Patterns of reporting by health care and nonhealth care professionals to child protection services in Canada

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BACKGROUND: All Canadian jurisdictions require certain professionals to report suspected or observed child maltreatment. The present study examined the types of maltreatment, level of harm and child functioning issues (controlling for family socioeconomic status, age and sex of the child) reported by health care and nonhealth care professionals.
METHODS: χ^2 analyses and logistic regression were conducted on a national child welfare sample from the 2003 Canadian Incidence Study of Reported Child Abuse and Neglect (CIS-2003), and the differences in professional reporting were compared with its previous cycle (CIS-1998) using Bonferroni-corrected CIs.
RESULTS: Analysis of the CIS-2003 data revealed that the majority of substantiated child maltreatment was reported to service agencies by nonhealth care professionals (57%), followed by other informants (33%) and health care professionals (10%). The number of professional reports increased 2.5 times between CIS-1998 and CIS-2003, while nonprofessional reports increased 1.7 times. Of the total investigations, professional reports represented 59% in CIS-1998 and 67% in CIS-2003 (P<0.001). Compared with nonhealth care professionals, health care professionals more often reported younger children, children who experienced neglect and emotional maltreatment, and those assessed as suffering harm and child functioning issues, but less often reported exposure to domestic violence.
CONCLUSION: The results indicate that health care professionals play an important role in identifying children in need of protection, considering harm and other child functioning issues. The authors discuss the reasons why under-reporting is likely to remain an issue.

Key Words: *Child abuse and neglect; Child welfare; Health care personnel; Mandatory reporting*

Les modes de signalement aux services de protection de l'enfance par les professionnels de la santé et les professionnels à l'extérieur du milieu médical au Canada

HISTORIQUE : Tous les territoires de compétence canadiens exigent que certains professionnels signalent les cas présumés ou observés de maltraitance d'enfants. La présente étude porte sur le type de maltraitance, le taux d'atteintes et les problèmes de fonctionnement de l'enfant (compte tenu du statut socioéconomique de la famille, de l'âge et du sexe de l'enfant) signalés par les professionnels de la santé et les professionnels à l'extérieur du milieu médical.
MÉTHODOLOGIE : Les chercheurs ont procédé à une analyse χ^2 et à une analyse de régression logistique sur un échantillon national d'enfants pris en charge par les services de protection de l'enfance tiré de l'Étude canadienne sur l'incidence des signalements de cas de violence et de négligence envers les enfants de 2003 (ÉCI-2003) et ont comparé les différences de signalement par des professionnels avec le cycle précédent (ÉCI-1998) au moyen des indices de confiance pondérés par la correction de Bonferroni.
RÉSULTATS : L'analyse des données de l'ÉCI-2003 a révélé que la majorité des cas de maltraitance d'enfants corroborés étaient signalés aux services de protection de l'enfant par des professionnels à l'extérieur du milieu médical (57 %), suivis d'autres personnes (33 %), puis de professionnels de la santé (10 %). Il y avait 2,5 fois plus de rapports de professionnels, mais 1,7 fois plus de rapports d'autres professionnels dans l'ÉCI-2003 que dans l'ÉCI-1998. Sur le nombre total d'enquêtes, on constatait 59 % de rapports de professionnels dans l'ÉCI-1998 et 67 % dans l'ÉCI-2003 (P<0,001). Par rapport aux professionnels à l'extérieur du milieu médical, les professionnels de la santé signalaient davantage d'enfants plus jeunes, d'enfants victimes de négligence et de maltraitance affective ainsi que d'enfants évalués comme souffrant d'atteintes et de problèmes de fonctionnement de l'enfance, mais moins de cas d'exposition à la violence familiale.
CONCLUSION : D'après les résultats, les professionnels de la santé jouent un rôle important pour dépister les enfants ayant besoin d'être pris en charge par les services de protection de l'enfance, compte tenu des atteintes et d'autres problèmes liés au fonctionnement de l'enfant. Les auteurs abordent les raisons pour lesquelles le sous-signalement risque de demeurer problématique.

