

Part I

Child Welfare Research
in Context

Epidemiology of Child Maltreatment

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INTRODUCTION

An estimated 3 million children were investigated because of alleged abuse or neglect in 2004 in the United States; 872,000 children were confirmed victims of maltreatment; and an estimated 1,490 children died from abuse or neglect (U.S. Department of Health and Human Services, 2006). Beyond the official statistics, general population surveys and surveys of health, education, and law enforcement professionals indicate that up to half to four fifths of all victims of maltreatment are not known to Child Protective Services (CPS; Bolen & Scannapieco, 1999; Sedlak & Broadhurst, 1996; Wolfe, 1999). The tip-of-the-iceberg analogy easily comes to mind when one thinks of the scope of child maltreatment.

Some combination of these or related statistics is usually included as background to many child maltreatment research, policy, and service documents; however, without more specificity such statistics are apt to create more confusion than elucidation. While the

iceberg analogy is an important reminder of the scope of child maltreatment, it fails to differentiate between forms of maltreatment, which vary considerably with respect to severity, chronicity, etiology, and sequelae (English, Upadhyaya, et al., 2005; National Research Council, 1993). This chapter summarizes some of the current research on the epidemiology of child maltreatment in Canada and the United States¹ in order to provide a more specifically differentiated understanding of the scope and distribution of child maltreatment.

DEFINITIONS

Child maltreatment refers to the range of abusive and neglectful acts perpetrated by adults or older youth against children. These generally fall into the four categories of physical abuse, sexual abuse, neglect, and emotional maltreatment. *Physical abuse* ranges from severe assaults against children that can permanently injure or kill children to abusive physical punishment

to shaking infants. *Sexual abuse* includes intercourse, fondling, acts of exposure, sexual soliciting, and sexual harassment. *Neglect* includes a caregiver's failure to supervise or protect a child and/or failure to meet a child's physical, medical, or educational needs. *Emotional maltreatment* includes extreme or habitual verbal abuse (threatening, belittling, etc.) and/or a systematic lack of nurturance or attention required for a child's healthy development. Children's exposure to family violence is increasingly being recognized as a form of emotional maltreatment.

In practice, there is significant variation in the classification systems used to categorize child maltreatment. In Canada and the United States, legal definitions are set by provincial or state statutes, which vary considerably with respect to the scope and severity of behaviors that are considered maltreatment (Gateway, 2005; Centre of Excellence for Child Welfare, 2005). While some efforts have been made to develop a standard set of research definitions, most notably the Barnett, Manly, and Cicchetti classification system (Barnett, Manly, & Cicchetti, 1993; Manly, 2005), the field remains far from achieving consensus on a specific set of common diagnostic categories reflecting distinct etiologic theories (National Research Council, 1993; Herrenkohl, 2005).

Definitions also vary with respect to a number of other considerations, including severity, chronicity, age of the victim, and age of the perpetrator. Some jurisdictions consider acts of maltreatment to include both situations where children have been harmed and ones where children are at significant risk of harm, whereas others limit their definitions of maltreatment to situations where harm has occurred (Gateway, 2005). The upper age boundary for childhood victimization also varies by jurisdiction, ranging from 15 to 18. The definition of a perpetrator will vary as well, with the concept of child maltreatment usually referring to maltreating acts involving adults or older youth. Peer-on-peer abuse usually falls under the concept of bullying in cases of physical abuse, or sexual play or exploration in cases of sexual relations involving children or youth within 5 years of age (Holmes & Slap, 1998).

