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Family Life Development Center, College of Human Ecology, Cornell University

Comparison of Fatality and Non-fatality Victims in the NCANDS 2000 Case Level Data

By Veronica Banks, M.P.H.
National Data Archive on Child Abuse and Neglect

Child fatalities are arguably the most tragic consequence of child maltreatment. The U.S. Children's Bureau estimates that 1,300 children died in 2001 as a result of maltreatment, at a rate of 1.81 children out of every 100,000 children in the population¹. This rate constitutes a slight increase over the reported 1.71 fatalities per 100,000 children in year 2000². The chief source of national information on abused and neglected children known to state child protective services agencies is the National Child Abuse and Neglect Data System (NCANDS), maintained by the U.S. Department of Health and Human Services. The National Data Archive on Child Abuse and Neglect at Cornell University distributes NCANDS data to qualified re-

searchers for secondary analysis. In fall, 2003, the Archive will distribute NCANDS 2000 case level data. For the first time, a NCANDS data release will include elements about perpetrators, services provided, and maltreatment-related child fatalities. The NCANDS 2000 release will also contain data for more states than were represented in previous years. The case level information contained in NCANDS 2000 will enable interested researchers to address multivariate questions that extend the findings of published NCANDS reports. The purpose of this article is to illustrate one example of how the NCANDS 2000 data can be used. Fatality and non-fatality cases are compared along key child demographic and maltreatment level factors. A logistic regression model is developed to identify which demographic and maltreatment level factors predict the likelihood of a child fatality.

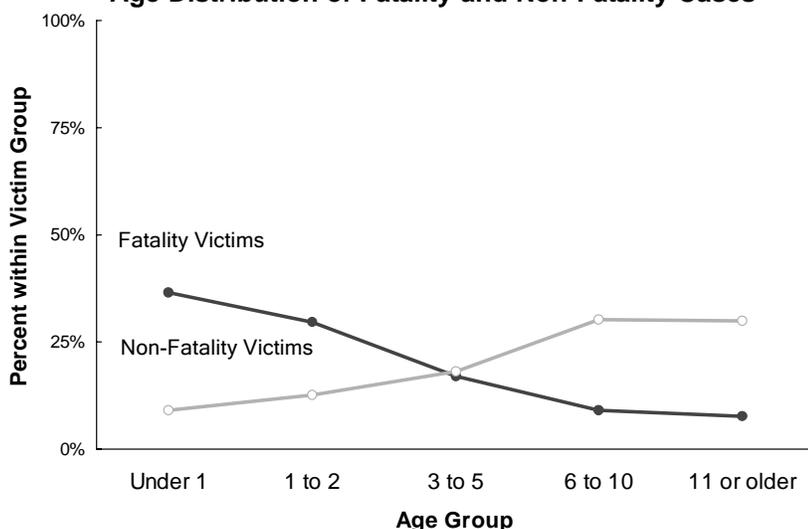
The NCANDS 2000 Child File that will be available from the Archive does not contain data from all 34 states that submitted case level data to the federal government. The Child File consists of data from 21 states and includes children about whom allegations of maltreatment were made. Just over 277,000 of these children were victims of child abuse and neglect. Victims in the NCANDS are those children for whom a maltreatment report was substantiated, indicated, or designated as "alternative response-victim." Among these victims are 433 fatalities, or about 45% of the fatalities reported at the case level to the federal government. Bivariate analyses of fatality and non-fatality victims along a number of demographic and maltreatment level factors were performed.

Age and Sex

Approximately 48% of non-fatality victims were male and 52% were female, though among fatalities, 58% were male and 42% were female. Consistent with other research findings^{3,4,5}, fatality victims were overwhelmingly infants and toddlers. Almost 37% of fatalities were under one year old at the time of death, 30% were between one and two years old, 17% were between three and five years old, 9% were between 6 and 10 years old, and 7% were eleven years old or older. Among non-fatality cases, only 9% of victims were less than one year old at the time of the report, 13% were between 1 and 2 years old, 18% were between three and five years old, 30% were between six and ten years old, and 30% were eleven years old or older. The different age distributions between the two groups

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Age Distribution of Fatality and Non-Fatality Cases



Note: Data from 17 states are included (405 fatalities and 187,628 non-fatalities).

Archive News

New NDACAN Staff

Michael Dineen joined the Archive as its new Coordinator of Technical Services last May. Michael comes to us from the University of Colorado Health Sciences Center in Denver where he worked as a data analyst. He has a master's degree in social psychology and extensive skills in database design and data programming. Welcome to Ithaca, Michael!