Child maltreatment (neglect, exposure to domestic violence, emotional maltreatment, and physical and sexual abuse) is a criminal act that can have immediate and long-term social and health consequences. All Canadian jurisdictions have introduced child protection legislation that requires certain groups of professionals to report suspected or observed child maltreatment to child protection services or the police (1). Mandatory reporting is required

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TABLE1
Categorization of the variables

Variable name	Category
Sex	Male
	Female
Ethnic status of primary caregiver	Visible minority (all ethnicities except Caucasian)
	Caucasian
Source of report	Health care professionals (includes hospitals, nurses, physicians and mental health professionals)
	Nonhealth care professionals (includes social assistance workers, crisis services/shelters, schools, community/recreation centres, other child welfare services, child care centres, police and community agencies)
Physical harm	Harm (includes bruises/cuts/scrapes, burns/scalds, broken bones, head trauma, fatal and other health conditions)
	No harm
Mental or emotional harm	Harm (includes no current signs, but mental or emotional harm is probable, or child shows signs of mental or emotional harm, or child requires therapeutic treatment)
	No harm
Child functioning: physical, emotional, cognitive health issue	Yes (includes developmental delay, learning disability, physical disability, substance abuse-related birth defects, other health conditions, specialized education services, depression or anxiety, self-harming behaviours, psychiatric disorders or positive toxicology at birth)
	No
Child functioning: any behavioural issue	Yes (includes negative peer involvement, alcohol abuse, attention-deficit hyperactivity disorder, drug/solvent abuse, violence toward others, running away, irregular school attendance, inappropriate sexual behaviour, youth criminal justice act involvement, or other behavioural or emotional problems)
	No
Physical examination	Yes (physician/nurse conducted a physical examination of the child as part of the investigation)
	No
Placement during investigation	Out-of-home placement (includes informal kinship care, kinship foster care, other family foster care, group home, residential/secure treatment)
	Placement is considered (out-of-home placement is still being considered at the time of the survey)
	No placement required
Maltreatment type*	Physical abuse
	Sexual abuse
	Neglect
	Emotional maltreatment
	Exposure to domestic violence
Substantiation of maltreatment	Substantiated (the balance of evidence indicates that abuse or neglect has occurred)
	Not substantiated

**The Canadian Incidence Study of Reported Child Abuse and Neglect documents up to three types of maltreatment for each investigation, classified as primary, secondary and tertiary. The type of maltreatment that denotes the principal type investigated is classified as the primary form*

by, but not limited to, health care professionals, educators, child care providers and law enforcement personnel.

The Canadian Incidence Study of Reported Child Abuse and Neglect (CIS) provides a unique opportunity to investigate who reports what type of maltreatment. In the CIS, child protection workers provide information regarding sources of allegation, characteristics of the child and maltreatment on a large sample of investigations across Canada. The objectives of the present paper were the following:

- To determine the maltreatment types that professionals (mandated reporters) refer to child protection agencies;
- To identify the characteristics of the children reported by professionals to child protection agencies;
- To investigate how health care and nonhealth care professionals differ in their reporting patterns, based on maltreatment types, physical and emotional harm, placement and the child's level of function (controlling for age and sex of the child, maltreatment substantiation level, socioeconomic disadvantage index [SED] and ethnic status of the child's primary caregiver); and
- To explore the implications of the variations in reporting practices for intervention.

METHODS

The CIS

The CIS is an ongoing national study repeated every five years. The objectives of the CIS are to examine the incidence of reported child maltreatment and the characteristics of children (and their families) investigated by child welfare services. The CIS protocols and procedures were approved by the University of Toronto's (Toronto, Ontario) Ethics Committee and the Health Canada Research Ethics Board. Detailed descriptions of the two cycles of this surveillance program (CIS-1998 and CIS-2003) are documented elsewhere (2,3). Briefly, in the CIS, a multistage cluster sampling design was used to select a representative sample of child welfare service areas across Canada over a three-month sampling period. It captured details of maltreatment investigations by child welfare workers who completed a standardized questionnaire. In CIS-2003, however, Quebec cases were excluded from the core sample due to administrative differences in the province's data collection.

