpetrators and 18% among secondary perpetrators. Approximately 9% were other family members among primary perpetrators and 2% among secondary perpetrators. There were no adoptive or foster parents among secondary perpetrators, and they represented the smallest proportion (1.6%) of the primary perpetrators.

Similarly, when the perpetrator relation to the child was examined, the largest proportion of both male and female perpetrators was a natural or biological parent (44.4 of male perpetrators and 71.2% of female perpetrators). However, there was a considerably higher proportion of paramours among male perpetrators (34.9%) compared to female perpetrators (5.1%). Other family members represented 11.9% of the female perpetrators and only 6.3 of the male perpetrators. Similar distribution was observed for secondary perpetrators, with almost 42% identified as biological parents among male perpetrators and 88% among female perpetrators. Almost 42% of secondary male perpetrators were paramours. There were no paramours among female secondary perpetrators.

The average age for male primary perpetrators was 34 years ($M = 33.99$, $SD = 14.60$) and the average age for female primary perpetrators was 30 years ($M = 30.07$, $SD = 9.71$). Similarly, secondary male perpetrators were about 34 year old ($M = 33.56$, $SD = 7.20$), but female perpetrators were slightly younger ($M = 27.31$, $SD = 7.41$). Race/ethnicity distribution by gender was similar to the race/ethnicity distribution for the whole sample.

RESULTS

First, bivariate analyses using logistic regression were performed (see Table 6). When primary perpetrators' demographic characteristics were examined, gender and minority status were found to be significantly associated with the type of death of the child. Victims of male perpetrators were five times more likely (Odds Ratio = 5.00, $p < .01$) to die from abuse than victims of female perpetrators. Victims of minority perpetrators were two times more likely to die from neglect (Odds Ratio = 2.06, $p < .05$).

Table 6. Logistic Regression Analysis of Predictors for Manner of Child Death

Variables	Beta	Wald χ^2	Odds Ratio	95% Confidence interval for risk ratio	
				Lower	Upper

Gender	-1.60	17.25**	0.20	0.10	0.43
Age	0.01	0.01	1.00	0.97	1.03
Minority status	0.72	3.84*	2.06	1.00	4.26
Being a natural parent	0.01	0.01	1.00	0.99	1.00
Living at home of a victim	0.01	0.01	1.00	0.99	1.00
History of Domestic Violence (any kind)	-0.01	5.33*	0.99	0.99	1.00
History of Domestic Violence as a perpetrator	1.45	12.86**	4.34	1.95	9.69
History of domestic violence as a victim	-0.30	0.51	0.74	0.33	1.68
Prior abuse reports involving this perpetrator	-0.37	7.42**	0.69	0.53	0.90
Employment status	0.01	0.43	1.00	1.00	1.00
Presence of substance abuse	0.01	0.02	1.00	0.99	1.00
Presence of mental health problems	0.01	0.46	1.00	1.00	1.00
Perpetrator criminal history	0.01	0.01	1.00	.099	1.00
Juvenile Justice history	0.43	0.35	1.54	0.37	6.45
Number of arrests	0.01	0.01	0.01	0.78	1.28
Child history of maltreatment	-0.40	0.49	0.67	0.22	2.06

Note. * $p < .05$. ** $p < .01$.

When other perpetrator characteristics were examined, presence of domestic violence history and previous abuse reports were significantly associated with the type of child death. In particular, perpetrators who had a history of domestic violence, regardless of whether they were the target of the aggression or had instigated the violence, were more likely to be responsible for a child fatality due to neglect than abuse. However, when perpetrators who had a history of initiating domestic violence were examined as a separate group from individuals who were victims of violence, perpetrators with a history of committing domestic violence were four times more likely to fatally abuse a child (Odds Ratio = 4.34, $p < .01$). Victims of perpetrators who had previous maltreatment reports were likely to die from neglect not abuse, such that having one more report corresponds to almost 1.5 times increased likelihood of dying from neglect (Odds Ratio = 1.45, $p < .05$).

Second, multivariate logistic regression analyses were conducted (See Tables 7 and 8). The results indicated that gender, having prior abuse reports, and having a history of domestic violence, regardless of whether the perpetrator was a victim or an aggressor, were associated with the type of child death. Similarly to the results of the bivariate analyses, victims of male perpetrators were likely to die from abuse, and victims of perpetrators who had previous abuse reports and histories of domestic violence were

likely to die from neglect. Gender (i.e., being a male) of the perpetrators and a history of committing domestic violence were highly correlated ($r = -.41$).

Cox Regression Univariate Analysis

The results of Cox regression indicated that gender of the perpetrator is significantly associated with the type of maltreatment that resulted in a child's death. Specifically, Female perpetrators are likely to neglect children while males are likely to abuse. If the perpetrator is male then a child is twice more likely to die as a result of abuse versus neglect (Odds Ratio = 2.07, $p < .01$).

The results of Cox regression also indicated that the number of prior maltreatment reports is significantly ($p < .01$) associated with the type of maltreatment that resulted in the child's death, such that the greater number of prior maltreatment reports the more likely a child died as a result of neglect. An increase by one report corresponds to 1.2 times increased likelihood for children to die as a result of neglect.

Logistic regression was conducted to predict the probability of child death as a result of abuse. The results of logistic regression indicated that when the perpetrator had fewer prior reports of domestic violence it was more likely that the child victim died as a result of abuse.

Mental health treatment or substance abuse history, criminal history, the number of arrests the perpetrator had, and the perpetrator's relation to the child were not statistically associated with the type of maltreatment that resulted in the child's death.

Survival Analysis Findings

A comparison was done between children who were victims of fatal abuse ($n = 66$) and children whose death was attributed to neglect ($n = 60$) to determine whether the two groups of children became victims at different rates. First, bivariate relationships between various factors and fatal maltreatment were examined. The results of Cox regression analyses indicated that minority status was associated with abuse that resulted in the death of a child (see Table 7). In particular, minority children were almost twice more likely to die as a result of abuse versus neglect than non-minority children (Odds Ratio = 1.97, $p < .01$). Moreover, the average life expectancy for minority children was 3 and a half years compared to non-minority children with a life expectancy of 8 years.

Table 7. Multivariate Model 1: Abuse cases only (N = 126)

Risk factors	Cox Regression Model Parameters				
	Beta	Wald $\chi^2(1)$	Odds Ratio	95% Confidence interval for risk ratio	
				Lower	Upper

Gender	0.35	0.02	1.04	0.62	1.73
Minority Status	0.52	3.83*	1.68	0.99	2.83
Mental Health Problems	-0.93	4.77*	0.40	0.17	0.91
Physical/medical Problems	-0.32	0.76	0.73	0.36	1.49

Table 8. Multivariate Model 2: Neglect cases only (N = 126)

Risk factors	Cox Regression Model Parameters				
	B	Wald $\chi^2(1)$	Odds Ratio	95% Confidence interval for risk ratio	
				Lower	Upper
Gender	0.11	0.17	1.12	0.65	1.93
Minority Status	-0.13	0.20	0.88	0.51	1.53
Mental Health Problems	-1.06	6.75*	0.35	0.16	0.77
Physical/Medical Problems	0.12	0.14	1.13	0.60	2.13

The findings suggest that children who had mental health problems were almost three times more likely to die as a result of neglect rather than abuse (Odds Ratio = 3.00, $p < .01$). In addition, Cox regression analyses indicated that presence of any health problems was associated with the type of maltreatment that resulted in death. Specifically, children with health problems were twice more likely to become victims of a fatal neglect incident (Odds Ratio = 2.30, $p < .01$). Life Table analyses indicated that 12% of children with health problems died before they reached 1 year of age, and only 7% of children under a year old died as a result of abuse. Life Table analyses also indicated that for the group of children who had health problems median time to death was 4 years compared to 13 and a half years for those who did not have medical problems. No association was found between the presence of physical/medical problems and the type of death.

Next, we examined the effect of social context on the type of death as a result of maltreatment. The results showed that children who were not enrolled in childcare were at an increased risk and were almost 3 times (Odds Ratio = 2.77, $p < .01$) more likely of becoming a victim of abuse related death. Additionally, a child was more likely to become a victim of fatal abuse if he or she was seen by a community agency (Odds Ratio = 2.12, $p < .01$). Life Tables analyses indicated that 15% of children seen by a community social service agency died as a result of abuse by the time they reached one year old compared to 2% of children who were not seen by a community agency.

Table 9. Logistic Regression Analysis of Predictors for Maltreatment Incidents Resulting in Child Fatality: Multivariate Model

Variables	Beta	df	Wald χ^2	Odds Ratio	95% Confidence interval for risk ratio	
					Lower	Upper
Minority	0.63	1	2.75	1.87	0.89	3.93
Child seen by community agencies	-0.79	1	4.07*	0.45	0.21	0.98
Home location of the incident	0.56	1	2.04	1.75	0.81	3.79

Note: ** $p < 0.01$, * $p < 0.05$

Finally, child death as a result of abuse was almost twice more likely to take place at home (Odds Ratio = 1.76, $p < .05$). Child gender and presence of witnesses were not associated with the type of death.