CMRL E-Mail List Information

Since 1993, NDACAN has operated the Child Maltreatment Research electronic mailing list (CMRL) to encourage information exchange and networking among researchers in the field of child abuse and neglect. It currently has about 1,000 subscribers from all over the world and is carefully moderated for appropriate content.

The NDACAN Udata is published annually by the National Data Archive on Child Abuse and Neglect (NDACAN), a project of the Family Life Development Center at Cornell University's College of Human Ecology. Funding for NDACAN is provided by grant #90-CA-1667 from the Children's Bureau, U.S. Department of Health and Human Services. The NDACAN staff are:

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The scope of the discussion includes all areas of child maltreatment research (e.g., epidemiology, etiology, prevention, consequences, intervention, and treatment) and the full range of research issues (e.g., measurement, instrumentation, statistical analysis, and ethics). The list is not open to discussions of program or clinical issues except as they relate to research. To subscribe to the CMRL, send an e-mail message from the address that will receive the postings to listproc@cornell.edu containing only the following line:

subscribe Child-Maltreatment-Research-L Fname Lname

Replace Fname and Lname with your first and last names. All postings to the CMRL mailing list since its inception are available for public viewing on the NDACAN Web site, Copyright NDACAN.

Special Research Meeting 2004

For 2004, NDACAN will not hold its traditional Summer Research Institute. In place of the Institute, the Archive will sponsor a Special Research Meeting for users of the National Survey of Child and Adolescent Well-Being (NSCAW) data. The meeting will include computer session time for participants to work on their own NSCAW research projects. Archive staff and statistical consultants will be available to provide assistance. The meeting will also feature colloquia from members of the NSCAW Research Group and other NSCAW researchers. The NSCAW Special Research Meeting will provide a wonderful opportunity to support the growing community of NSCAW researchers. Visit the Archive Web site to learn more about the NSCAW and the upcoming Special Research Meeting.

Other Resources for Child Abuse and Neglect Researchers

The National Clearinghouse on Child Abuse and Neglect Information

The Clearinghouse is a national resource center for professionals seeking information on the prevention, identification, and treatment of child abuse and neglect. Among other things, the Clearinghouse maintains a database of publications, audiovisual materials, services, programs, excerpts of state statutes, and ongoing research projects relevant to child maltreatment. The Clearinghouse is a service of the Children's Bureau.

Phone: 1-800-FYI-3366

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The Children's Bureau

The Children's Bureau is the oldest federal agency for children and is located within the United States Department of Health and Human Services' Administration for Children and Families, Administration on Children, Youth and Families. The Bureau seeks to provide for the safety, permanency and well-being of children through leadership, support for necessary services, and productive partnerships with states, tribes and communities. The Bureau is a major funder of research examining the causes, treatment, and prevention of child maltreatment. The Web site provides a great deal of information regarding Bureau programs, federal laws, and major data

collection efforts. *Child Maltreatment* and other federal reports can be accessed from the site.

Web site: www.acf.dhhs.gov/programs/cb/

National Data Analysis System (NDAS)

The Child Welfare League of America, in cooperation with state child welfare agencies, has created the nation's first comprehensive, interactive child welfare database, the National Data Analysis System (NDAS). The NDAS puts child welfare statistics at the fingertips of Internet users, creating customized tables and graphs and providing information and links necessary to understand the data. Data are available in the areas of child abuse and neglect, adoption and foster care, fiscal expenditures, and child welfare administration. Web site: <http://ndas.cwla.org>.

Child Trends DataBank

The Child Trends DataBank provides the latest trends on over 70 indicators of child and youth well-being. National estimates are provided and updated frequently. The indicators are presented with plain language summaries and cover the domains of health, social and emotional development, income and work, education, demographics, and family and community. Web site: www.childtrendsdatabank.org

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are reflected in the groups' mean ages; 2.8 for fatalities and 7.4 for non-fatalities.

Maltreatment Type

Physical abuse and neglect both play an important role in the fatal maltreatment of children. Fatality victims are more likely than non-fatality victims to be physically abused. Approximately 60% of fatality victims suffered physical abuse alone or in combination with other forms of maltreatment. In contrast, only 24% of non-fatality victims suffered physical abuse alone or with other forms of maltreatment. A different pattern emerges for neglect. Although 52% of fatality victims suffered neglect alone or with some other form of maltreatment, 66% of non-fatality victims suffered neglect alone or with some other form of maltreatment.