CPS-INVESTIGATED MALTREATMENT

The most commonly reported maltreatment statistics are the annual rates of victimization identified by child

protection authorities. In the United States, these statistics are reported annually by the National Child Abuse and Neglect Data System (NCANDS) which combines reports received by state authorities. An estimated 3,503,000 children received an investigation by CPS agencies in 2004, of which an estimated 872,000 children were confirmed to be victims, a rate of 11.9 victims per 1,000 children (U.S. Department of Health and Human Services, 2006). Two thirds of these cases involved child neglect or medical neglect, at a rate of 7.4 and 0.3 victims per 1,000 children, respectively (see Table 1.1). Neglect has always been the dominant form of maltreatment investigated by CPS in the United States (U.S. Department of Health and Human Services, 2006). Physical abuse was noted in less than a fifth of cases and sexual abuse in 10%. The relatively large proportion of cases labeled "other maltreatment" is a result of the significant state-level differences with respect to the forms of maltreatment covered by legislation and the classification systems used to document these.

In Canada, investigated maltreatment statistics are tracked through the Canadian Incidence Study of Reported Child Maltreatment (CIS), a periodic survey of cases investigated by provincial and territorial child protection authorities. The 2003 cycle of the CIS found that an estimated 217,319 child maltreatment investigations were conducted in Canada (excluding Quebec)² and that child maltreatment had been substantiated for 103,297 of these children, a rate of 21.71 victims per 1,000 children (Trocmé, MacLaurin, Fallon, Daciuk, et al., 2005). As can be seen in Table 1.2, these cases are fairly evenly distributed among neglect, exposure to domestic violence, physical abuse, and emotional maltreatment, with only 3% of cases involving sexual abuse.

Although the rate of victimization is considerably higher in Canada than in the United States, this difference reflects several important distinctions in the mandate and scope of CPS in Canada and the United States. First, the rate of case substantiation is much higher in Canada compared to the United States. Only a quarter (25.7%) of reports were substantiated in the United States in 2004, with maltreatment remaining suspected ("indicated") in another 3% of cases (U.S. Department of Health and Human Services, 2006), whereas 47% of investigations were substantiated in Canada in 2003, with maltreatment remaining suspected in another 13% of cases (Trocmé, MacLaurin, Fallon, Daciuk, et al., 2005). A second and related

TABLE 1.1 Confirmed Cases of Child Maltreatment in the United States, 2004

Form of Maltreatment	Rate per 1,000 Children	Percentage*
Physical abuse	2.1	18
Neglect	7.4	62
Medical neglect	0.3	3
Sexual abuse	1.2	10
Psychological maltreatment	0.9	8
Other maltreatment	3.2	27
Any maltreatment	11.9	

Source: U.S. Department of Health and Human Services, Administration on Children, 2006, Figure 3-3.

*Rows are not additive since a child can be the victim of more than one form of maltreatment.

point is that the rate of substantiated physical abuse is 2.5 times higher in Canada, a difference most likely associated with differences in standards with respect to the acceptability of the use of corporal punishment. Indeed, three quarters of substantiated physical abuse cases in Canada involved inappropriate use of physical punishment (Durrant et al., 2006). Third, there has been a major expansion across Canada in cases of exposure to domestic violence and, to a lesser extent, in cases of emotional maltreatment. As a result, the rate of victimization attributed to exposure to domestic violence is nearly as high as the rate of neglect, and the rate of emotional maltreatment is nearly as high as the rate of physical abuse.

Age and Sex of Victims

Rates of CPS-investigated maltreatment vary considerably by age, sex, and form of maltreatment. Rates

of CPS-substantiated maltreatment are highest in the United States for younger children, ranging in 2004 from 16.1 per 1,000 for children under 3 to 9.3 per 1,000 for youth 12 to 15 (see Table 1.3). Younger children are much more likely to become involved with CPS because of neglect, which affects nearly three quarters of victims under 3 and two-thirds of children 4 to 7. While neglect remains the predominant form of maltreatment for older children, the proportion of victims who are physically or sexually abused increases substantially from 15% for children under 3 to 39% for youth 12 to 15. In 2004, just under half (48.3%) of child victims were boys, and 51.7% of the victims were girls (U.S. Department of Health and Human Services, 2006).