Sample

The current article presents secondary analyses based on the investigations from the core sample of CIS-2003 that were referred by health care and nonhealth care professionals (total of 7749 cases). The sample did not include investigations referred by other informants (index child, relatives, neighbours, and custodial or noncustodial parents). For comparison with the previous cycle of the CIS, the same inclusion criteria were used from CIS-1998 (ie, all cases except for Quebec or other informant referrals), resulting in 3143 child maltreatment investigations.

Study variables

Table 1 lists the variables included in the present analysis. As shown, most categorical variables were dichotomously coded for analysis purposes, while child's age was considered to be continuous. The CIS captured up to three types of maltreatment for each investigation (among neglect,

TABLE 2
Health care professional and nonhealth care professional reports of various maltreatment investigations of the 1998 Canadian Incidence Study of Reported Child Abuse and Neglect (CIS) and CIS-2003 (core sample), and their relative changes from 1998 to 2003

	All groups		Health care professional reports				Nonhealth care professonal reports			
	Number of reports		Number of reports (%)		Standardized relative change		Number of reports (%)		Standardized relative change	
Type of maltreatment	CIS-1998	CIS-2003	CIS-1998	CIS-2003	%	Adjusted CI, %	CIS-1998	CIS-2003	%	Adjusted CI, %
All maltreatment investigations										
All investigations	5363	11,562	473 (9)	1141 (10)	12	1 to 24*	2670 (50)	6608 (57)	15	11 to 18***
Primary form										
Physical abuse	1823	3,049	152 (8)	294 (10)	16	–4 to 39	1032 (57)	1974 (65)	14	9 to 20***
Sexual abuse	528	655	57 (11)	72 (11)	2	–27 to 41	240 (45)	329 (50)	11	–2 to 25
Neglect	2042	4034	183 (9)	483 (12)	34	14 to 57***	865 (42)	1848 (46)	8	2 to 15*
Emotional maltreatment	436	1704	51 (12)	205 (12)	3	–23 to 37	180 (41)	811 (48)	15	2 to 30*
Exposure to domestic violence	534	2120	30 (6)	87 (4)	–27	–51 to 9	353 (66)	1646 (78)	17	10 to 25
Substantiated maltreatment										
All maltreatment	2150	5660	186 (9)	531 (9)	8	–8 to 27	1165 (54)	3611 (64)	18	13 to 23***
Primary form										
Physical abuse	631	1286	53 (8)	117 (9)	8	–21 to 48	388 (61)	874 (68)	11	3 to 19**
Sexual abuse	155	153	18 (12)	21 (14)	18	–34 to 113	71 (46)	75 (49)	7	–15 to 35
Neglect	804	1775	78 (10)	218 (12)	27	–1 to 62	361 (45)	910 (51)	14	4 to 25**
Emotional maltreatment	198	850	15 (8)	113 (13)	75	5 to 194*	88 (44)	458 (54)	21	3 to 43*
Exposure to domestic violence	365	1596	22 (6)	62 (4)	–36	–60 to 3	257 (70)	1294 (81)	15	7 to 24

*"All groups" include referrals from health care professionals, nonhealth care professionals and other informants. "Standardized relative change" measures the increase from CIS-1998 to CIS-2003 in the number of reports for each professional group, with respect to the increase in the total number of reports for all groups. *P<0.05; **P<0.01; ***P<0.001*

emotional maltreatment, exposure to domestic violence, and physical and sexual abuse).

In the present study, family income and caregiver education could not be used as indicators of socioeconomic status because of the large number of missing or unknown values in the original CIS data. SED is a cumulative index adapted from previous research (4) and redefined for the study to include the following factors: primary caregiver receiving some form of social assistance or having no source of income, single motherhood, having three or more children in the home, having moved three or more times in the past 12 months, and/or living in a shelter or hostel.

Statistical analysis

χ^2 analyses were used to test the differences between maltreatment reported by health care and nonhealth care professionals with respect to physical harm, emotional/mental harm, child functioning and out-of-home placement of the maltreated child. Relative changes were calculated using 90% Bonferroni-corrected CIs to compare the differences in the types of maltreatment in professional reporting between CIS-1998 and CIS-2003. Finally, multiple logistic regression controlling for demographic variables estimated the associations among the source of referral, maltreatment and various outcomes such as harm and child functioning. The analyses of the present paper are based on the unweighted sample using PROC LOGISTIC in SAS/STAT software, version 9.1, of the SAS system (SAS Institute Inc, USA) for Windows (Microsoft Corporation, USA) and EpiInfo, version 3.5.1 (Centers for Disease Control and Prevention, USA). The observations are assumed to be independent for the purposes of the study because reporting is made at the individual (ie, child) level.

