

**MMWR***Weekly*

April 4, 2008 / 57(13);336-339

## Nonfatal Maltreatment of Infants --- United States, October 2005--September 2006

During October 2005--September 2006 (federal fiscal year 2006), approximately 905,000 U.S. children were victims of maltreatment that was substantiated by state and local child protective services (CPS) agencies (1 ).

\* Approximately 19% of child maltreatment fatalities occurred among infants (i.e., persons aged <1 year) (1 ), and homicide statistics suggest that fatality risk might be greatest in the first week of life (2 ).

However, the risk for nonfatal maltreatment among infants has not been examined previously at the national level. To determine the extent of nonfatal infant maltreatment in the United States, CDC and the federal Administration for Children and Families (ACF) analyzed data collected in fiscal year 2006 (the most recent data available) from the National Child Abuse and Neglect Data System (NCANDS). This report summarizes the results of that analysis, which indicated that, in fiscal year 2006, a total of 91,278 infants aged <1 year (rate: 23.2 per 1,000 population) experienced nonfatal maltreatment, including 29,881 (32.7%) who were aged  $\leq 1$  week. Neglect was the maltreatment category cited for 68.5% of infants aged  $\leq 1$  week, but NCANDS data did not permit further characterization of the nature of this neglect. Developing effective measures to prevent maltreatment of infants aged  $\leq 1$  week will require more detailed characterization of neglect in this age group.

NCANDS is a national data collection and analysis system created in response to the federal Child Abuse Prevention and Treatment Act.<sup>†</sup> Data have been collected annually from states and reported since 1993. States submit case-level data as child-specific records for each report of alleged child maltreatment for which a completed investigation or assessment by a CPS agency has been made during the reporting period. Individual CPS agencies are responsible for determining the type of maltreatment and outcome of the maltreatment investigation based on state and federal laws. However, no standardized definitions of maltreatment are used consistently by all states; therefore, each state maps its own classification of maltreatment onto NCANDS definitions<sup>§</sup> before sending the final data file to NCANDS. Once a state submits its data to NCANDS, a technical validation review is conducted by a staff supervised by the ACF Children's Bureau to assess the internal consistency of the data and to identify probable causes for missing data. States are requested to make corrections as needed.

In fiscal year 2006, 49 states, the District of Columbia, and Puerto Rico provided case-level data to NCANDS. For this report, data from five states (Alaska, Maryland, North Dakota, Pennsylvania, and Vermont) were not available for analysis. Only data regarding victims with a CPS agency disposition of substantiated maltreatment issued during fiscal year 2006 were analyzed. Among the approximately 3.6 million children aged <18 years who were subjects of maltreatment investigations in fiscal year 2006, maltreatment was substantiated by CPS agencies in approximately 905,000 (25.1%) children. Substantiated maltreatment data were analyzed for victims aged <1 year by the age of the infant victim at the time of first report, sex, race/ethnicity, type of maltreatment, and source of the report.

A total of 91,278 unique victims of substantiated maltreatment were identified in CPS agency dispositions in fiscal year 2006 among infants aged <1 year, an annual rate of 23.2 per 1,000 population. A total of 47,117 (51.6%) victims were male. By race/ethnicity, 39,768 (43.6%) infant victims were white; 23,008 (25.2%) were black or African American; 17,582 (19.3%) were Hispanic; 1,141 (1.3%) were American Indian or Alaska Native; and 583 (0.6%) were Asian.<sup>¶</sup> Multiple race/ethnicity was identified for 2,874 (3.1%) of the infant victims, and 6,322 (6.9%) were of unknown race/ethnicity.

Among the 91,278 infant victims of substantiated maltreatment, 35,455 (38.8%) were aged  $\leq 1$  month ([Figure 1](#)). Of these, 29,881 (84.3%) were aged  $\leq 1$  week ([Figure 2](#)). Among maltreated infants aged  $\leq 1$  week, 20,472 (68.5%) were categorized as victims of neglect (including deprivation of necessities or medical neglect), and 3,957 (13.2%) as victims of physical abuse ([Table](#)).