The pattern in Canada is somewhat different. The CIS 2003 did not show the same age-related decrease in maltreatment rates as noted in the United States. With the exception of somewhat higher rates

TABLE 1.2 Primary or Secondary Form of Substantiated Maltreatment in 2003 in Canada, Excluding Quebec

Form of Maltreatment	Rate per 1,000 Children	Percentage*
Physical abuse	5.77	27
Neglect	7.53	35
Sexual abuse	0.67	3
Emotional maltreatment	5.03	23
Exposure to domestic violence	7.38	34
Any maltreatment	21.71	

Source: Trocmé, Fallon, MacLaurin, Daciuk, et al., 2005, Tables 3-5 to 3-9.

*Rows are not additive since a child can be the victim of more than one form of maltreatment.

TABLE 1.3 Age of Victims by Form of Maltreatment, 2004

Nature of Harm	Physical Abuse	Neglect	Sexual abuse	Psychological Maltreatment	Unknown	Total*	Incidence per 1,000
Age <1-3	12.8%	72.9%	2.2%	4.8%	16.2%	232,409	16.1
Age 4-7	16.8%	64%	9.15%	6.4%	14.6%	187,275	13.4
Age 8-11	19.1%	59.8%	11.4%	7.4%	14.7%	160,940	10.9
Age 12-15	22.8%	54%	16.5%	6.8%	14.1%	158,104	9.3
Age 16 and older	24.9%	52.4%	16.3%	6.2%	14.6%	45,946	6.1

Source: U.S. Department of Health and Human Services, Administration on Children, 2006, Table 3-11 and Figure 3-4.

*Row percentages are not additive since a child can be the victim of several forms of maltreatment.

of maltreatment for 8- to 11-year-olds (23.5 per 1,000), the incidence of substantiated maltreatment ranged from 20.4 to 21.9 per 1,000 (see Table 1.4). As a result, the incidence of substantiated maltreatment was over twice as high in Canada than in the United States for youth 12-15.

Older children were more often identified as victims of physical abuse and sexual abuse, whereas younger children were more often victims in cases of exposure to domestic violence. There was relatively little variation in the age distribution of children in cases of emotional maltreatment and neglect. While girls made up 49% of victims, girls made up a larger proportion of victims in cases of sexual abuse (63%) and emotional maltreatment (54%), whereas boys were more often victims in cases of physical abuse (54%), neglect (52%), and exposure to domestic violence (52%) (Trocmé, MacLaurin, Fallon, Daciuk, et al., 2005).

Comparison of rates by age and form of maltreatment between Canada and the United States further underscores the effect of variations in standards and

practices on official maltreatment rates. For example, the higher rate of reported victimization for youth 12-15 in Canada (20.4 per 1,000 compared to 9.3 per 1,000) is further compounded by the larger proportion of Canadian youth who were victims of physical abuse (35% compared to 22.8%). As a result, more than three times as many youth, 7.2 compared to 2.1 per 1,000,³ were noted as victims of physical abuse in Canada than in the United States, indicating two very different service responses to parent-youth conflict.

Trends

Despite a steady increase in reports, rates of substantiated maltreatment have been declining since the mid-1990s across the United States. From 1990 to 2004, the rate of investigations increased from 36.1 per 1,000 children to 47.8 per 1,000, which is a 32.4% increase (Figure 1.1). During the same period, the rate of victimization decreased 11%, from 13.4 per 1,000 children in 1990 to 11.9 per 1,000 children in 2004. Furthermore, since 1993, the rate of victimization

TABLE 1.4 Age of Victims by Primary Form of Substantiated Maltreatment in 2003 in Canada, Excluding Quebec

Nature of Harm	Physical Abuse	Neglect	Sexual Abuse	Emotional Maltreatment	Exposure to Domestic Violence	Total*	Incidence per 1,000
Age <1-3	10%	33%	1%	15%	41%	22,808	21.9
Age 4-7	21%	29%	3%	14%	33%	25,052	21.3
Age 8-11	29%	28%	3%	14%	25%	29,519	23.5
Age 12-15	35%	28%	4%	16%	17%	25,916	20.4

Source: Trocmé, Fallon, MacLaurin, Daciuk, et al., 2005, Tables 6-1 and 6-3.