RESULTS

CIS-2003 data indicate that nonhealth care professionals reported the majority of child maltreatment investigations to child protection agencies (57%), followed by other informants (33%; not analyzed in the study). Health care professionals reported the fewest number of investigated child maltreatment cases to child protection agencies (10%).

The association between child's age and the source of allegation was statistically significant: health care professionals were more likely to report younger children (OR = 0.92 per year of increase in age at the time of reporting; P<0.001). In contrast, there were no significant sex differences between investigations referred by health care professionals and nonhealth care professionals.

Table 2 presents the standardized relative changes of professional-reported maltreatment from CIS-1998 to CIS-2003 according to type and substantiation. Both health care and nonhealth care professional overall reporting presented statistically significant increases. While the number of reports for each type of maltreatment (investigated and substantiated) increased for both groups, nonhealth care professional reports increased at a higher rate in general than health care professional reports. However, health care professional reports increased considerably more for neglect

TABLE 3
Maltreatment investigations with physical harm among different types of maltreatment investigations: A comparison between health care professional reports and nonhealth care professional reports; The 2003 Canadian Incidence Study of Reported Child Abuse and Neglect (core sample)

	Investigations from professional reports, n		Maltreatment investigations with physical harm, n (%)	
Maltreatment type	**Health care**	**Nonhealth care**	**Health care professional reports**	**Nonhealth care professional reports**
All maltreatment investigations				
All investigations	1141	6608	171 (15)	499 (8)*
Primary form				
Physical abuse	294	1974	76 (26)	328 (17)*
Neglect	483	1848	70 (14)	83 (4)*
Substantiated maltreatment				
All maltreatment	531	3611	120 (23)	380 (11)*
Primary form				
Physical abuse	117	874	47 (40)	243 (28)*
Neglect	218	910	57 (26)	63 (7)*

**Statistically significant (P<0.05)*

TABLE 4
Maltreatment investigations with emotional harm among different types of maltreatment investigations: A comparison between health care professional reports and nonhealth care professional reports; The 2003 Canadian Incidence Study of Reported Child Abuse and Neglect (core sample)

	Investigations from professional reports, n		Maltreatment investigations with emotional harm, n (%)	
Maltreatment type	**Health care**	**Nonhealth care**	**Health care professional reports**	**Nonhealth care professional reports**
All maltreatment investigations				
All investigations	1141	6608	397 (35)	2381 (36)
Primary form				
Physical abuse	294	1974	88 (30)	562 (28)
Sexual abuse	72	329	24 (33)	98 (30)
Neglect	483	1848	135 (28)	534 (29)
Emotional maltreatment	205	811	105 (51)	410 (51)
Exposure to domestic violence	87	1646	45 (52)	777 (47)
Substantiated maltreatment				
All maltreatment	531	3611	287 (54)	1867 (52)
Primary form				
Physical abuse	117	874	64 (55)	399 (46)
Sexual abuse	21	75	16 (76)	59 (79)
Neglect	218	910	90 (41)	407 (45)
Emotional maltreatment	113	458	79 (70)	304 (66)
Exposure to domestic violence	62	1294	38 (61)	698 (54)

There were no statistically significant differences (P<0.05) between cases reported by health care and nonhealth care professionals

and substantiated emotional maltreatment. Sexual abuse investigations did not present significant increases for any of the groups. Adjusted CIs compared the relative changes according to maltreatment type between health care and nonhealth care professionals. In these, only the increase of exposure to domestic violence reporting (both investigated and substantiated) was significantly different between these groups (with a considerably higher increase for nonhealth care professionals).