Table 10 shows the multivariate Cox Proportional Hazards results. All independent variables significantly associated with the type of child death when bivariate relationships were examined were included in the equation. The results of multivariate analyses indicated that only the presence of mental health problems, enrollment in childcare, being seen by a community social service agency, and being at home at the time of death were associated with the type of fatal child maltreatment.

Table 10. Multivariate Cox Regression Model: Factors Associated With Child Fatality

Risk factors	Cox Regression Model Parameters				
	B	Wald $\chi^2(1)$	Odds Ratio	95% Confidence interval for risk ratio	
				Lower	Upper
Gender	0.08	0.19	1.09	0.75	1.58
Minority Status	0.22	1.27	1.24	0.85	1.80
Mental Health Problems	-0.99	11.33**	0.37	0.21	0.66
Physical/medical Problems	-0.08	0.12	0.92	0.58	1.47

Note. * $p < .05$. ** $p < .01$.

Logistic Regression Analysis Findings

When bivariate relationships between predictor variables and abuse resulted in death were examined using logistic regression, minority status, being seen by the community agency, and being at home were significantly associated with the type of death (see Table 11). However, when multivariate analyses were performed only being seen by a community agency predicted a specific type of maltreatment that resulted in death. In

particular, if the child was seen by a community agency he/she was almost 2 and a half times (2.4) more likely to have been a victim of fatal abuse.

Table 11. Bivariate Relationships Between Predictor Variables and Abuse Resulting in Death (N = 126). Logistic Regression

Variables	Beta	df	Wald χ^2	Odds Ratio	95% Confidence interval for risk ratio	
					Lower	Upper
Age	-0.01	1	0.11	0.99	0.92	1.06
Gender	0.05	1	0.02	1.05	0.51	2.14
Minority	0.71	1	3.84*	2.04	1.00	4.14
Mental Health Problems	-0.26	1	0.22	0.77	0.26	2.27
Physical/medical Problems	-0.56	1	1.39	0.57	0.22	1.45
Any Health problems	-0.38	1	0.86	0.68	0.30	1.54
Child seen by community agencies	-0.86	1	5.02*	0.42	0.20	0.90
Child enrollment in childcare	0.22	1	0.33	1.24	0.59	2.59
Presence of child witnesses	-0.53	1	1.75	0.59	0.27	1.29
Presence of adult witnesses	0.04	1	0.01	1.04	0.35	3.08
Presence of any witnesses	-0.43	1	1.27	0.65	0.31	1.38
Home location of the incident	0.77	1	4.23*	2.16	1.04	4.52

Note: ** $p < 0.01$, * $p < 0.05$

Life Tables Findings

Life Table analyses indicated that among the study sample 15% of minority children died before the age of one compared to 9% of nonminority children. Approximately 33% of children who had mental health problems died before the age of 5; however, 83% of children who did not have mental health problems suffered a fatal maltreatment incident during their early childhood. The median length of life for children without mental health problems was approximately two and a half years compared to 12 and a half years for children who had mental health problems. Life Table analyses also indicated that for the group of children who had health problems the median time to death was 4 years compared to 13 and a half years for those who did not have medical problems.

Analysis of the Criminal Justice System's Response to Perpetrators of Child Maltreatment Fatalities

Historically in the United States there has been ambivalence in the legal response to fatal child maltreatment cases, and often criminal outcomes reflected a pattern of leniency (Dean, 2004; Hicks & Gaughn, 1995). Studies exploring the case flow of child maltreatment offenses in the criminal justice system have reported that perpetrators of child abuse typically receive similar treatment to offenders of other felonies (Cullen et al., 2000).

In this study the child abuse death review files often ended at the point that the perpetrator was indicted on charges of manslaughter or murder. However, two efforts were undertaken in order to determine the outcome of the legal aspect of the child deaths: (1) search for child death perpetrators in Department of Correction files, and (2) search of Florida newspaper archives and the internet for related articles on prosecution results and sentences of the perpetrators.

Department of Correction Files

In this research, among perpetrators for whom Department of Corrections data were available, 88% of non-related offenders were sentenced; however, the majority of mothers who were involved whether as the primary perpetrator or secondary offender were given supervision or other community-based sentences. Newspaper archives and internet search supplemented Department of Corrections data.

Follow-up searches were conducted for child death perpetrators in September 2005 and again in August 2006. A general internet search was conducted using Google.com and a search of Florida newspaper archives was conducted using NewsLibrary.com. In total, follow-up information was available for 97 of the 152 perpetrators. The follow-up efforts served to highlight the lengthiness of the legal process as a result of delayed court dates, trials, and appeals.

Of those perpetrators for whom follow-up information was available, 23 were convicted of charges related to the child's death and sentenced to either time in prison, parole, or a combination thereof. Sentences ranged from nine months prison time (plus 2 years house arrest and 17 months probation) as an accessory to child neglect by a mother's boyfriend, to life imprisonment with no opportunity for parole for a first-degree murder conviction following a brutal beating of a 2 ½ year old by a mother's boyfriend. One of the convictions was overturned and two were in the appeals process at the time of the follow-up (one noted as recently as September 2006 for a 1999 homicide). Two additional perpetrators were brought to trial and acquitted of the charges.

Twenty-nine perpetrators had been indicted on charges related to the child deaths, but had not yet gone to trial (or the trial had not been resolved) at the time of the follow-up. Among those indicted, four of the perpetrators were at-large, including one who had fled the country to avoid prosecution.

No charges were brought in the cases of 27 of the named perpetrators. The majority of those (n=21) were in cases that were deemed to be accidental. Five were in cases deemed homicides, but under special circumstances. For example, one case was a death caused by a firearm discharged by a minor – neither caregiver responsible for supervision was charged in relation to the death. In other cases, there was insufficient evidence to file charges against anyone involved in the care of the child.

Seven perpetrators never stood trial for various reasons. Five committed suicide following the homicide of their children, one died in his jail cell while awaiting trial, and another was found incompetent to stand trial.

Interestingly, three civil lawsuits were pending following the child deaths. Two suits were pending against the Florida Department of Children and Families by surviving family members who believed the Department's delayed response was at least partially the cause of the child death. The third lawsuit was being brought against an apartment complex for failure to secure a pool area that was the site of two child deaths.

DISCUSSION

The tragedy of fatal child maltreatment has galvanized efforts to transform child maltreatment prevention policy, and the examination of cases involving child deaths due to abuse or neglect is an essential component in developing preventive interventions for families. While there is variability across the cases, an analysis of trends points to relevant issues that may affect outcomes for vulnerable children and their families.

The findings suggest that the presence of mental health problems among children had a significant negative association with fatal child maltreatment. It appears that identification of mental health needs of children can have a protective function in safeguarding children by creating greater community visibility and involvement with the child and family. Another positive contributing factor may be a reduction of unreasonable caretaker expectations, when children are known to have mental or behavioral impairment. Unreasonable caretaker expectations is a factor that has been found to increase risk. Mobilizing resources at the local and state level to enhance identification and intervention practices for children with mental health correlates may increase the likelihood of improvements in the service system to benefit the health and well being of children and families, and result in reduction of risk for caretaker abuse.

Consistent with results of other studies (Gellert et al., 1995; Lucas et al., 2002; Lyman et al., 2003) minority status was positively associated with abuse related fatal child maltreatment. This finding provides important information on the extent to which current services and community resources are effective and culturally competent. Prevention and treatment interventions for child maltreatment need to be differentially targeted toward various populations and consider cultural diversity in order to be effective.

Conversely, being seen by a community agency was positively associated with abuse related fatal child maltreatment. The finding that children who are victims of fatal maltreatment are more likely to have received some form of community service was surprising since these interventions were often introduced as a protective response to imminent risk. However, the results are supported by two other studies that explored recurrence of maltreatment (Fluke, Yuan, & Edwards, 1999; Lipien & Forthofer, 2004). This trend provides important information on the extent to which current services and community resources are effective and culturally appropriate. If the services are ineffective, the risk of future harm cannot be mitigated by the existing system (Fluke et al, 1999). Conversely there may be unexplored family risk variables that are present in families that are assessed as needing closer monitoring and ongoing services. These added risks and not the protective service provision may contribute to a higher propensity for fatal child maltreatment (Lipien & Forthofer, 2004). Moreover, protective service provision is likely an indicator of the cases that were identified at highest risk. The provision of protective services does not cause the increased risk; however, it may fall short of preventing further harm. Specifically, these study results suggest that prevention and treatment interventions for child maltreatment need to be differentially targeted toward various populations in order for a large proportion of perpetrators to benefit from these efforts. For example, male perpetrators who are not biological fathers are more commonly associated with physical abuse; therefore, in-home services may be missing the opportunity to involve men who maltreat children but are not living in the home.

The death of a child is a sentinel event in a community that can mobilize action and foster a response to the contributory factors associated with these incidents. Although fatal victimization of children comprises a heterogeneous class of events, conceptualizations of this public health issue can be clarified through ongoing research into the complex interplay of correlates. This knowledge may subsequently contribute to creative and effective policies that expand the capacity to promote child well being as a community norm and mobilize communities to take notable action in the form of support, education, and organizational practices for the benefit of children and their families.