National annual weighted estimates based on a sample of 5,660 substantiated child maltreatment investigations with information about age and sex.

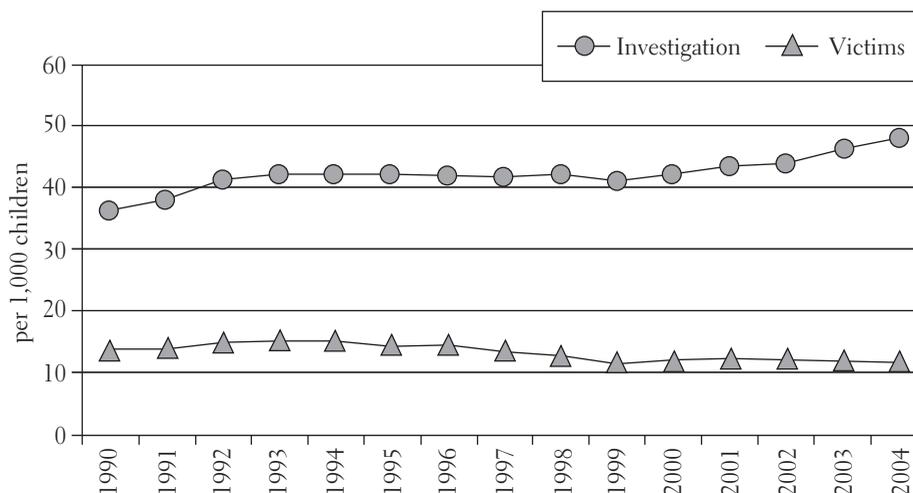


FIGURE 1.1 Rates of Reported and Substantiated Maltreatment in the United States

Source: NCANDS. From Figure 3-2, U.S. Department of Health and Human Services, Administration on Children, 2006.

decreased 22% from 15.3 per 1,000 (U.S. Department of Health and Human Services, 2006).

The decline in victimization rates has not, however, been consistent across forms of maltreatment. From 1992 to 2003, physical and sexual abuse rates declined 36% and 47%, respectively, while rates of neglect declined only 7%, and have in fact been increasing since 1999 (Jones, Finkelhor, & Halter, 2006). Jones and colleagues argue that there is compelling evidence that the decline in reports of physical and sexual abuse follow similar trends for related social indicators, such as violent crime, child poverty, teen pregnancies, and youth suicide. The fluctuation in neglect rates is more complex and may reflect a combination of a downward trend consistent with improving social conditions plus improved detection and greater sensibility to the negative effects of neglect. The continued increase in reports, however, does not lend itself well to these explanations.

In contrast, the trend in Canada has been one of unprecedented increases in rates of reported and substantiated maltreatment, with rates of substantiated maltreatment increasing at an even steeper rate than reports (Trocmé, Fallon, MacLaurin, Daciuk, et al., 2005; Trocmé, Fallon, MacLaurin, & Neves, 2005). The rate of maltreatment investigations in Canada, excluding Quebec, has increased 86%, from 24.55 investigations per 1,000 children in 1998 to 45.69 in 2003. The rate of substantiated cases increased 125%, from 9.64 substantiated cases per 1,000 children to 21.71.

The increase has been driven to a large degree by a dramatic increase in cases of exposure to domestic violence and emotional maltreatment (Figure 1.2). The rate of exposure to domestic violence increased 259%, from 1.72 substantiated cases per 1,000 to 6.17. The rate of emotional maltreatment increased 276% from 0.86 to 3.23 substantiated cases per 1,000. In 1998, these two forms of maltreatment accounted for 27% of substantiated cases. In 2003, they accounted for 43% of substantiated cases. These differences reflect a shift in awareness and, in some cases, in legislation with respect to the impact on children of emotional maltreatment and exposure to domestic violence.