Among the 29,881 infant victims aged  $\leq 1$  week, 25,964 (86.9%) victims were reported to CPS agencies by professionals, including 19,486 (65.2%) by medical personnel and 5,542 (18.5%) by social services personnel ([Table](#)). Medical personnel also reported the greatest percentage (21,545 [60.8%]) of victims aged  $\leq 1$  month. Of infant victims aged <1 year, 29,462 (32.3%) were reported by medical personnel, followed by law enforcement personnel (19,574 [21.4%]), social services personnel (13,740 [15.1%]), parents/other relatives (8,058 [8.8%]), and friends/neighbors (2,927 [3.2%]).

**Reported by:** *ML Brodowski, MSW, MPH, CM Nolan, MSW, Office on Child Abuse and Neglect; JA Gaudiosi, DBA, Data Team, Admin for Children and Families. YY Yuan, PhD, L Zikratova, MS, MJ Oritz, MA, MM Aveni, Walter R. McDonald and Associates, Inc., Sacramento, California. RT Leeb, PhD, TR Simon, PhD, WR Hammond, PhD, Div*

*of Violence  
Prevention, National  
Center for Injury  
Prevention and Control, CDC.*

## **Editorial Note:**

The findings in this report indicate that, in fiscal year 2006, 23.2 children per 1,000 population aged <1 year experienced substantiated nonfatal maltreatment in the United States. Among these infants, neglect was the maltreatment category most commonly cited, experienced by 68.5% of victims. Among infant victims aged <1 year who experienced substantiated maltreatment, 32.7% were aged  $\leq 1$  week, and 30.6% were aged <4 days. Neglect also was the maltreatment category most often cited among children aged  $\leq 1$  week.

This report is the first published national analysis of substantiated nonfatal maltreatment of infants, using NCANDS data. Although the results demonstrate a concentration of maltreatment and neglect at age  $\leq 1$  week, NCANDS data cannot be used to determine the etiology of the infant maltreatment and neglect because NCANDS reports are limited to broad categories and do not provide specific information about diagnoses or the circumstances of the maltreatment. The concentration of reports of neglect in the first few days of life and the preponderance of reports from medical professionals during the same period suggest that neglect often was identified at birth. One hypothesis for the concentration of maltreatment and neglect reports in the first few days of life is that the majority of reports resulted from maternal or newborn drug tests. Although tracking of prenatal substance exposure and hospital postnatal toxicology-screening practices vary among states and within states, positive maternal or neonatal drug test results routinely are reported to CPS agencies as child neglect (3 ). Additional research is needed to clearly define the causes of substantiated neglect and maltreatment among newborns and to determine the best strategies for intervention.

The percentage of substantiated reports categorized as physical abuse among infants aged  $\leq 1$  week (13.2%) is similar to the percentage among maltreated children of all ages (16%) (1 ). Physical abuse is defined by CDC and NCANDS as the intentional use of physical force by a parent or caregiver against a child that results in, or has the potential to result in, physical injury. Physical abuse includes beating, kicking, biting, burning, shaking, or otherwise harming a child. Although the act is intentional, the consequence might be intentional or unintentional (i.e., resulting from overdiscipline or physical punishment) (1,4 ). One type of physical abuse, shaken baby syndrome/abusive head trauma (SBS/AHT) (5 ), is a cause of severe physical injury and death in infants, occurring in 21.0--32.2 infants aged <1 year per 100,000 population. More detailed study of contextual information is needed to determine the causes of physical abuse in infants reported to NCANDS and to develop additional prevention strategies.

Few studies have examined rates and risk factors for maltreatment in infants aged <1 year, and risk for nonfatal maltreatment among infants has not been examined previously at the national level in the United States. A study by the Public Health Agency of Canada provided national-level data for that country (excluding the province of Quebec) and reported incidence in 2003 of substantiated nonfatal maltreatment among infants aged <1 year of 27.3 per 1,000 population for females and 29.1 for males,\*\* similar to the rates

described in this report. Also similar to this study, the Canadian study found that neglect was the most common form of substantiated maltreatment for children aged <3 years; the Canadian study did not determine the most common form of maltreatment among infants aged <1 year.

The findings in this report are subject to at least two other limitations, in addition to the lack of specific information about maltreatment circumstances. First, underreporting or delayed reporting might influence the findings. Both mandated reporters and the public might lack sufficient knowledge or training that supports reporting possible child maltreatment (6,7 ). To assist health-care professionals in better reporting child maltreatment, CDC developed uniform definitions and recommended data elements to promote and improve consistency of child maltreatment reporting and serve as a technical reference for the collection of data (4 ). Second, data collection and reporting practices vary among states, and data from certain states were not available for analysis.