Other forms of maltreatment play a more prominent role in non-fatal than in fatal victimization. Such types of maltreatment include medical neglect, sexual abuse, psychological or emotional maltreatment, and other non-specified forms of maltreatment investigated by state CPS agencies. Approximately 15% of non-fatality victims suffered other forms of maltreatment but not physical abuse or neglect, compared to only 5% of fatality victims.

Race and Hispanic Ethnicity

NCANDS 2000 data contain more data elements on race than did previous NCANDS data releases. In accord with federal regulations, the NCANDS 2000 data structure allows membership in multiple racial groups to be re-

corded. Unfortunately, the relatively small number of fatalities precluded a complete analysis by child race. Therefore, NCANDS 2000 child racial categories were defined for this analysis as Black only, White only, and Other race (includes other single race children and multiple race children). Interestingly, Black children were equally represented in fatality and non-fatality cases and comprised about 28% of each group. Children of Other race were slightly over-represented among fatality cases, comprising about 9% of fatalities and 5% of non-fatalities.

Consistent with previous NCANDS data releases, the NCANDS 2000 release treats Hispanic ethnicity as a concept distinct from race and records Hispanic ethnicity as a separate data element. A bivariate analysis indicates that children of Hispanic ethnicity were more likely to suffer fatal victimization than were non-Hispanic children, with almost 18% of fatally maltreated children being of Hispanic ethnicity compared with 12% of non-fatally maltreated children.

Prior Victimization

Consistent with the findings of prior research,⁶ the majority of fatality cases were not identified by CPS agencies as prior victims. Only 20% of fatality cases were identified as prior victims compared with about 27% of non-fatalities. These percentages should be viewed with caution because missing data for prior victimization status limited the analysis to 16 states. The relatively smaller percentage of prior victims among fatality cases, however, is con-

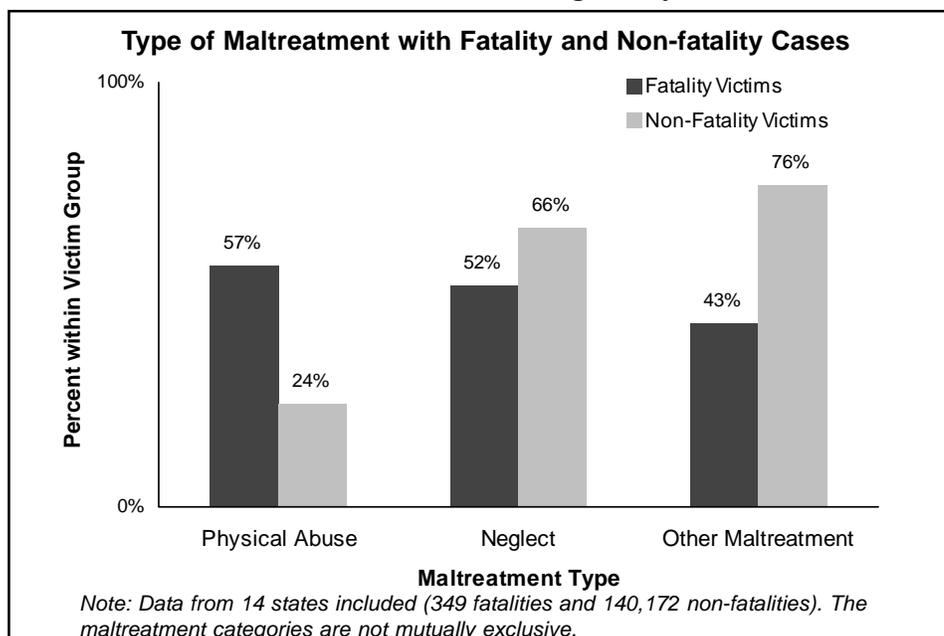
sistent with the finding that most fatality cases involve very young children, who are the most vulnerable to the effects of severe maltreatment due to dependence and fragility.

Logistic Regression

NCANDS 2000 data were used in a logistic regression model to test the effect of a number of child-level variables on the odds of fatal victimization. Predictors included child's sex, child's age group (less than one year; 1 to 2 years; 3 to 5 years; 6 to 10 years; 11 or older), child's Hispanic ethnicity, child's race (White only; Black only; other), physical abuse victimization, and neglect victimization. Modeling state as a fixed effect controlled variation among states. Missing data for some of the variables reduced the number of states represented in the model to 12 out of the 21 states whose data are distributed by the Archive. Results indicated that child's sex was not statistically significant in predicting the likelihood of fatality, controlling for the other factors in the model. Child's age group, however, was significant. While toddlers (1 to 2 years old) were as likely as infants (less than 1 year old) to suffer fatal maltreatment, pre-school children (3 to 5 years old) were less likely than infants to die by a factor of .34 ($p < .0001$). In other words, preschool children were 66% less likely than infants to suffer fatal maltreatment. Elementary school age children (6 to 10 years old) and older children (11 years or older) were also less likely than infants to suffer fatal maltreatment. The likelihood of fatality for both groups was reduced by a factor of .10, or 90% ($p < .0001$ for both).