Tables 3 to 6 present health care and nonhealth care professional reporting in terms of demographic characteristics of the investigated child, type of maltreatment, maltreatment with harm, child functioning levels and placement of the investigated child. Regarding the type of maltreatment, neglect was most frequently reported by health care professionals (42%), whereas physical abuse was most frequently reported by nonhealth care professionals (28%).

Table 3 reveals that the proportion among health care professional reporting of maltreatment with physical harm (including physical abuse and neglect) was significantly higher than nonhealth care professional reporting. Similar patterns with relatively higher proportions of physical harm in the first group were observed among the primary form of substantiated maltreatment investigations. Maltreatment with physical harm, sexual abuse, emotional maltreatment or exposure to domestic violence was too small to calculate individually.

Table 4 shows that mental/emotional harm was highly associated with maltreatment, regardless of the reporting source (no statistically significant differences were observed between groups). In particular, substantiated maltreatment found associated mental/emotional harm in more than 50% of its investigations.

Table 5 shows that maltreatment with various child functioning issues is significantly higher among reports from health care professionals than nonhealth care professionals, except for substantiated reports with behavioural issues observed in the child.

TABLE 5
Various child functioning issues among all maltreatment investigations and substantiated maltreatment investigations: A comparison between health care professional reports and nonhealth care professional reports; The 2003 Canadian Incidence Study of Reported Child Abuse and Neglect (core sample)

	Maltreatment investigations with child functioning issues	
Type of child functioning	Health care professional reports	Nonhealth care professional reports
Total maltreatment investigations, n	1141	6608
Total substantiated maltreatment, n	531	3611
All maltreatment investigations, n (%)		
Physical, emotional or cognitive health issue	412 (36)	2071 (31)*
Any behavioural issue	345 (30)	2452 (37)*
Substantiated maltreatment, n (%)		
Physical, emotional or cognitive health issue	238 (45)	1207 (33)*
Any behavioural issue	190 (36)	1409 (39)

**Statistically significant (P<0.05)*

Table 6 reveals that, with respect to out-of-home placement, health care professional reports were significantly higher than nonhealth care professionals reports, regardless of substantiation. There were no significant differences for investigations in which out-of-home placement was still being considered at the time of the survey.

Table 7 presents the ORs for health care professional- versus nonhealth care professional-reported cases with various maltreatment outcomes, controlling for age, sex, maltreatment substantiation, SED and ethnic status. Compared with nonhealth care professional reports, health care professional-reported cases had a statistically significant higher probability of association with physical harm, mental/emotional harm, physical/emotional/cognitive health issues, child functioning issues, out-of-home placement, neglect and emotional maltreatment investigations.

DISCUSSION

The present analysis provided a snapshot of professionals' child maltreatment-reporting practices to child welfare in Canada. It adds to the few Canadian studies (5,6) that have been conducted on physicians' and nurses' reporting patterns. The reporting practices between health care and nonhealth care professionals differ on multiple variables. Compared with other professionals, health care practitioners are more likely to report children who have experienced harm, have functioning issues, are placed in out-of-home care, and have experienced emotional maltreatment and neglect, but they are less likely to report exposure to domestic violence. Child maltreatment reports increased in absolute and relative numbers between 1998 and 2003 for both groups.

Nonhealth care professionals reported more maltreatment than health care practitioners according to CIS-2003 (57% versus 10%). This finding is similar to United States data (7), which show that among professionals, school personnel

TABLE 6
Placement among all maltreatment investigations and substantiated maltreatment investigations; A comparison between health care professional reports and nonhealth care professional reports; The 2003 Canadian Incidence Study of Reported Child Abuse and Neglect (core sample)

	Maltreatment investigations with child functioning issues	
Placement	Health care professional reports	Nonhealth care professional reports
Total maltreatment investigations, n	1141	6608
Total substantiated maltreatment, n	531	3611
All maltreatment investigations, n (%)		
Out-of-home placement	136 (12)	503 (8)*
Placement considered	32 (3)	136 (2)
Substantiated maltreatment, n (%)		
Out-of-home placement	115 (22)	425 (12)*
Placement considered	24 (5)	113 (3)

**Statistically significant (P<0.05)*

TABLE 7
ORs for health care professional-reported cases with various maltreatment outcomes compared with nonhealth care professional-reported cases; The 2003 Canadian Incidence Study of Reported Child Abuse and Neglect (core sample)