Similar to the decline in sexual abuse rates documented in the United States (Finkelhor & Jones, 2004), rates of sexual abuse have been decreasing in Canada since 1993 (Trocmé, Fallon, MacLaurin, & Neves, 2005). In contrast to the United States, neglect and, even more notably, physical abuse cases have increased substantially. Part of this increase can be attributed to changes in investigation practices and standards, which have led to higher substantiation rates and the identification of more maltreated siblings. Nearly half of all investigations are substantiated in Canada, whereas less than a third are substantiated in the United States.

BEYOND CPS REPORTS

Official statistics reflect only a portion of the situations that might be considered child maltreatment.

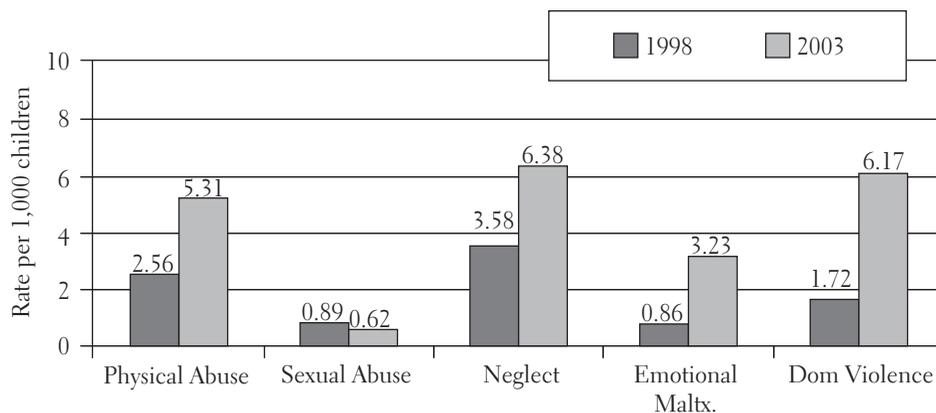


FIGURE 1.2 Changing Rates of Substantiated Maltreatment in Canada, Excluding Quebec

Source: Trocme, MacLaurin, Fallon, Daciuk, et al., 2005

A series of National Incidence Studies designed to capture cases beyond official CPS reports has been conducted in the United States. While results of the 2006 wave of the NIS will not be available before late 2007, results from the first three NIS studies, which were conducted in 1976, 1986, and 1993, consistently pointed to a significant underdetection of cases of maltreatment known to professionals working with children. The 1993 study found that only a third of cases countable under the study's endangerment standard had been fully investigated by CPS (Sedlak & Broadhurst, 1996).

Population surveys designed to measure annual incidence also indicate that many cases are not being detected by CPS. Using the Conflict Tactic Scales (CTS) in a national sample of parents, Straus and colleagues found in 1995 that 49 per 1,000 parents reported using severe violence toward one of their children at least once in the year (Straus, Hamby, Finkelhor, Moore, & Runyan, 1998), 23 times the rate of physical abuse reported by NCANDS in 2004. Using a modified and translated version of the CTS, a 2004 survey in Quebec found that 63 per 1,000 mothers reported using "severe violence" at least once in the previous year, which is over 10 times the estimated rate of physical abuse reported to CPS in the rest of Canada for 2003 (Clement & Chamberland, 2005).

Direct comparison with reports to CPS is, however, problematic because of definitional differences and varying norms. In the case of the CTS, self-reported ratings of severe violence are not directly equivalent to ratings of abuse, since the CTS is designed to only measure parent behavior, irrespective of actual harm

or risk of harm (Straus, Hamby, Finkelhor, Moore, & Runyan, 1998). Even in examining cases where maltreatment has already been substantiated, different classification systems produce divergent results. A recent study comparing ratings by coders using NIS typologies with CPS ratings found significant differences in case classification, especially in cases of neglect and emotional maltreatment (Runyan et al., 2005).