Physical abuse victimization and neglect victimization also predicted fatal maltreatment. Physical abuse by itself or in combination with other forms of maltreatment increased the likelihood of fatality by a factor of 4.04 ($p < .0001$). Thus, victims of physical abuse were about 300% more likely than non-physical abuse victims to suffer fatal maltreatment. Neglect by itself or in combination with other forms of maltreatment also increased the likelihood of fatality, though not as much. Neglect victims were 86% more likely than non-neglect victims to die ($p < .0001$). Child's Hispanic ethnicity was not statistically significant. Child's race also was not statistically significant overall ($p = .088$),

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New Datasets Available from NDACAN

Adoption and Foster Care Reporting System (AFCARS), 2001

NDACAN Dataset: #101

Principal Investigator: Children's Bureau, U.S. Department of Health and Human Services

Description: The Adoption and Foster Care Analysis and Reporting System (AFCARS) is the first federally mandated data collection system intended to provide case specific information on all children covered by the protections of Title IV-B of the Social Security Act (Section 427). Under the final AFCARS rules, states are required to collect case specific data on all children in foster care for whom the state child welfare agency has responsibility for placement, care, or supervision. States are also required to collect data on all adopted children who were placed by the state child welfare agency or by private agencies under contract with the public child welfare agency. They are encouraged but not required to report private adoptions that are finalized in the state. The AFCARS data are designed to address policy development and program management issues at both the state and federal levels. They are also useful for researchers interested in analyzing aspects of the United States' foster care and adoption

programs. Tables summarizing the AFCARS data are available from the Children's Bureau home page on the Web: www.acf.dhhs.gov/programs/cb.

The National Survey of Child and Adolescent Well-Being (NSCAW), Combined Waves 1-3

NDACAN Dataset: #103

Principal Investigator: Research Triangle Institute

Description: The Administration on Children, Youth, and Families and the Office of the Assistant Secretary for Planning and Evaluation have undertaken the National Survey of Child and Adolescent Well-Being (NSCAW). NSCAW makes available, for the first time, nationally representative longitudinal data drawn from first-hand reports of children and families or other caregivers who have had contact with the child welfare system. Data from service providers are also collected. NSCAW is the first national study to provide detailed information on the experiences of children and families with the child welfare system and to collect measures of well-being for this population.

The NSCAW is designed to address the following questions:

- What paths do children follow into and through the child welfare system?
- What factors affect investigation, services, placements, and length of involvement?
- What are the long- and short-term outcomes for children and families in the child welfare system in terms of safety, well-being, and permanence?

The target population for the NSCAW includes all children and families that enter the child welfare system. Two samples were drawn from the population in 92 participating county child welfare agencies throughout the nation. The CPS sample includes 5,404 children, ages 0-14, who had an investigation closed between October 1, 1999 and December 31, 2000. The second sample consists of an additional 727 children who were in out-of-home care for about 12 months at the time of sampling. This second group, referred to as the One Year in Foster Care (OYFC) Sample, was selected to allow special analysis related to the experience of out-of-home care.

Future waves of the NSCAW will include data collected 12 months and 18 months after the close of the investigation.

Recent Research Published by NDACAN data users

Bussey, M., Feagans, L., Arnold, L., Wulczyn, F., Brunner, K., Nixon, R., et al. (2000) *Transition from foster care: A state-by-state data base overview*. Casey Family Programs.

Cox, M. E., Buehler, C., & Orme, J. G. (2002). Recruitment and foster family service. *Journal of Sociology and Social Welfare*, 29, 151-177.

Cox, M. E., & Orme, J. G., & Rhodes, K. W. (2002). Willingness to foster special needs children and foster family utilization. *Children and Youth Services Review*, 24, 293-317.

Cuddeback, G. S., & Orme, J. G. (2002). Training and services for kinship and non-kinship foster families. *Child Welfare*, 81(6), 879-909.