CDC supports a range of research, early intervention, and prevention programs at the national, state, and local levels. These efforts include a focus on developing child-maltreatment tracking programs in state health departments and promotion of positive parenting and prevention of child maltreatment through a framework of safe, stable, and nurturing relationships between children and caregivers.<sup>††</sup> Similarly, ACF supports a range of prevention and intervention programs, including programs to identify and serve substance-exposed newborns and reduce variation in the policies and procedures related to prenatal substance exposure. Reframing neglect as a series of missed opportunities for prevention and emphasizing safe, stable, and nurturing relationships can highlight opportunities for prevention that might otherwise be missed. For example, approximately 84% of pregnant women in the United States receive some prenatal care, and approximately 99% of infants are born in medical settings (8 ), these setting provide an opportunity for medical professionals to detect and manage early risk for maltreatment (e.g., maternal substance abuse) that can impair or interfere with child-caregiver relationships.

Serious injury resulting from physical abuse of infants can be decreased by efforts focusing on reduction of SBS/AHT through in-hospital programs aimed at parents of newborns. These programs have produced a substantial reduction in reported SBS/AHT in localized areas (9 ), and CDC is supporting research to evaluate the replicability of these results in diverse settings. In addition, home-visitation and parent-training programs (10 ), particularly those that 1) begin during pregnancy, 2) provide social support to parents, and 3) teach parents about developmentally appropriate infant behavior and age-appropriate disciplinary communication skills, have been determined to reduce risk for child maltreatment.

## References

1. US Department of Health and Human Services, Administration on Children, Youth and Families. Child maltreatment 2006. Washington, DC: US Department of Health and Human Services; 2008. In press.
2. [CDC. Variation in homicide during infancy---United States, 1989--1998. MMWR 2002;51:187--9.](#)
3. Birchfield M, Scully J, Handler A. Perinatal screening for illicit drugs: policies in hospitals in a large metropolitan area. *J Perinatol* 1995;15: 208--14.
4. Leeb RT, Paulozzi L, Melanson C, Simon T, Arias I. Child maltreatment surveillance: uniform definitions for

public health and recommended data elements, version 1.0. Atlanta, GA: US Department of Health and Human Services, CDC; 2008.

5. American Academy of Pediatrics, Committee on Child Abuse and Neglect. Shaken baby syndrome: rotational cranial injuries---technical report. *Pediatrics* 2001;108:206--10.
6. Levi BH, Brown G. Reasonable suspicion: a study of Pennsylvania pediatricians regarding child abuse. *Pediatrics* 2005;116:e5--12.
7. Markenson D, Tunik M, Cooper A, et al. A national assessment of knowledge, attitudes, and confidence of prehospital providers in the assessment and management of child maltreatment. *Pediatrics* 2007;119:e103--8.
8. Martin JA, Hamilton BE, Sutton PD, et al. Births: final data for 2005. *Natl Vital Stat Rep* 2007;56(6).
9. Dias MS, Smith K, DeGuehery K, Mazur P, Li V, Shaffer ML. Preventing abusive head trauma among infants and young children: a hospital-based, parent education program. *Pediatrics* 2005;115: e470--7.
10. Bilukha O, Hahn RA, Crosby A, Task Force on Community Preventive Services. The effectiveness of early childhood home visitation in preventing violence: a systematic review. *Am J Prev Med* 2005;28(2 suppl 1):11--39.

\* Substantiated maltreatment is defined as maltreatment by a parent or other caregiver deemed to have occurred after thorough investigation by a qualified staff member from a CPS agency with jurisdiction over the geographic area in which the maltreatment took place. Additional information is available at <http://www.acf.hhs.gov/programs/cb/pubs/cm05/index.htm>.

† Public Law 93-247 as amended. Additional information is available at [http://www2.acf.hhs.gov/programs/cb/laws\\_policies/cblaws/capta/index.htm](http://www2.acf.hhs.gov/programs/cb/laws_policies/cblaws/capta/index.htm).