Unlike CPS-investigated cases and surveys designed to estimate the rate of new incidents of maltreatment in a year (annual incidence), prevalence studies measure rates of victimization by asking youth or adults about abusive experiences during their childhood. Childhood maltreatment prevalence studies have been used mostly to examine the prevalence of child sexual abuse and, to a lesser extent, to examine the prevalence of physical abuse.

One of the most frequently referenced surveys of a national sample of respondents in the United States found that in 1985 27% of females and 16% of males disclosed a history of childhood sexual abuse (Finkelhor, Hotaling, Lewis, & Smith, 1990). The most extensive child maltreatment prevalence data available in Canada are from an adult population health survey conducted in Ontario in 1990, which found that 12.8% of females and 4.3% of males reported a history of sexual abuse (MacMillan et al., 1997). A recent meta-analysis of 22 studies using randomly sampled community respondents found that the overall prevalence of childhood sexual abuse was 30–40% for females and at least 13% for males (Bolen & Scannapieco, 1999). The study found that variations in estimates were related to the number of

screening questions used to identify victims, the sizes of the samples, and the years in which the studies were conducted (Bolen & Scannapieco, 1999).

SEVERITY

Injuries

Most cases of maltreatment reported to child welfare services involve situations where children have already suffered some sort of emotional harm, or are at significant risk of being injured or of suffering some type of emotional harm. Physical harm due to maltreatment, however, is present in a relatively small proportion of cases. The CIS 2003 provides one of the more comprehensive sources of information on injury due to maltreatment (Trocmé et al., 2005). As shown in Table 1.5, physical harm was noted in only 10% of substantiated maltreatment cases (see total in Table 1.5), most of which was either bruises, cuts, or scrapes or other health conditions (such as a sexually transmitted disease or asthma aggravated by neglect). The study also tracked the severity of harm measured by the need for medical treatment: 70% of cases involving harm did not require medical intervention.

Somewhat surprisingly, no physical harm was noted in over two thirds of the cases of substantiated

physical abuse. Standards for CPS intervention across Canada have consistently stressed the importance of early intervention in situations where maltreating behaviors put children at risk of harm. The assessment of the acceptable level of risk, however, is not well defined. This may explain in part the difference between the physical abuse rates in Canada and in the United States (see Tables 1.1 and 1.2).

Fatalities

At 2.2 deaths per 100,000 (average rate 1994–1998), the United States has one of the highest rates of child maltreatment–related deaths in the developed world (based on the World Health Organisation’s Mortality Database; UNICEF, 2003). Rates of child deaths due to maltreatment have been increasing in the United States. The NCANDS child maltreatment report estimates that 1,490 children died from abuse and neglect in 2004, a substantial increase from the 1,052 deaths recorded in 1998. In 2004, the ratio of child maltreatment–related deaths to child maltreatment victims was 1.71 per 1,000.⁴

The average rate of child homicides from 1995 to 1999 in Canada as reported by the UNICEF Child Maltreatment Deaths Report Card was 0.7 per 100,000, placing Canada in the middle range of developed countries. Rates of child homicides as

TABLE 1.5 Physical Harm by Primary Category of Substantiated Maltreatment in 2003 in Canada, Excluding Quebec

Nature of Harm	Physical Abuse	Neglect	Sexual Abuse	Emotional Maltreatment	Exposure to Domestic Violence	Total
No physical harm	71%	93%	95%	99%	99%	90%
Bruises, cuts, or scrapes	27%	2%	4%		1%	7%
Burns and scalds	*	1%	*	*	*	*
Broken bones	1%	*	*	*	*	*
Head trauma	1%	*	*	*	*	*
Other health conditions	2%	5%	2%	1%	*	2%
At least one type of physical harm**	29%	8%	5%	1%	1%	10%
Total substantiated investigations	25,257	30,367	2,935	15,370	29,369	103,298

Source: Trocmé, Fallon, MacLaurin, Daciuk, et al., 2005, Table 4-1(b).