LIMITATIONS

It should be pointed out that this study has a number of limitations. A methodological shortcoming throughout the study is that the available data does not account for all fatal child abuse cases in the state, so the true magnitude of the phenomenon is unknown. The comparison cohort sample was small given the difficulty in locating records; however, the overall sample was large compared to previous studies on fatal abuse (Hicks & Gaughan, 1995; Lucas et al., 2002). The presence of a comparison group also strengthened the analysis and facilitated the use of inferential statistics. Moreover, since the study relied upon official records for the data source, the data was readily available, and attrition of the subjects only became a factor in the follow-up analysis that explored the outcomes of identified offenders. Since the follow-up time frame was restricted to a 4-year observation period, survival analysis techniques were used to produce a clearer and unbiased description of the events during the specified time frames.

Administrative records are also subject to a range of error due to state or local agency procedures for recording events (Lawrence, 2004; Trocme & Lindsey, 1996). This can limit the validity of operational definitions and characteristics of child maltreatment in the study. In particular disposition decisions can vary, leading to systematic under or over recording of events as child abuse fatalities. Overall, the underreporting of child maltreatment is significant, and studies have estimated that nearly 70% of child abuse and neglect incidents are not reported to child protection agencies (Reiniger, Robison, & McHugh, 1995). Operationalizing incidents as accidents or homicides also may be subject to attribution errors, and throughout the observation period, policies and child protection procedures may have shifted, thereby affecting the nature of recorded events (Lipien & Forthofer, 2004). Therefore, research findings regarding maltreatment type, prior abuse incidents, interventions, and case disposition should be interpreted cautiously.

In the analysis of access to social services, additional challenges were encountered. The identified social services did not reflect a complete sample, since it only included those locations which were found in the online directories in 2005 and could be geocoded by FGDL.

The selection of relevant categories is somewhat subjective – the categories are also based on the categories used in the online directories, and are self-defined by those that choose to be listed in the directories. Access was defined here at the county level. Within county access was not considered (i.e. travel within a County to get to a facility) nor was between county access (i.e. travel to facility in an adjacent Count which may be closer).

Furthermore, classification of the cases as homicides and accidents is inherently subjective and requires retrospective decision-making that may be fraught with perceptual errors. Within these limitations, however, the results suggest that access to social services at the county level is not very different for urban and rural counties. The individual-level access, however, might be very different due to travel distances within and between counties. In many rural counties, for example, the social services are very concentrated in a single town, requiring many residents to travel 20 or 30 miles for the nearest social service location.

Additionally, little can be said about differences in the effectiveness of the services provided. Given that prevalence rates of fatal child maltreatment were consistently higher for rural areas, further research is needed to better understand the prevalence of child abuse and neglect, the services available in rural areas, and the use and effectiveness of the services available.

RECOMMENDATIONS

Fatal child maltreatment is a complex phenomenon that is influenced by a wide spectrum of causes at societal, community, relationship, and individual levels.

Identifying effective strategies to diminish consequent maltreatment incidents subsequent to the involvement of child protection authorities is the goal. Although the rate of child maltreatment fatalities in Florida is relatively low and averages slightly higher than 2% per 100,100 of the child population during 2000, 2001, and 2002, the majority of these children already had been victims of abuse or neglect; therefore, they could be protected from further maltreatment and maltreatment related fatalities. One challenge for child protection agencies is a quick identification of those children who are most likely to experience a recurrence of maltreatment and are at serious risk for what can ultimately lead to a child fatality. In this case protective investigators must identify immediate safety concerns, as well as consider all known contributing risk factors, and appropriate interventions to effectively plan for a child's long term safety.

Findings from this study suggest that special attention should be given to minority children, children with lower community visibility (e.g., children with physical or behavioral health problems who are not being treated by medical doctors or mental health therapists), and children who have been seen by child protection agencies. In addition, children who were reported being maltreated and as a result of protective investigation were found to have some indication of maltreatment or verified maltreatment should receive services right after investigation is completed. These services need to be targeted to ameliorate identified risk factors and prevent further maltreatment. In Florida during fiscal year 2004-2005, only 23% of maltreated children and their families received services from child protection agencies. Because our findings indicated that children died from abuse and neglect at equal rates (i.e., by the age of 17, approximately 98% of children died from neglect and approximately 97% of children died from abuse) maltreated children and their families should receive intervention of similar intensity regardless of the type of maltreatment. Additionally, law enforcement agencies, mental health services, and child protection agencies should improve interagency collaboration to increase the effectiveness of assessing potential risk, and providing interventions that better plan for children's safety.

The key to reducing incidents of fatal maltreatment is multi-agency and multi-disciplinary prevention and early intervention activities. Since traditional social services cannot remedy cases in which the child died as a result of a single fatal episode, prior protective service involvement is of particular interest to practitioners and researchers (Fluke, Yuan, & Edwards, 1999; Lipien & Forthofer, 2004; Way, Chung, Jonson-Reid, & Drake, 2001). However, recidivism rates could not differentiate between perpetrators of fatal and nonfatal child maltreatment. Nonetheless, a significant number of cases had prior involvement with community services, emphasizing the importance of assessing the impact of child protective services policies, resource allocation, and caseworker decision-making on the severity of harm to children.

Risk factors that were related to the severity of harm to the child included the child's race and age and the geographic area in which the event occurred. One of the significant findings of this study relates to the increased incident of fatal child maltreatment in rural areas. Associated findings noted that domestic abuse and substance abuse are also prominent among perpetrators in these cases. The study

results also showed that children who died from maltreatment injury were more likely to reside in a household with an unrelated adult. However, there was no increased risk of maltreatment death in households with a single biological parent and no other adult resident. The presence of unrelated adults in the home may indicate instability in the household. These factors appear to become exacerbated when limited social support and conflicts with family members intensify the impact of stressors. Therefore, ways to offer more specifically targeted preventive and supportive services may be an important gateway to diminishing risk for future harm.

Although differentiated risk exists, it is significant that differential services were not apparent in the cases even when the variables suggested an increased level of risk for the involved child (i.e., male perpetrators with young children at risk for severe or fatal abuse). Since few male perpetrators were the sole caregiver for the child, these cases often identified a male caregiver as the primary perpetrator but the female caregiver was also charged with inadequate guardianship or some other failure to protect the child. Agreements to protect the child often revolved around the female guardian rather than the male figure who may have been a paramour and difficult to identify and/or engage in interventions.

Given the heterogeneity of cases, it is critical that a multidisciplinary approach be pursued. The child fatality review team process has been instrumental in identifying changes needed to improve services and enhance program and policy planning. However, their efforts can be augmented through broader dissemination and implementation of protective interventions. Most families had been in prior contact with a social service agency prior to the fatal incident, indicating that a variety of disciplines have an opportunity to intervene. The Child Death Review Team provides an opportunity to organize community-level and statewide quality improvement activities on behalf of children and their families (Durfee et al., 2002). The teams have established a process that examines causes and factors that lead to recommendations for specific social service system enhancements. The reviews explore agency involvement and actions surrounding the death as well as details on the circumstances that led to the fatal incident; however, part of translating the findings into policy changes also necessitates that issues are embraced on a community level by families and caregivers. The lessons learned can enrich information for community action and lead to the implementation of community wide campaigns that are available, accessible, and culturally appropriate. The likelihood of preventing future cases of fatal child maltreatment will be realized if findings are disseminated widely to caregivers, as well as professionals and key policymakers. This includes social marketing campaigns that promote awareness of the use of certain services or changes in personal or collective behavior.

A successful social marketing approach, especially one that addresses complex behavior patterns like those involved in child abuse and fatal maltreatment, requires a sustained effort. Child protective services cannot be structured on the assumption that caregivers will have the ability, knowledge, and skills to generalize or disseminate interventions to others who care for the child.

While enhancing caregiver skills, efficacy of the intervention can be optimized by training community members in fostering social action to reduce incidents of fatal child abuse. For example, a model hospital-based parent education program in Western New York State has shown compelling results in reducing the incidence of abusive head injuries among infant and toddlers. Materials are shared with parents by nurses before the parents check out of the hospital with their new baby. The program materials include an informational brochure and a videotape that describe the dangers of shaking a baby and how best to handle infant crying. The program also asks parents to sign a commitment statement saying that they understand the materials. As a result of the program incidents of shaken baby syndrome have been reduced 47 percent.

Creative strategies need to be continually explored that offer low cost options, ease of administration, and effectiveness in reaching both male and female caregivers in the community. Through the effective diffusion of new ideas and practices, prevention efforts can produce measurable and consequential social change.

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APPENDIX A: FINAL CHART REVIEW MATRIX

Child Abuse Death Review – Perpetrator Risk Factor Study

User's Guide
to accompany the file review protocol

Child Abuse Death Review – Perpetrator Risk Factor Study

The goal of the study is to identify common characteristics of child abuse perpetrators to determine what risk/protective characteristics are present in various situations. Such information may be useful in reviewing alleged abuse cases and in determining appropriate interventions. This knowledge will allow professionals the ability to create prevention programs that have a higher likelihood of being effective.