King, G., Trocmé, N., & Thatte, N. (2003). Substantiation as a multi-tier process: Results of a NIS-3 analysis. *Child Maltreatment* 8(3).

Lee, R. E., & Stacks, A. M. (2001). Reconsidering the factor structure of the beavers interactional scales: Do external ratings mirror self-reports? *Contemporary Family Therapy* 23(4).

Meyers, S. & Battistoni, J. (2003) Proximal and distal correlates of adolescent mothers' parenting attitudes. *Applied Developmental Psychology* 24, 33-39.

Rhodes, K. W., Orme, J. G., Buehler, C. (2001). A comparison of family foster parents who quit, consider quitting, and plan to continue fostering. *Social Service Review*, 75(1), 84-114.

Shahar, G. (2001) Maternal personality and distress as predictors of child neglect. *Journal of Research in Personality* 35, 537-545.

Smith, B. (In press). After Parental Rights are Terminated: Factors Associated with Exiting Foster Care. *Children and Youth Services Review*.

Thompson, S.J., Safyer, A.W., & Pollio, D.E. (2001). Examining differences and predictors of family reunification among subgroups of runaway youth using shelter services. *Social Work Research*, 25 (3), 163-172.

Thompson, S.J., Kost, K.A., & Pollio, D.E. (in press). Examining risk factors to predict family reunification for runaway youth: Does ethnicity matter? *Family Relations*.

Forthcoming Datasets from NDACAN

National Child Abuse and Neglect Data System (NCANDS), 2000 Child File

Principal Investigator: Children's Bureau, Department of Health and Human Services

NDACAN Dataset: #99

Description: The National Child Abuse and Neglect Data System (NCANDS) is a federal data collection program sponsored by the Children's Bureau in the Administration on Children, Youth and Families in the Department of Health and Human Services. The objective of NCANDS is to obtain data from state child protective service (CPS) agencies on the volume and nature of child maltreatment reporting. All Child File data are collected through the voluntary participation of state agencies. States submit a child-specific record for each investigation or assessment of alleged child abuse or neglect that receives a disposition during a particular calendar year. Each child is assigned a unique identifier within each report. The data fields in the child-specific record include the demographics of children and their perpetrators, types of maltreatment, investigation or assessment dispositions, risk factors, and services provided as a result of the investigation or assessment.

While data from the states participating in the NCANDS Child File do not constitute a statistically representative sample of maltreated children in the United States, they show distributions similar to those found in studies using national data. Furthermore, they provide an important opportunity to answer many questions regarding child maltreatment cases that are known to child protective services.

NCANDS 2000-2001 Cumulative Aggregated File

Principal Investigator: Children's Bureau, Department of Health and Human Services

NDACAN Dataset: #102

Description: The National Child Abuse and Neglect Data System (NCANDS) is the primary source of national information on abused and neglected children known to state child protective service agencies. All fifty states and the District of Columbia report key summary indicators of State child abuse and neglect statistics, including data on victims, reports, investigators, perpetrators, and services. The Cumulative Aggregated File will contain aggregate data for years 2000 and 2001.

Physical Abuse Treatment Outcome Project: Application of Parent-Child Interaction Therapy (PCIT) to Physically Abusive Parents

Principal Investigator: Chaffin, M.

NDACAN Dataset: #100

Description: The Center on Child Abuse and Neglect (CCAN) at the University of Oklahoma adapted a behavioral parent-training protocol to physical child abuse cases and tested the effectiveness of the treatments in reducing future maltreatment and improving parent-child interactions and behavioral and emotional adjustment. The treatments included: 1) Behavioral Parent Training (BPT), an intervention based on the Hanf model and using modified forms of Parent-Child Interaction Therapy and Barkley model protocols; 2) an enhanced form of BPT for increasing skill generalization and reducing individual risk factors (EBPT); and 3) Standard Community Care (SCC) consisting of a parenting program adapted from the

Parents Anonymous model. CCAN examined 300 Oklahoma City families referred primarily by the county's child protective services agency. Criteria included that the abuse event involved a confirmed case of physical abuse of a child between 4 and 12 years old that occurred not longer than 6 months before the referral, that neither parent had been confirmed as sexually abusive and that regular contact between the child and the abusive parent existed. The BPT protocol included a 6-week parent-orientation group designed to increase motivation for change; child-orientation groups addressing such issues as family violence, effective coping strategies, and impulse and self-control; and behavioral training to modify parent-child interactions. The EBPT added to BPT with treatment for depression and substance abuse, home visits, and case-management services. The SCC services included groups addressing orientation, parenting skills, and anger management. This study also included treatment-efficiency and cost-effectiveness analyses.