§ Categories of maltreatment in NCANDS are as follows: physical abuse, neglect or deprivation of necessities, medical neglect, sexual abuse, psychological or emotional maltreatment, other, and unknown. For this report, neglect or deprivation of necessities and medical neglect were combined into one category; other and unknown maltreatments also were combined into one category. Examples of neglect under the NCANDS categories include educational neglect, abandonment, fetal alcohol syndrome, and congenital drug exposure or addiction.

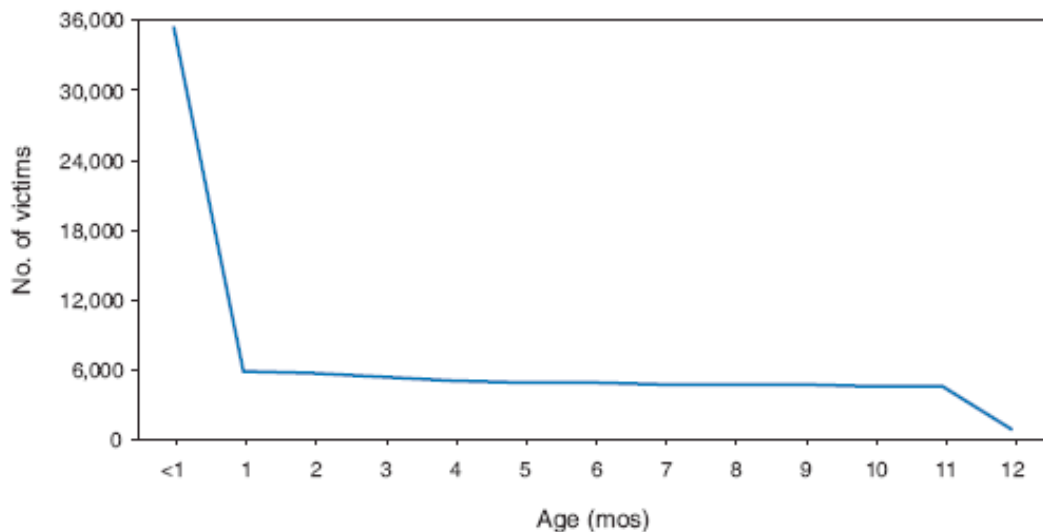
¶ Since 2003, NCANDS has used a method for compiling racial/ethnic data based on the 1997 revised Office of Management and Budget standards for race and ethnicity, which include the following racial categories: white, black or African American, Asian, American Indian or Alaska Native, and Native Hawaiian or Other Pacific Islander. In NCANDS, persons categorized as Hispanic or Latino are not categorized by race.

\*\* Available at [http://www.phac-aspc.gc.ca/cm-vee/csca-ecve/pdf/childabuse\\_final\\_e.pdf](http://www.phac-aspc.gc.ca/cm-vee/csca-ecve/pdf/childabuse_final_e.pdf).

†† Additional information available at <http://www.childwelfare.gov/preventing>, <http://www.friendsnrc.org>, and <http://www.cdc.gov/ncipc/dvp/cmp/default.htm>.

## Figure 1

**FIGURE 1. Number of infants aged <1 year who were victims of substantiated maltreatment,\* by age in months — National Child Abuse and Neglect Data System, United States, October 2005–September 2006†**



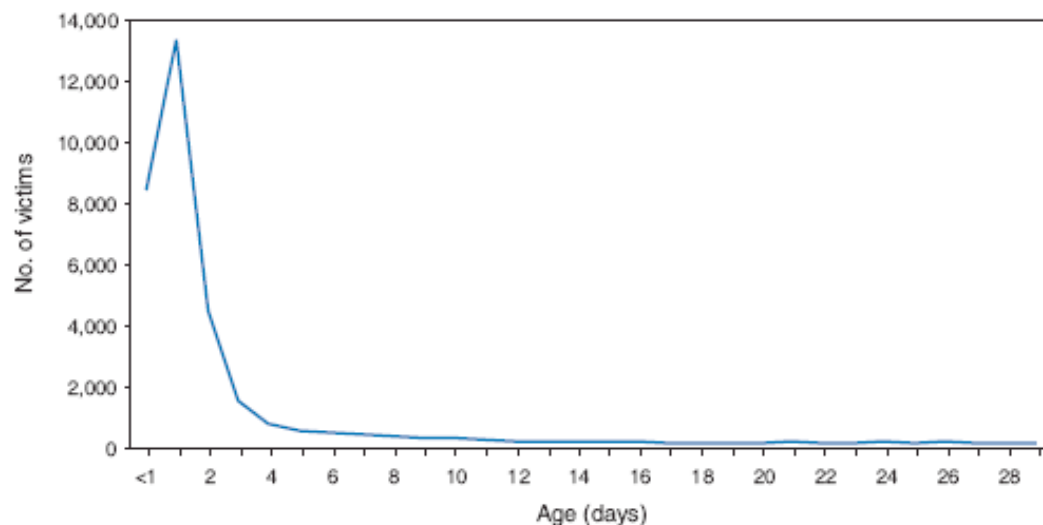
\* Defined as maltreatment by a parent or other caregiver deemed to have occurred after thorough investigation by a qualified staff member from a child protective services agency with jurisdiction over the geographic area in which the maltreatment took place. Additional information available at <http://www.acf.hhs.gov/programs/cb/pubs/cm05/index.htm>.