In order to achieve that goal, faculty and staff at the Louis de la Parte Florida Mental Health Institute, in conjunction with the Florida Department of Health, have developed a file review protocol for use. This protocol will be used for all 300 files associated with this project.

The protocol is divided into four sections: (1) Child Data, (2) Incident Data, (3) Perpetrator(s) Data, and (4) Household related Data. Each section will be presented in this User Guide along with definitions of terms and data source(s). Data will be entered directly into an Excel-based spreadsheet when available. Pull-down menus have been created where possible to narrow the choices and ease the aggregation of responses. When direct entry is not possible, a hardcopy of the form will be completed and subsequently entered. Therefore, this User's Guide is helpful for the forced choices available in the electronic version.

Child Data:

1. Child's Case unique identifier

Three case identifier prefixes have been developed for use. This will allow project staff to track cases without relying on HomeSafenet (HSN) numbers or Social Security numbers. The Child Death Review cases will be numbered CAD#1 through CAD#100. Department of Children and Families (DCF) cases that resulted in subsequent reunification will be numbered DCFR#1 through DCFR#100. Finally, those DCF cases in which children were never removed from the home following the maltreatment will be numbered DCFN#1 (non-removal) through DCFN#100.

2. Child's City of Residence

The city of the child's residence at the time of the incident will be reported as found on the official abuse report (i.e., FAHIS report or subsequent HSN generated report).

3. Child's County of Residence

The county of the child's residence at the time of the incident will be reported as found on the official abuse report.

4. Child's Zip Code

The Zip Code of the child's residence at the time of the incident will be reported as found on the official abuse report.

5. Child's DOB

The child's date of birth will be entered in the following format – mm/dd/yyyy.

6. Child's Gender

The child's gender will be reported using a pull down choice menu of male or female.

7. Race

The race/ethnicity of the child victim will be reported using a pull down choice menu with the following options: White, Black, Hispanic, American Indian, Asian/Eskimo, or Other.

8. Ethnicity

The ethnicity of the child victim will be reported using a pull down choice menu with the following options: Hispanic, Haitian, Other, or Unknown.

The following six questions attempt to describe child-specific characteristics and risk factors that may be related to the maltreatment.

9. Did child have a Mental Health Disability?

This question is to be answered using all available material in the file. The response is to be categorized as a Yes, No, or Unknown (to be reserved for a lack of available information). If the response is yes, there is also an opportunity to explain any mental health needs of the child as evidenced in the file by evaluations, treatment notes, or case summaries. DSMIV or ICD9 codes will be included if available.

10. Did child have a physical disability?

This question is to be answered using all available material in the file. The response is to be categorized as a Yes, No, or Unknown (to be reserved for a lack of available information). If the response is yes, there is also an opportunity to explain any physical health needs of the child as evidenced in the file by evaluations, treatment notes, or case summaries. ICD9 codes will be included if available.

11. Did child have a developmental delay?

This question is to be answered using all available material in the file. The response is to be categorized as a Yes, No, or Unknown (to be reserved for a lack of available information). If the response is yes, there is also an opportunity to explain any developmental delays of the child as evidenced in the file by evaluations, treatment notes, or case summaries. DSMIV or ICD9 codes will be included if available.

12. Did child have chronic medical needs?

This question is to be answered using all available material in the file. The response is to be categorized as a Yes, No, or Unknown (to be reserved for a lack of available information). If the response is yes, there is also an opportunity to explain any chronic medical needs of the child as evidenced in the file by evaluations, treatment notes, or case summaries. Chronic should be interpreted as more than 6 months with projected future needs or that the child was noted as being enrolled in Children's Medical Services clinic services. ICD9 codes will be included if available.

13. Was child seen by any community social service agencies within previous 6 months of incident?

This question is to be answered using all available material in the file. The response is to be categorized as a Yes, No, or Unknown (to be reserved for a lack of available information). If the response is yes, there is also an opportunity to explain social service contact provided or sought on behalf of the child as evidenced in the file by evaluations, treatment notes, or case summaries.

14. Was child enrolled in school/childcare?

This question is to be answered using all available material in the file. The response is to be categorized as a Yes, No, or Unknown (to be reserved for a lack of available information). Part-time enrollment will be coded as “Yes.”

Incident Data:

15. Child Witnesses

The file reviewer is to indicate with a Yes/No response if there is documentation of any child witnesses to the maltreatment (other than the victim).

16. Adult Witnesses

The file reviewer is to indicate with a Yes/No response if there is documentation of any adult witnesses to the maltreatment.

17. Other Child Victims

The file reviewer is to indicate with a Yes/No response if there is documentation of any other child victims of maltreatment in the report that is the focus of the review (i.e., the maltreatment that resulted in a child death, a removal that resulted in subsequent reunification, or ongoing in-home child protective services for the target child).

18. Date of Initial Report

This date is to be taken from the official report (e.g., FAHIS report) of the maltreatment that resulted in one of the three following outcomes: (1) a child death, (2) a removal that resulted in subsequent reunification, or (3) ongoing in-home child protective services for the target child.

19. Location

The reviewer is to indicate if the maltreatment occurred in the home of the child or out of the home. There is a drop down menu with In-home/Out-of-home choices. There is also an opportunity to explain “out-of-home” settings (e.g., on the highway in the case of a car accident, or at a neighbor’s home, etc.).

20. Time of report

The time is to be taken from the official report (e.g., FAHIS report) of the maltreatment and will be recorded based on a 24 hour clock.

20a. Date/Time of incident (if different than Date/Time of report)

21. Potential Catalyst(s)

This is an open-ended item that allows the Reviewer to indicate possible catalysts for the abuse. Examples may include: alcohol/drug abuse, domestic dispute, child crying or misbehaving, etc.

22. Type of Incident (Allegation)

The DCF allegation matrix as it exists in Child and Family Operating Procedure No. 175-28 (CFOP 175-28) was collapsed into the major maltreatment categories including: Death, Sexual maltreatment, Mental injury, Lack of supervision, Neglect, Lack of health care, Threatened harm, Failure to protect, Physical abuse, and other. Space is provided to explain if necessary. For example, there may have been multiple allegations included in one incident.

23. Manner of Child Death

For those cases that resulted in the death of the target child, this is an open-ended question allowing for description of the child's death.

Perpetrator Data:**24. Perpetrator's unique identifier**

Perpetrator identification will be tracked in a method modified from the child identifiers by adding a P (i.e., PCAD, PDCFR, and PDCFN). It is recognized that there may be more than one perpetrator indicated in a maltreatment incident. As such, the numbering scheme would include the use of a lower case letter following the number. For example, if two perpetrators were named in CAD#55, the perpetrator identifiers would be PCAD#55a and PCAD#55b.

25. Perpetrator's City of Residence

The city of the perpetrator's residence at the time of the incident will be reported as found on the official abuse report.

26. Perpetrator's County of Residence

The county of the perpetrator's residence at the time of the incident will be reported as found on the official abuse report.

27. Perpetrator's Zip code

The ZIP Code of the perpetrator's residence at the time of the incident will be reported as found on the official abuse report.

28. DOB of Perpetrator

The perpetrator's date of birth will be entered in the following format – mm/dd/yyyy.

29. Perpetrator's Gender

The perpetrator's gender will be reported using a pull down choice menu of male or female.

30. Race/Ethnicity of perpetrator

The race/ethnicity of the perpetrator will be reported using a pull down choice menu with the following options: White, Black, Hispanic, American Indian, Asian/Eskimo, or Other.

31. Perpetrator's relationship to child

Six options have been included in the pull down choice menu for the perpetrator's relationship to the child victim: (1) Foster parent, (2) stepparent, (3) natural parent, (4) other family member, (5) paramour, and (6) other.

32. Did perpetrator live in home of victim

Reviewer is to indicate a Yes/No/Unknown response based on documentation available in the record.

33. Educational Level of Perpetrator

There are six options available for response to this item: (1) Unknown, (2) less than high school completion, (3) high school graduate, (4) some college or training, (5) college graduation, and (6) post-baccalaureate education. A response to this item may be found in progress notes or evaluation of perpetrator when available.

34. History of Domestic Violence

This item allows for identification of the perpetrator as either the victim or perpetrator of domestic violence. There are five options: Yes – as perpetrator, Yes – as victim, Yes – as both perpetrator and victim, No history reported, and unknown. There is also space available to describe the history of domestic violence in more detail.

35. Prior Abuse Reports Involving this Perpetrator

Reviewers are to indicate the number of prior child abuse reports involving this perpetrator as an offender. Choices include 1, 2, 3, 4, or 5 or more (5+), none reported, and unknown. Prior reports DO NOT need to involve the same child victim.

36. Did legal action result from prior abuse report(s)?

Reviewers are to report Yes, No, or Unknown as to whether or not there were legal ramifications subsequent to prior abuse reports (e.g., incarceration).

The following nine questions are designed to gather specific characteristic information regarding the perpetrator both at the time of the incident and historically.