Outcome	OR	95% CI	P
Maltreatment with harm			
Physical harm	2.40	1.98–2. 92	<0.0001
Mental or emotional harm	1.28	1.10–1.49	0.0013
Child functioning			
Physical, emotional and/or cognitve health issue	1.65	1.43–1.90	<0.0001
Behavioural health issue	1.08	0.93–1.26	0.3182
Any child functioning issue	1.48	1.29–1.71	<0.0001
Placement	1.99	1.61–2. 46	<0.0001
Primary form of maltreatment investigations			
Physical abuse	0.91	0.78–1.06	0.2163
Sexual abuse	1.29	0. 98–1.69	0.0699
Neglect	1.80	1.58–2.06	<0.0001
Emotional maltreatment	1.61	1.36–1.92	<0.0001
Exposure to domestic violence	0.21	0.16–0.26	<0.0001

OR controlling for age and sex of the child, substantiation of primary maltreatment, socioeconomic disadvantage and ethnic status of the primary caregiver

generate the most reports (17%) followed by the police (16%), social workers (10%) and health care professionals (8%).

Health care professionals reported more neglect and emotional maltreatment in the recent CIS, but less exposure to domestic violence than nonhealth care professionals. Some researchers have reported barriers to identifying domestic violence; for instance, health care practitioners believe that they do not have sufficient knowledge about domestic violence (8,9). This concern may be even more pronounced regarding the impact on children. There has been a movement for universally 'asking about' domestic violence among health care professionals, with guidelines being developed by health care associations (10-12).

The increase in police reporting may also explain why health care practitioners report less exposure to domestic

violence than nonhealth care professionals. The police are major contributors to the nonhealth care professional category and are often the first responders to the event. As such, child protection workers may feel comfortable substantiating a police report of exposure to domestic violence because they can rely on police evidence. They also have an established working relationship because many child protection agencies have created protocols for joint investigations of child maltreatment with the police (13).

While organizational and policy directives have influenced reporting, one must also consider the exposure of individual professionals to different children and to context-specific risk factors. This exposure may partly explain the variation in the identification of different types of maltreatment by different professional groups, according to their area of expertise. For example, psychology students are more likely to identify psychological abuse, while nursing students are more likely to identify physical abuse (14). Various professionals come in contact with certain problems and issues; for instance, the police mostly encounter domestic violence and homelessness, meanwhile, medical personnel report families with parenting stress (15).

The age of a child has been identified as an important factor influencing the decision to report, with younger children being reported more frequently than older children (16-18). Health care professionals reported younger children more often than nonhealth care professionals. Meanwhile, nonhealth care professionals (consisting in large part of teachers) would be more likely to see and, thus, report older children. Health care professionals have opportunities to assess and interact with children and their caregivers in a variety of settings. In tertiary health care settings, health care practitioners have further opportunities to conduct in-depth physical and psychosocial assessments to identify children with injuries or outcomes consistent with exposure to maltreatment. In community and primary health care settings, health care professionals, such as public health nurses, may be able to develop trusting relationships with clients (19) and observe child and family interactions over time, again providing opportunities to identify potential maltreatment. Interestingly and somewhat counter-intuitively, health care professionals reported neglect more often than any other type of maltreatment, while nonhealth care professionals reported physical abuse more often. In addition, health care professionals reported emotional maltreatment more often, which would be consistent with their training (20).

Cases of neglect and physical abuse reported by health care practitioners were more likely to have manifestations of physical harm than cases reported by nonhealth care professionals. One possible explanation could be that caregivers may only make the decision to seek health care services once physical injury is evident and requires intervention. However, earlier research also showed that children with more serious injuries are reported more often when compared with children who are perceived to be at risk of harm or who have experienced less serious injuries (17,18,21).

The children health care professionals reported were also more likely to have physical, emotional and cognitive health issues than those reported by nonhealth care professionals. However, this difference was not found for behavioural issues. This may be because the majority of health care professionals may not have the opportunity to see children during an extended period of time or are less likely to deal with behavioural issues than teachers and the police. Families who have an increased involvement with social and health care systems (eg, substance abuse or mental illness) may also be more likely to be reported because of greater exposure to professionals (20). Daily observation of children also creates opportunities to assess and identify changes in a child's physical condition, emotional status or behaviour, which if suspected of being associated with maltreatment, can be reported and responded to before the occurrence of prolonged or escalated injuries.