† Data from five states (Alaska, Maryland, North Dakota, Pennsylvania, and Vermont) were not available for analysis.

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**Figure 2**

**FIGURE 2. Number of infants aged  $\leq 1$  month who were victims of substantiated maltreatment,\* by age in days — National Child Abuse and Neglect Data System, United States, October 2005–September 2006†**



\* Defined as maltreatment by a parent or other caregiver deemed to have occurred after thorough investigation by a qualified staff member from a child protective services agency with jurisdiction over the geographic area in which the maltreatment took place. Additional information available at <http://www.acf.hhs.gov/programs/cb/pubs/cm05/index.htm>.

† Data from five states (Alaska, Maryland, North Dakota, Pennsylvania, and Vermont) were not available for analysis.

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**Table**

**TABLE. Number and percentage of infants aged  $\leq 1$  week who were victims of substantiated maltreatment,\* by type of maltreatment and source of report — National Child Abuse and Neglect Data System, United States, October 2005–September 2006†**

Source of report	Neglect‡	Physical abuse	Sexual abuse	Psychological or emotional maltreatment	Other maltreatment‡	Total (%)
<b>Professionals</b>						
Medical personnel	13,456	2,845	12	39	3,134	19,486 (65.2)
Social services personnel	2,796	854	8	18	1,866	5,542 (18.5)
Mental health personnel	436	46	1	6	22	511 (1.7)
Legal, law enforcement, criminal justice personnel	208	23	3	3	60	297 (0.9)
Education personnel/ Day care providers/ Foster care providers	83	10	—	—	35	128 (0.4)
<b>Total (%)</b>	<b>16,979 (56.8)</b>	<b>3,778 (12.6)</b>	<b>24 (0.1)</b>	<b>66 (0.2)</b>	<b>5,117 (17.1)</b>	<b>25,964 (86.9)</b>
<b>Community members/ Nonprofessionals</b>						
Parents/Other relatives	220	27	2	3	72	324 (1.1)
Friends/Neighbors	185	11	1	—	18	215 (0.7)
Alleged perpetrators	2	—	—	—	1	3 (0.0)
Other/Unknown/ Anonymous reporters	3,086	141	2	8	138	3,375 (11.3)
<b>Total (%)</b>	<b>3,493 (11.6)</b>	<b>179 (0.6)</b>	<b>5 (0.0)</b>	<b>11 (0.0)</b>	<b>229 (0.8)</b>	<b>3,917 (13.1)</b>
<b>Overall total (%)</b>	<b>20,472 (68.5)</b>	<b>3,957 (13.2)</b>	<b>29 (0.1)</b>	<b>77 (0.3)</b>	<b>5,346 (17.9)</b>	<b>29,881 (100)</b>

\*Defined as maltreatment by a parent or other caregiver deemed to have occurred after thorough investigation by a qualified staff member from a child protective services agency with jurisdiction over the geographic area in which the maltreatment took place. Additional information available at <http://www.acf.hhs.gov/programs/cb/pubs/cm05/index.htm>.

† Data from five states (Alaska, Maryland, North Dakota, Pennsylvania, and Vermont) were not available for analysis.

‡ Includes deprivation of necessities and medical neglect.

§ Includes infants who were victims of more than one type of maltreatment.

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Date last reviewed: 4/2/2008

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