37. Employment Status

Several options are made available in a drop down menu to describe the employment status of the perpetrator at the time of the incident. However, only one of the following can be selected:

- a. Unknown – to be reserved for a lack of available information
- b. full-time employment
- c. part-time employment
- d. temporary/day labor (e.g., itinerant farm work)
- e. work initiative (e.g., involvement in a TANF program)

- f. not working – unemployed but without a disability status
- g. disability working – to be used for those individuals who are receiving SSI, but still work to some degree
- h. disability not working – disability payments are the sole source of income
- i. student – perpetrator was involved in either full or part-time educational endeavors

38. Job Stability

Four options are available to describe the job stability of the perpetrator at the time of the incident: NA, Unknown, Employed same job/employer 1 yr+, or Temporary (2+ jobs within same year).

39. Substance Abuse History

Reviewer is to indicate which of the following five choices best describes the perpetrator's history of substance abuse and receipt of services: (1) Unknown, (2) Receiving substance abuse treatment services at the time of the incident, (3) Prior history of substance abuse services, (4) Prior history of substance abuse but no services, and (5) No history of substance abuse or related services. Substance abuse services can refer to any combination of inpatient or outpatient services, including attendance at Alcoholics Anonymous (AA) or Narcotics Anonymous (NA) meetings.

40. Mental Health History

Reviewer is to indicate which of the following five choices best describes the perpetrator's history of mental health issues and receipt of services: (1) Unknown, (2) Receiving mental health treatment services at the time of the incident, (3) Prior history of mental health services, (4) Prior history of mental health issues but no services, and (5) No history of mental health issues or related services. Mental health services can refer to any combination of inpatient or outpatient services, and can also refer to perpetrator's experiences as a youth.

41. Health problems

Reviewer is to indicate if the perpetrator has a history of any of the following health problems: heart condition, diabetes, cancer, stroke, seizure disorder, other. There is also an option for "Unknown" if insufficient information is available. There is space available to describe "Other" if selected, or to offer comment if more than one condition is historically present.

42. Perpetrator's criminal history

A drop down menu with the choices of Yes/No/Unknown is available to answer whether or not the perpetrator had any criminal history (i.e., arrests for misdemeanors or felonies) prior to the maltreatment incident. This question is to be answered using all available material in the file. There is space available for explanation if the answer is yes.

43. Juvenile history

Responses are limited to Yes, No, and Unknown as to whether or not the perpetrator had a history of legal involvement as a juvenile. In Florida, that would mean referrals to the Department of Juvenile Justice (DJJ). In other states, it would refer to a parallel agency.

44. Arrest history

Reviewer is to indicate the number of times the perpetrator has been arrested AS AN ADULT. Choices are: 1, 2, 3, 4, 5+, Unknown, and Never Been Arrested.

45. What type of criminal acts has perpetrator been involved with?

This is an open-ended question that allows for a listing of all charges that have been made against the perpetrator.

The following four questions are specific to the child maltreatment and the perpetrator's reaction.

46. Did perpetrator admit abuse?

In the specific case of child maltreatment that is under review, did the perpetrator admit to the abuse? Valid responses are Yes/No/Unknown.

47. Did perpetrator accept responsibility for abuse/ neglect/death?

This question goes a step further than item #45. Not only did the perpetrator admit to the abuse, but did he/she accept responsibility. Valid responses are again Yes/No/Unknown.

48. Perpetrator's childhood history of abuse/neglect

Reviewer is to indicate Yes, No, or Unknown as to whether or not the perpetrator had been a child victim of maltreatment.

49. Outcome of Perpetrator

This is an open-ended question that allows the reviewer to indicate any one of the myriad of outcomes for the perpetrator in response to the maltreatment incident. For example, the perpetrator may have been asked to leave the home and placed under a restraining order. Another outcome may be life in prison for the murder of a child. Yet another option could be the termination of parental rights as a result of the maltreatment.

Household Related Data:

50. Prior un-substantiated reports of abuse/neglect for family

"Family" is loosely defined for this item and #50. Family refers to any of the members of the household constellation at the time of the child maltreatment incident under review. For example, mother's paramour may have been the alleged perpetrator on prior reports or an older sibling could have been the target while in the care of another family member. Responses are limited to Yes/No/Unknown.

51. Prior substantiated reports of abuse/neglect for family

As with item #49, responses are limited to Yes/No/Unknown, and apply a broad definition of “family.”

52. Prior law enforcement involvement with family

Reviewer is to indicate Yes, No, or Unknown in reference to the question of prior law enforcement involvement with family (e.g., response to domestic dispute, call regarding stolen car, etc.). Space is provided to elaborate if the answer is yes.

53. Service Use

A series of items were developed to describe possible service usage by the family. Each item can be answered with one of the following six options: (1) Within 6 months prior to the incident, (2) as a direct result of the incident, (3) both prior and subsequent to the incident, (4) Historically, (5) No, and (6) Unknown. The items are as follows:

- a. Mental Health services – to include any inpatient or outpatient services including use of a Baker Act (involuntary civil commitment) assessment
- b. Substance Abuse services
- c. Parent Education
- d. Family Support
- e. General Education/Adult Education – educational endeavors of caregivers
- f. Public Assistance – this includes food stamps, WIC, and cash assistance
- g. Employment services
- h. Work Force
- i. Stress Management
- j. Medicaid/Medicare -
- k. Financial Management
- l. Anger Management
- m. Marriage Support/ Counseling
- n. Tangible Supports – this includes any assistance with food, household items, clothing, utility payments, etc.
- o. Other
- p. None

54. Community Visibility Factors

A series of items was developed to describe possible community visibility factors of the family (i.e., how much opportunity the community had to see the children and interactions with parents and other caregivers). Each item can be answered with Yes, No, or Unknown. Reviewer should consider the entire history of the family. The items are as follows:

- a. Child enrolled in school/child care – at the time of the incident, was the target child enrolled in either school or child care
- b. Receive medical services
- c. Is parent involved in child activities? – this item also has a possible response of not applicable if either (a) the child is too young to participate in activities or (b) the child does not participate in any activities.
- d. Is child involved in extra-curricular activities?

- e. Does family have social supports? – examples of social supports include involvement in community groups, church groups, a close circle of friends and/or neighbors, etc.
- f. Is/are the caregiver/s working?
- g. Other – space is available to explain any other factors that may have influenced community visibility. This is also a space for reviewers to make any notes. For example, it may be important to note that there was a dramatic change in the family’s social behaviors just prior to the incident (e.g., no longer showed up at the playground, quit seeing friends, started missing more work, etc.).

55. Family Stress Factors

A series of items was developed to describe family stress factors of the family. Each item can be answered with Yes – Recent (i.e., within the past six months), Yes – Historically (i.e., prior to six months ago), No, or Unknown. Many of these items reflect changes that can occur in any household, resulting in increased stress to family members. The items are as follows:

- a. Living conditions physically hazardous
- b. Divorce – either impending or past
- c. Marriage
- d. Marital Separation – either current or past
- e. Pregnancy
- f. Person moving into household
- g. Moved to new location
- h. Limited household income
- i. Loss/change of employment
- j. Child(ren) entered new school/ childcare
- k. Death of family member
- l. Death of family/child friend
- m. Alcohol/ Drug problem
- n. Problems at school
- o. Problems at work
- p. Unemployment
- q. Legal problems
- r. Custody problems
- s. Continuing/chronic medical conditions
- t. One or more children under age 4 living in home
- u. History of teenage pregnancy/parenting
- v. Any children being previously adjudicated dependent
- w. Other – there is space available to offer any explanation of any of the stress factors indicated or to clarify what was being referenced by “Other”.

The following six questions refer to the non-offending caregiver of the target child if this person differs from one of the perpetrators indicated. These questions are intended to gather a history relevant to the non-offending caregiver for the child.

56. Age of non-offending caregiver

This item is to refer to the primary caregiver of the target child ONLY IF that caregiver has not already been described as a perpetrator. Choices for response include: Unknown, Under 18, 19-25, 26-35, 36-45, 46-50, 50+ years old.

57. History of mental health treatment/services

Reviewer is to indicate Yes, No, or Unknown as to the non-offending caregiver's history of mental health treatment or services. This is to include all inpatient and outpatient services received at any time in the individual's life.

58. History of substance abuse treatment/services

Reviewer is to indicate Yes, No, or Unknown as to the non-offending caregiver's history of substance abuse treatment or services. This is to include all inpatient and outpatient services received at any time in the individual's life.

59. History of juvenile justice involvement

Choices include Yes, No, and Unknown as to any history of legal involvement as a juvenile on the part of the non-offending caregiver.

60. History of childhood abuse/neglect

Reviewer is to indicate Yes, No, or Unknown as to whether or not the non-offending caregiver had been a child victim of maltreatment.

61. History of criminal activity

Choices include Yes, No, and Unknown as to any history of legal involvement as an adult on the part of the non-offending caregiver. Space is provided to offer any details regarding criminal history.

The following two questions are designed to better describe the family structure at the time of the target incident.

62. Number of Adults in home

A forced-choice menu offers the options of 1, 2, 3, 4, and more than 4.

63. Number of children in home

A forced-choice menu offers the options of 1, 2, 3, 4, and more than 4.

64. Reviewer's Comments

This is the final item on the protocol that allows an opportunity for the reviewer to make any comments that were not already included in the protocol, to offer clarification of anything included, or to offer feedback on the process.