CIS data demonstrated that health care professionals are reporting serious cases in terms of child functioning and harm to the child even when socioeconomic factors are taken into account. However, it is surprising that health care professionals do not report more children who have experienced maltreatment given their exposure to potential abuse and neglect, particularly nurses who come in contact with infants and young children through home visitation and immunization programs. Despite the establishment of mandatory reporting legislation in Canada, it has been estimated that only a small percentage of Canadian children exposed to either physical abuse (5%) or sexual abuse (9%) are ever officially reported to a child protection agency (22).

Several reasons have been provided for the low level of reporting by health care professionals: physicians are afraid of legal action by the families (23), and fear that patients will leave their practice for another physician or will not seek health care (24). Community nurses value the relationships they have with families and may be reluctant to report, feeling a need to protect families from inappropriate intervention or a delayed intervention from child protection agencies, being concerned of an error in their assessments of abuse or even fearing for their own safety if the family learned of the report (25).

There has been debate regarding mandatory reporting in light of personal suffering and stigma in cases of unfounded allegations and additional workload created on an already overburdened system (26,27). However, these data show that mandatory reporting assists in protecting harmed children and puts expectations on professionals to support children. Countries with mandatory reporting laws investigate and substantiate more allegations of child maltreatment (28). However,, it is possible that professionals still need training in the identification of child maltreatment and reassurance about their protection after reporting (28). It may also be that there is a need to improve the methods of intake, screening and assessment at the child protection agency level (29). Earlier research has demonstrated the importance of good communication between child protection

workers and professionals mandated to report. One Canadian study (6) suggested that physicians were more likely to report if child protection workers provided feedback on the progress of the investigation and increased their comfort level when reporting maltreatment. The decision to report is not taken lightly; several studies have mentioned the need for consultation with other professionals before reporting. Finally, intervention programs need to be evaluated and the results of these evaluations need to be communicated to increase professionals' trust that there will be overall benefits for the children they report.

Both health care and nonhealth care professionals had increased reporting between CIS-1998 and CIS-2003 across all categories of child maltreatment with the exception of sexual abuse, for which reporting remained relatively stable. The increase in reporting is probably due to augmented awareness among professionals and policy changes. Most notably, police officers are now required to routinely report children in the home during investigations of intimate partner violence, which may explain some of the observed increases between 1998 and 2003 (3). Meanwhile, increases in substantiation are most likely related to improved investigation practices, for instance, identification of maltreated siblings (3).

FUTURE RESEARCH

Several of these findings merit further discussion and research consideration in a Canadian context in view of increased workload. There are three potential reasons for not reporting: professionals do not meet the children who have experienced abuse; professionals do not recognize maltreatment; and they choose not to report suspected maltreatment (14).

STRENGTHS AND LIMITATIONS

CIS data are cross-sectional; thus, they can only show associations, not causality. Although the present study is large, it was impossible to conduct specific analyses for certain professional groups (eg, nurses) due to the small number of cases. The reporting categories in CIS-1998 and CIS-2003 were not mutually exclusive. For example, physicians could be included in the hospital category or in the physician category. These measures have been improved for CIS-2008. The true magnitude of under-reporting cannot be established using the CIS; the CIS also does not allow for assessment of regional differences.

Among the strengths of the present study are the following: the CIS analyzed five major types of maltreatment compared with other studies that often focused on reporting practices only with respect to child physical and sexual abuse; the CIS considered 12 different professional groups as potential sources of the report; and the test-retest agreement was generally good for the CIS and, in particular, for the reporting source (30).

CONCLUSION

Health care professionals played an important role in identifying children in need of protection from maltreatment and harm, controlling for demographic characteristics of both the child and the family. The data clearly show that health care professionals identify children who have experienced severe maltreatment, as captured by physical harm, and children with behavioural problems. However, as explained above, under-reporting is likely to remain an issue.

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