Sexual Abuse of Females: Effects in Adolescence, Data Collection at Time 4

Principal Investigator: Trickett, P.

NDACAN Dataset: #95

Description: The study subjects are 84 sexually abused females and their (nonabusing) mothers and 82 demographically similar nonabused females and their mothers. Researchers will seek to determine whether the sexually abused girls have a more difficult transition through puberty that may adversely affect subsequent development and whether sexual abuse alters hormonal levels, thus affecting the timing of puberty. In addition, the study will examine whether sexually abused females maintain higher levels of dissociation into adolescence and adulthood.



The National Data Archive on Child Abuse and Neglect congratulates the 2003 Summer Research Institute participants!

Call for Datasets

The Archive is continually looking for datasets that would be valuable additions to its holdings. Criteria for selection include methodological rigor, scope, relevance and technical quality. If you have data or know of data that would be particularly beneficial to other child maltreatment researchers, please contact us.

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The mission of the National Data Archive on Child Abuse and Neglect (NDACAN) is to facilitate the secondary analysis of research data relevant to the study of child abuse and neglect. By making data available to a larger number of researchers, NDACAN seeks to provide a relatively inexpensive and scientifically productive means for researchers to explore important issues in the child maltreatment field.

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though the trend indicated that Black children were 34% more likely than White children to die of maltreatment ($p=.054$). Children in the Other race category did not differ from White children in the likelihood of suffering a fatality.

In summary, the results of the logistic regression differ somewhat from the results of the bivariate analyses. While males made up a greater percentage of fatality cases than non-fatality cases, they did not differ from females in the likelihood of suffering fatal maltreatment in the logistic regression model. The patterns of race and ethnicity were also reversed between the bivariate and logistic regression results. While the bivariate analysis showed that Hispanic children were over-represented in fatality cases, the logistic regression analysis found that child's Hispanic ethnicity did not significantly predict the likelihood of dying. Conversely, while the bivariate analysis found that Black children were equally represented among fatality and non-fatality cases, the logistic regression analysis found that Black children were somewhat more likely than White children to suffer a fatality. The other results of the logistic regression analysis were consistent with the results of the bivariate analysis. Younger children had a greater likelihood of suffering fatal maltreatment, as did victims of physical abuse and neglect. It is important

to note that the differences observed between the findings of the bivariate and logistic regression analyses occur not only because the logistic regression technique controls for other variables in the model but also because the logistic regression analysis uses only complete cases and therefore draws data from fewer states than are represented in the bivariate analysis.

The NCANDS 2000 case level data provide investigators for the first time the opportunity to explore such relevant factors as perpetrator characteristics, service provision, and fatality occurrence. Another benefit of the NCANDS 2000 distributable data is that they represent more states than were represented in previous releases. Thus, researchers have the opportunity to investigate their questions using data on a large population and obtained from the best available annual source of information on reported child maltreatment.

1 U.S. Department of Health and Human Services, Administration on Children, Youth and Families, *Child Maltreatment 2001*. Washington, DC:U.S. Government Printing Office, 2003.

2 U.S. Department of Health and Human Services, Administration on Children, Youth and Families, *Child Maltreatment 2000*. Washington, DC:U.S. Government Printing Office, 2002.

3 Gellert, Maxwell, Durfee, & Wagner (1995). Fatalities assessed by the Orange County child death review team, 1989

to 1991. *Child Abuse & Neglect*, 19(7):875-883.

4 McLain, Sacks, Froehlke, & Ewigman (1993). Estimates of child abuse and neglect, United States, 1979 to 1988. *Pediatrics*, 91(2):338-343.

5 Overpeck, Brenner, Trumble, Trifiletti, & Berendes (1998). Risk factors for infant homicide in the United States. *New England Journal of Medicine*, 339(17):1211-1216.

6 Hicks & Gaughan (1995). Under-standing fatal child abuse. *Child Abuse & Neglect*, 19(7):855-863.

The views expressed in this article are solely the views of the author and the National Data Archive on Child Abuse and Neglect. They do not necessarily reflect the views of the U.S. Department of Health and Human Services, its contracting agencies, or the States included within the NCANDS.

Acquiring NCANDS Case Level Data

The case level NCANDS 2000 Child File data will be available later this fall. Please visit the Archive Web site (www.ndacan.cornell.edu) for updates about NCANDS' availability and to learn about the data access requirements and procedures for obtaining the Child File data.