APPENDIX B: Data Dictionary GIS Database

Data Dictionary GIS Database

Domestic Violence Offenses by County

Available by calendar year for 1992 – 2004

Source: Florida Statistical Analysis Centre, FDLE

Fields:

- Population
- Criminal Homicide
- Manslaughter
- Forcible Rape
- Forcible Sodomy
- Forcible Fondling
- Aggravated Assault
- Aggravated Stalking
- Simple Assault
- Threat/ Intimidation
- Stalking
- Total
- Rate Per 100,000 Population

Notes: Population is estimated for every calendar year (i.e., not derived from US Census), and rate is calculated by comparing total offenses with total population.

Domestic Violence Arrests by County

Available by calendar year for 2004 only

Source: Florida Statistical Analysis Centre, FDLE

Fields:

- Population
- Criminal Homicide
- Manslaughter
- Forcible Rape
- Forcible Sodomy
- Forcible Fondling
- Aggravated Assault
- Aggravated Stalking
- Simple Assault
- Threat/ Intimidation
- Stalking
- Total
- Rate Per 100,000 Population

Notes: Population is estimated for every calendar year (i.e., not derived from US Census), and rate is calculated by comparing total offenses with total population.

Total Index Crime by County

Available by calendar year for 1989-2004

Source: Florida Statistical Analysis Centre, FDLE

Fields:

- Population
- Murder
- Forcible Sex Offenses
- Robbery
- Aggravated Assault
- Burglary
- Larceny
- Motor Vehicle Theft
- Total Index Crime
- Index Rate Per 100,000

Notes: Population is estimated for every calendar year (i.e., not derived from US Census), and rate is calculated by comparing total index crimes with total population.

Total Arrests by County

Available by calendar year for 1989-2004

Source: Florida Statistical Analysis Centre, FDLE

Fields:

- Total Arrests
- Population
- Arrest Rate per 100,000
- Total Adult Arrests
- Total Juvenile Arrests
- Murder
- Forcible Sex Offenses
- Robbery
- Aggravated Assault
- Burglary
- Larceny
- Motor Vehicle Theft
- Manslaughter
- Kidnap/ Abduction
- Arson
- Simple Assault
- Drugs/ Narcotics
- Bribery
- Embezzlement
- Fraud
- Counterfeit/ Forgery
- Extortion/ Blackmail
- Intimidation
- Prostitution/ Commercialized Sex
- Non-Forcible Sex Offenses
- "Buy/Receive/

Poss. Stolen Property"
DUI
Destruction/ Damage/ Vandalism
Gambling
Weapon Violations
Liquor Law Violations
Misc.

Notes: Population is estimated for every calendar year (i.e., not derived from US Census), and rate is calculated by comparing total arrests with total population.

Maltreatment Cases by County

Available by fiscal years: 1999-2000; 2000-2001; 2001-2002

Fields:

All maltreatment reports
Substantiated cases

Census Variables by County

Available for 2000 only

Source: US Census Bureau

Fields:

Population
Number of households
Number of family households (families)
Number of family households with own children under 18 years
Number of children under 18
Number of minority children under 18 – see note 1
Population in mental (psychiatric) hospitals – see note 2
Median household income
Average family income
Median family income
Median family income – with own children under 18
Median family income – no own children under 18

Note 1: Number of minority children under 18 is not a regular census variable. It has been calculated by determining the number of white males and females under 18 and subtracting this from the number of children under 18.

Note 2: The number of people in mental hospitals reflects the location of mental hospitals, and the value for about half the county is zero.

Social Services in Florida by Individual Location

Data is based on a compilation of online Yellow Page listings for 2004 which were then geocoded. Approximately 13,000 records. Other than type, not much else is known about these locations.

Source: Geoplan Florida

The GIS data consists of the geocoded location of every individual facility, which can be

aggregated at any spatial level.

Data Dictionary GIS Database

Initial Draft of Literature review

The goal of this literature review was to synthesize scholarly publications pertaining to the exploration of abuse-related versus neglect-related child fatalities. Search strategies were developed by the research team as an iterative process in consultation with the Louis de la Parte Florida Mental Health Institute (FMHI) University of South Florida librarian.

The research team began the literature searching process by establishing guidelines for citation retrieval. The following citation retrieval criteria were used to select reports, books, and published and unpublished article citations for preliminary review:

- published in English no earlier than 1970,
- the title or abstract contained one or more of the search terms, and
- an empirical study, meta-analysis, or literature review.

Literature with any data (quantitative or qualitative) and any design (surveys to high quality randomized group designs or within subject designs) in any domain (including child welfare, health, juvenile justice, medicine, mental health, nursing, and social services) was eligible for inclusion. Databases searched included OVID, ERIC, PubMed, Current Contents, Science Direct, CINAHL PschINFO, *Medline*, *WorldCat*, *NCJRS*, and *Criminal Justice Abstracts* (CJA) to find material on the forensic component of the search, i.e., determining abuse vs. neglect child death. *Medline*, *PsycINFO*, *CJA*, and *Social Work Abstracts* were examined for materials on perpetrator characteristics. Hundreds of different periodicals were scanned, including *Child Abuse & Neglect*, *Child Abuse Prevention Issues*, *Child Abuse Review*, *Child Maltreatment*, *Child Health Alert*, *Death Studies*, and *Homicide Studies*.

Throughout the extensive literature search, we used the following terms in multiple combinations in both venues: accidental falls, accidents, brain edema, brain injuries, brain edema, cerebral hemorrhage, child abuse, child abuse investigation, child maltreatment, child death, craniocerebral trauma, deprivation, facial injuries, Munchausen's syndrome by proxy, child abuse as crime, retinal hemorrhage, rib fractures, risk factors, skull fractures, starvation survival, and non-penetrating wounds, deliberate, homicidal, childhood, child, adolescent, death, casualty, fatality, accidental, intentional, non-intention, unintentional, child abuse, neglect, caregiver, and parental. We also tried to limit the field to aid in a more specific search process by geographic location, author, language, and year of publication. This proved indifferent throughout the course of the research.

Once the research team had completed the literature search, nearly 50 citations were retrieved and entered into a database. The research team then proceeded to screen the list by reading the titles and abstracts using the same guidelines for citation retrieval.

The remaining citations were retrieved for full-text review and content analysis. The review team recorded pertinent information from each document reviewed and created a brief summary of the article. The article summary covered several aspects including: the research domain, topic or purpose of the article, methods, results and findings, selected quotations, selected references, and memos or notes made by the reviewer about the article. Full text reviews were completed by the review team members.

Annotated Literature Review

Alexander, R., & Case, M. (2005) *Evaluation of Accidental and Inflicted Child Death*, GW Publishing.

This book contains the complete information on child fatality review teams and is designed to serve team members, potential team members, and interested nonmembers as the only text they will need on death review. The volumes detail common types of child fatalities for professionals to use as a reference, including fully captioned photographs to help determine whether or not the fatality was the result of abuse. These references explain the role of each core member, including child abuse prevention professionals, medical examiners, coroners, pediatricians, prosecutors, law enforcement personnel, mental health professionals, child protective services, domestic violence and substance abuse experts, vital statistics personnel, educators and public health workers.

Browne, K. D., & Lynch M. A. (1995). The nature and extent of child homicide and fatal abuse. *Child Abuse Review*, 4, 309-316.

The authors review the literature and identify risk factors for fatal child abuse and neglect, including child under five years of age; Child suffering from non-organic failure to thrive; History of abuse or unexplained injuries to a child in the family; Spousal violence or discord in family; Caregiver suffers from psychiatric illness or psychological disorder; Caregiver excessively uses alcohol or illicit drugs; Caregiver under stress and/or poverty (eg: unemployment or criminal activities in the family); and Caregiver young and inexperienced.

Bunting, L. & Reid, C. (2005). Reviewing child deaths—Learning from the American experience. *Child Abuse Review*, 14(2), 82-96.

Current systems for investigating child deaths in England, Wales and Northern Ireland have come under intense scrutiny in recent years and questions have been raised about the accuracy of child death investigations and resulting statistics. Research has highlighted the ways in which multidisciplinary input can contribute to investigative and review processes, a perspective which is further supported by recent UK policy developments. The experience of creating multidisciplinary child death review teams (CDRTs) in America highlights the potential benefits the introduction of a similar system might have. These benefits include improved multi-agency working and communication, more effective identification of suspicious cases, a decrease in inadequate death certification and a broader and more in-depth understanding of the causes of child deaths through the systematic collection and analysis of data. While a lack of funding, regional coordination and evaluation limit the impact of American CDRTs, the positive aspects of this process make it worthwhile, and timely, to consider how such a model

might fit within our own context. Current policy developments such as the Home Office review of coroner services, the Children Bill and related Department for Education and Skills (DfES) work on developing screening groups demonstrate that strides have been made in respect of introducing a multidisciplinary process. Similarly, the development of local protocols for the investigation and [sol]or review of child deaths in England, Wales and Northern Ireland highlights an increased focus on multidisciplinary processes. However, key issues from the American experience, such as the remit of CDRTs[sol]screening panels, the need for national coordination and the importance of rigorous evaluation, can inform the development of a similar process in the UK.