Based on a sample of 5,660 substantiated child maltreatment investigations with information about physical harm.

*Too few cases to produce an estimate.

**Column percentages are not additive since a child can be harmed in several ways.

tracked through police reports have been decreasing in Canada: 55 homicides of children 0–18 were recorded in 2004, a historic 30-year low (Dauvergne, 2006). The ratio of homicides to substantiated victims in Canada was 0.48 per 1,000.⁵

While child homicide statistics are the only source of child maltreatment statistics for which we have both international comparative and historical data, the juxtaposition of statistics from Canada and the United States points to several of the challenges that emerge from such comparisons. Overall rates of maltreatment are comparable in both countries, yet rates of child maltreatment deaths appear to be three times higher in the United States. Rates of substantiated maltreatment have been decreasing in the United States, while rates of child maltreatment deaths have been increasing. In Canada, the trends are reversed.

Despite the care given to investigating, classifying, and reporting child homicides, these statistics represent a complex and heterogeneous set of phenomena that are best analyzed and interpreted in terms of more specific subpopulations. Infants and young children are at the highest risk of homicide at the hands of parents; middle childhood is a relatively safe period; whereas rates of homicides for adolescents are higher both within in the family and, most dramatically in the United States, in situations of youth-on-youth violence (Finkelhor & Ormrod, 2001). Homicides arise in a number of very different circumstances, including neonaticides, fatal child abuse, family violence, mental illness, fatal sexual assault, and teen fatal assault (Lawrence, 2004). As a result, it is misleading to interpret child homicide as the endpoint of a continuum of violence ranging from moderate neglect to homicidal physical assault. In practice, child maltreatment and child homicides are best interpreted as relatively distinct phenomena (Lawrence, 2004; Trocmé & Lindsey, 1996; UNICEF, 2003).

IMPLICATIONS FOR RESEARCH, POLICY, AND PRACTICE

For a period of 25 years, from the early 1970s to the mid-1990s, child maltreatment service statistics and epidemiological studies were consistently moving in the same direction of increasing rates driven by improved surveillance. The tip-of-the-iceberg analogy appeared to serve the field well and supported research, policies, and practices that focused predominantly on detection through the introduction of mandatory reporting laws,

the expansion of services, improved access to administrative data, and the development of finer survey tools. In many jurisdictions, rates have started to plateau or decline, a pattern that is likely to follow in others. The explosion of maltreatment reports from a few hundred cases involving battered children with multiple fractures to several million investigations conducted annually across North America has been driven both by improved detection and a broadening of our understanding of the negative impact of maltreatment by parents. The focus has moved from detection, reporting, and investigation to the more complex questions of how best to help different groups of maltreated children and youth. Closer examination of the epidemiology of child maltreatment reveals a diverse population, ranging from cases of severe physical abuse requiring urgent response, to complex cases of neglect and exposure, to domestic violence. The role of CPS is being reconceptualized (Waldfoegel, 2001; Trocmé & Chamberland, 2003), and monolithic conceptualizations of child maltreatment are being challenged (English, Bangdiwala, & Runyan, 2005; Herrenkohl, 2005).

Notes

1. This chapter focuses on the epidemiology of child maltreatment in Canada and the United States because these are the jurisdictions with the comprehensive population survey and administrative maltreatment data.
2. Because of the limited amount of information available from the Quebec sample, most tables present estimates for Canada excluding Quebec. Where possible, additional tables in the original studies also present weighted estimates for all of Canada, including Quebec.
3. These incidence estimates are derived from Tables 1.3 and 1.4 by multiplying the proportion of abuse cases by the incidence rate, i.e., 0.35×20.4 and 0.249×9.3 .
4. This was derived by dividing 1,490 NCANDS-reported deaths by 872,000 NCANDS-reported victims (U.S. Department of Health and Human Services, 2006).
5. This was derived by dividing the 55 CIS-reported child homicides by the 114,067 CIS-reported deaths for Canada, including Quebec (Trocmé et al., 2005).

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