Chance, T., & Scannapieco, M. (2002). Ecological correlates of child maltreatment: Similarities and differences between child fatality and nonfatality cases. *Child & Adolescent Social Work Journal*, 19(2), 139-161.

The rate of fatal child maltreatment is increasing, and differentiating between risk factors for fatal as opposed to nonfatal maltreatment is essential to developing prevention programs. This exploratory retrospective study utilizes case record analysis to examine four categories of correlates for child maltreatment: 1) parent/caregiver factors, 2) child factors, 3) environmental/situational factors, and 4) maltreatment incident factors. Thirty-eight fatality cases are compared to a matched group of nonfatality cases to determine which factors are related to fatality in a large Southwestern metropolitan area. The results provide a profile of characteristics that may place a child at higher risk of fatal maltreatment.

Cloke, C. (ed.) (2000) *Out of Sight: NSPCC Report on Child Deaths from Abuse 1973 to 2000*, London, NSPCC.

Out of Sight brings together an important collection of papers and summaries of the work of researchers and professionals from the UK and elsewhere. Contributors consider the need to improve statistical information on child abuse deaths, improve the diagnosis and investigation of all child deaths, learn the lessons from child abuse tragedies, and introduce wide-sweeping reforms to protect children and safeguard their rights. Babies under 12 months old are far more vulnerable to fatal child abuse than older children and several contributors consider the risk factors for infants in the UK and how to better prevent infant killings and investigate unexpected infant deaths. *Out of Sight* concludes that a national strategy is needed to prevent children dying from abuse and neglect.

Connell-Carrick, K. (2003). A Critical Review of the Empirical Literature: Identifying Correlates of Child Neglect. *Child & Adolescent Social Work Journal*, 20(5), 389-425.

More than half the children in the United States who were victims of maltreatment in 2000 were victims of neglect (USDHHS, 2002). The majority of all child maltreatment related fatalities in 2000 were the result of neglect (USDHHS, 2002), and 27.8% of these fatalities were associated with both physical abuse and neglect (USDHHS, 2002). Neglected children are more likely to be younger children (USDHHS, 2000), and the highest rate of child fatality due to maltreatment is between the ages of zero and five (Petit & Curtis, 1997; Gustavsson & Segal, 1994; USDHHS, 1999). The purpose of this

article is to present the findings of a systematic review of the research on child neglect from 1990 to 2002. The review critiques method and synthesizes of the current body of knowledge on child neglect.

Cordner, S. M., Burke, M. P., Dodd, M. J., Lynch, M. J., Ranson, D. L., & Robertson, S. D. (2001). "Issues in child homicides: 11 cases." *Legal Medicine* 3: 95-103.

For a variety of reasons, child homicides are the most difficult cases for forensic pathologists. For example, the events are usually not witnessed, accidental explanations are offered, often there is more than one carer spanning the period over which the injuries might have occurred, and there can be conflicting opinions between the various medical specialties. Eleven cases of fatal child abuse are presented to illustrate and briefly discuss particular difficulties. Reference is also made to interaction with the legal process and parallel difficulties the law has with fatal child abuse.

Creighton, S. J. (1995). Fatal child abuse—How preventable is it? *Child Abuse Review*, 4, 318-328.

Infant and child homicide rates have remained stable over the last 20 years. They represent the most visible part of the spectrum of fatal child abuse. By contrast, infant mortality and child deaths from accidents and SIDS have all declined. The prevention strategies used to combat these deaths would appear to have been more successful than the protection strategies used against child abuse deaths. International comparisons of infant homicide rates have shown that measures of family stress, available resources and the cultural variables of low status of women and the culture of violence were all associated with increased infant homicide rates. The paper argues for a change in our culture towards children to prevent fatal child abuse.

Crume, T., DiGuseppi, C., Byers, T., Sirotnak, A., & Garrett, C. (2002).

Underascertainment of child maltreatment fatalities by death certificates, 1990-1998. *Pediatrics* (110) 2. <http://pediatrics.aappublications.org/cgi/reprint/110/2/e18.PDF> (PDF - 76 KB).

Child fatality review teams have emerged across the United States in the past decade to address the concern that systems of child protection, law enforcement, criminal justice, and medicine do not adequately assess the circumstances surrounding child fatality as a result of maltreatment. **Methods.** We compared data collected by a multidisciplinary child fatality review team with vital records for all children who were aged birth to 16 years and died in Colorado between January 1, 1990, and December 1, 1998. Odds ratios and 95% confidence intervals for ascertainment by the death certificate were estimated using logistic regression. **Results.** Only half of the children who died as a result of maltreatment had death certificates that were coded consistently with maltreatment. Black race and female gender were associated with higher ascertainment, whereas death in a rural county was associated with lower ascertainment. Deaths resulting from violent causes (eg, shaking, blunt force trauma, striking) were more likely to be ascertained than those that involved acts of omission (eg, neglect and abandonment, drowning, fire). The most common perpetrators of maltreatment were parents. However, maltreatment by an unrelated perpetrator was 8.71 times (95% confidence interval: 3.52-21.55) more likely to be ascertained than

maltreatment by a parent. Conclusions. The degree of underascertainment found in this study is of concern because most national estimates of child maltreatment fatality in the United States are derived from coding on death certificates. In addition, the patterns recognized in this study raise concern about systematic underascertainment that may affect children of specific sociodemographic groups.

Freeman, J. B., Levine, M., & Doueck, H. J. (1996). "Child age and caseworker attention in child protective services investigations." *Child Abuse & Neglect* 20(10): 907-920. Infants and toddlers are at increased risk for severe-fatal abuse, often at the hands of male perpetrators. This paper examined whether child maltreatment cases involving younger children receive more casework services, overall caseworker activity (e.g., home visits, phone contacts), and are more likely to be substantiated, particularly if a male perpetrator is involved. The randomly selected sample consisted of 293 child abuse and neglect reports in a large county in Western New York in 1993. Hierarchical regression analyses showed that younger children generally receive more overall services and caseworker activity, and that while age makes a significant contribution after the decision has been made to substantiate a case, it does not have the same effect on the initial decision of whether or not to substantiate. Gender of the perpetrator did not reliably predict caseworker attention.

Friedman, S. H., Horwitz, S. M., & Resnick, P. J. (2005). Child Murder by Mothers: A Critical Analysis of the Current State of Knowledge and a Research Agenda. *American Journal of Psychiatry*, 162,1578-1587.

Maternal filicide, or child murder by mothers, occurs more frequently in the United States than in other developed nations. However, little is known about factors that confer risk to children. The authors review the literature to identify predictors of maternal filicide and identify gaps in knowledge about maternal filicide. METHOD: Databases were systematically searched for studies of maternal filicide and neonaticide (murder in the first day of life) that were conducted in industrialized countries and were published in peer-reviewed, English-language publications after 1980. RESULTS: Women who committed filicide varied greatly by the type of sample studied. Neonaticide was often committed by young, poor, unmarried women with little or no prenatal care. CONCLUSIONS: The results of the review suggest that little is known about the predictors of maternal filicide and that a systematic, focused program of research on reliable markers for maternal filicide is needed to better prevent these events.

Gellert, G., Maxwell, R., Durfee, M., & Wagner, G. (1995). Fatalities assessed by the Orange County Child Death Review Team, 1989 to 1991. *Child Abuse & Neglect*, 19(7), 875-883.

Interagency child death review teams have emerged in response to the increasing awareness of severe violence perpetrated against children in the United States. Child death review involves a systematic, multidisciplinary, and multiagency process to coordinate data and resources from the coroner, law enforcement, the courts, child protective services, and health care providers. The Orange County, CA team reviews all coroner's cases (unattended death or questionable cause of death) for children 12 years old and younger. This paper describes the interagency review in Orange County and

provides data on the demographics of cases reviewed by the team (N = 637) compared to unreviewed deaths (N = 1,463) for the period 1989 to 1991. Trends were analyzed to assess differences in: (1) age distribution; (2) gender; (3) ethnicity; (4) cause of death (non-SIDS natural; non-natural including traffic deaths, SIDS, other injuries; homicide; and undetermined); and (5) cause of death by age, gender, and ethnicity. Implications of the data for other jurisdictions with child death review teams are discussed.

Hutchins, E., Grason, H., & Handler, A. (2004). FIMR and Other Mortality Reviews as Public Health Tools for Strengthening Maternal and Child Health Systems in Communities: Where do We Need to go Next?. *Maternal & Child Health Journal*, 8(4), 259-268.

This article examines FIMR in relationship to two other maternal and child health mortality reviews--child fatality review (CFR) and maternal mortality review (MMR), and explores how their approaches to reviewing deaths can complement one another. Identifying opportunities for collaboration among these case review methodologies may lead to greater efficiencies at the local and state levels and strengthen the case review approach as a public health tool for improving maternal and child health outcomes. To enable comparative analysis, a table was constructed that identifies the purpose, structure, and process features of each case review approach. This was followed by an examination of two possible ways to improve maternal and child mortality review processes in states: 1) better coordination; and 2) improving each individual process through adapting and adopting promising practices from the others. A discussion is also provided of the state Title V role in facilitating both the coordination of reviews and the process of sharing best practices. Given the similarities that exist among the three MCH mortality reviews, it is important to view each review as one component of a larger system of maternal and child health death reviews. Implementing widely the recommendations generated by these reviews may increase the likelihood of improvements in services and systems on behalf of women and children.

Korbin, J. (1986). Childhood histories of women imprisoned for fatal child maltreatment. *Child Abuse & Neglect*, 10(3), 331-338.

A history of childhood maltreatment is the most consistently reported characteristic of abusive parents. Retrospective research with nine women imprisoned for fatal child abuse revealed childhood histories of maltreatment. Detailed life histories indicated that the meaning of the abuse to the individual had an important impact on later abusive parenting. The types of childhood abuse varied. Childhood abuse was one in a set of factors contributing to abusive parenting. Retrospective studies underline the need for prospective research on long-term outcomes of childhood abuse.

Korbin, J. (1987). Incarcerated mothers' perceptions and interpretations of their fatally maltreated children. *Child Abuse & Neglect*, 11(3), 397-407.

Fatally maltreated children are an elusive component in the complex interaction that has led to their premature deaths. Retrospective research with women imprisoned for fatal child maltreatment indicated recurring themes of maternal interpretations of their children as rejecting and developmentally abnormal, either advanced or delayed.

Separations and difficulties during reunions were critical. The fatality was not a one-time event, but the exit point of a recurrent cycle of abusive interaction.

Lawson, B., Masson, H., & Milner, J. (1995). 'There but for the Grace...?' Developing multi-disciplinary training following a local child death inquiry. *Child Abuse Review*, 4, 340-350.

This article describes the process of planning and running a training course for multi-disciplinary professionals in the wake of a local child death inquiry. The factors which influenced the content and management of the training experience are discussed, in particular the trainers' determination to encourage course participants to develop practice foresight rather than defensive reactions to what had emerged in the inquiry's findings. How the course was received by the practitioners, the work that was accomplished and the impact on the trainers of running a course in such circumstances are then highlighted.

Longlade, P. (1999). Evaluating child homicide inquests as a learning process: A social constructionist analysis of a Canadian experience. *Children and Youth Services Review*, 21(4), 295-310.

The death of a child who is known to protection agencies is perhaps the gravest critical incident affecting child welfare today. The media coverage that these tragedies receive has fuelled public demand for solutions to this social problem. In response, several countries have conducted judicial or public investigations into child homicide deaths. However, there has been very little critical analysis of these proceedings as a learning or problem-solving process.

This paper suggests that a social constructionist understanding of organizations as cultures provides a useful perspective from which to conduct an inquest into the inquest process itself. This framework is applied to a Coroner's inquest held in Ontario, Canada, in 1997. Under such an analysis, the inquest proceedings are seen to be a "storying of experience", not an impartial and comprehensive exploration of the facts. It is argued that the interpretation of the child abuse death was limited by a bureaucratic orientation. While this orientation did result in a number of promising solutions, the solutions that were emphasized tended to be those which reflected the paradigms, practices and needs of the dominant stakeholders in these proceedings. The potential dangers of several of the resulting recommendations are considered.

An acknowledgement of the subjectivity inherent in current inquests, coupled with a deliberate effort to integrate insights from other paradigms and perspectives would be a critical first step toward improving our understanding of how to prevent child homicide deaths.

Lucas, D. R., Wezner, K. C., Milner, J. S., McCanne, T. R., Harris, I. N., Monroe-Posey, C., & Nelson, J. P. (2002). "Victim, perpetrator, family, and incident characteristics of infant and child homicide in the United States Air Force." *Child Abuse & Neglect* 26: 167-186.

Males were over-represented in young child victims (between 1 year and 4 years of age) and child victims (between 4 years and 15 years of age) but not in infant victims (between 24 hours and 1 year of age). African-American infant victims and perpetrators were over-represented. Younger victims were more likely to have been previously physically abused by the perpetrator. Perpetrators were predominantly male and the biological fathers of the victims. Infant and young children perpetrators reported childhood abuse histories, which child perpetrators reported the highest frequency of mental health contact. Victims' families reported significant life stressors. Families of young child victims were more likely divorced, separated, or single. Incidents with infants and young children tended to occur without witnesses; incidents with child victims tended to have the victim's sibling(s) and/or mother present. Fatal incidents were more frequent on the weekend, in the home, and initiated by some family disturbance.

Lyman, J. M., McGwin, G., Malone, D. E., Taylor, A. J., Brissie, R. M., Davis, G., & Rue, L. W. (2003). "Epidemiology of child homicide in Jefferson County, Alabama." *Child Abuse & Neglect* 27: 1063-1073.

The 53 study subjects were mainly female (55%), Black (69%), younger than 2 years of age (85%), had single mothers (38%), and a history of abuse (53%). Offenders were more likely to be male (64%), Black (73%), and a parent of the victim (53%). Homicides primarily resulted from an angry impulse (61%), with hands the most common weapon (61%). Conclusions: The majority of deaths in this study occurred among children younger than age 2, with a high proportion of fatalities among Black children of unmarried mothers. The offender most often knew the victim, with half of all homicides and two-thirds of all infant homicides involving a parent. More than half of the homicides resulted from an angry impulse, while the most common scenario for deaths with undetermined intent involved the caretaker finding the child unresponsive.

Mancuso, R. (1998). With the best of intentions: New York state's Child Protection System and the laws used to mask the real reasons for organizational failure. *Journal of Human Behavior in the Social Environment*, 1(4), 57-72.

Drawing on organizational, legal, & case study examples to examine organizational decision making in cases of child maltreatment, three questions are posed: (1) What were the stated & unintended results of the Child Protective Services Reform Act of 1996 on the functioning of the Child Protection System (CPS) in NY? (2) Are there outside pockets of influence (e.g., political, organizational, social, community, or religious pressures) that affect the functioning of the CPS? (3) What will be the consequences, both short- & long-term, for the citizens, children, & families who come in contact with the CPS? Given an increase in severe child maltreatment cases, better understanding of the organizational & legal decision-making process is critical.

Munro, E. (2005). A Systems Approach to Investigating Child Abuse Deaths. *British Journal of Social Work*, 35(4), 531-546.

A new systemic approach to investigating child abuse deaths is proposed, drawing on the lessons learned in engineering. Investigations have traditionally taken the approach of concluding once faults in professional practice are identified. Solutions take the form of trying to control erratic practitioners: psychological pressure to achieve higher

standards, increasing formalization and guidelines to reduce the scope for individual fallibility, and stricter management surveillance. The inquiry into the death of Victoria Climbié fits this model. However, thirty years of such inquiries have not led to the expected improvement in professional practice. Indeed, the *Climbié* report describes several agencies operating at a very low level, and failing to implement the most basic elements of good practice. A similar history of failure in engineering has led to the development of a systems approach. Human error is taken as the starting point, not the conclusion, and the investigation tries to understand *why* the mistake was made, by studying interacting factors in the practitioners, the resources available and the organizational context. The way this approach could be adopted in child protection work is outlined.

Smith, M., & Fong, R. (2004). *The children of neglect: When no one cares*. Brunner-Routledge.

Recent studies by the US Department of Health and Human Services (1996, 1999, 2000, 2002) show that children are almost twice as likely to be neglected by their families as they are to be abused, and that the effects of neglect are at least as devastating as those of abuse. And yet there is a glaring gap in the literature available to social workers, counselors, and therapists, as there have been very few books published that focus on neglect. This book contains a comprehensive review of the current state of child neglect, combining research, theory and practice in order to promote awareness and suggest practical solutions. Included are statistics regarding incidence and lethality, definitional issues, etiological theory, history and current policy, current interventions, and the relationship of child neglect to poverty, substance abuse, and culture.

Webster, R. et al. (2003) 'Child death review: the state of the nation' *American Journal of Preventive Medicine*, XXV, 58-64.

Child death review (CDR) is a mechanism to more accurately describe the causes and circumstances of death among children. The number of states performing CDR has more than doubled since 1992, but little is known about the characteristics of these programs. The purpose of this study was to describe the current status of CDR in the United States and to document variability in program purpose, scope, organization, and process. METHODS: Investigators administered a written survey to CDR program representatives from 50 states and the District of Columbia (DC), followed by a telephone interview. RESULTS: All 50 states and DC participated; 48 states and DC have an active CDR program. A total of 94% of programs agreed that identifying the cause of and preventing future deaths are important purposes of CDR. Assistance with child maltreatment prosecution was cited as an important purpose by only 13 states (27%). Twenty-two states (45%) review deaths from all causes, while six states (12%) review only deaths due to child maltreatment. CDR legislation exists in 33 states. Fifty-three percent of the CDR programs were implemented since 1996, and 59% report no or inadequate funding. CDR contributes to the death investigation process in seven states (14%), but the majority (59%) of reviews are retrospective, occurring months to years after the child's death. CONCLUSIONS: CDR programs in the United States

share commonalities in purpose and scope. Without national leadership, however, the wide variation in organization and process threatens to limit CDR effectiveness.

Additional Resources

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Discussion

Maltreatment fatalities are among critical issues for the child protection system.