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Trends in investigations of abuse or neglect referred by hospital personnel in Ontario

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ABSTRACT

Background There is a dearth of literature surrounding mandated reporters to child welfare services in the Canadian context. This paper examines 20 years of reporting patterns from hospitals, which represent 5% of all referrals to child welfare services in Ontario.

Methods The Ontario Incidence Study of Reported Child Abuse and Neglect (OIS) is a representative study that has taken place every 5 years since 1993. The OIS is a multistage cluster sample design, intended to produce an estimate of reported child abuse and neglect in the year the study takes place.

Results There have been significant changes in referral patterns over time. Hospital referrals in 2013 are more likely to involve a concern of neglect, risk of maltreatment or exposure to intimate partner violence. In 1993, children were more likely to be referred from a hospital for a concern of physical abuse. Between 1993 and 1998, there was a significant drop in the number of sexual abuse investigations referred from a hospital. Hospitals have low rates of substantiation across all of the OIS cycles.

Conclusion This is the first study to examine hospital-based referral patterns in Canada. The relatively low percentage of hospital referrals across the cycles of the OIS is consistent with the extant literature. The findings warrant further discussion and research. This study is foundational for future research that can assist in identifying and developing responses across sectors that meet the complex needs of vulnerable families and that ultimately promote children's safety and well-being.

What is already known on this topic?

- Mandatory reporters report perceived barriers to the reporting of suspected child maltreatment.
- The child welfare sector's response to reported child maltreatment differs based on referral source.
- Very young children tend to be referred from hospitals to child welfare agencies.

What this study hopes to add?

- Contrary to public perception, neglect and risk are the primary reasons children are referred to child welfare agencies from hospitals in Ontario.
- Young children (under 3 years old) are more likely to be referred to child welfare by hospital personnel in Ontario than older children.
- One-third of hospital-referred investigations to child welfare are substantiated, 42% receive ongoing services and 9% of children are placed during their initial investigations.

INTRODUCTION

Child maltreatment is a public health problem.[1–3] It is well-established that maltreatment can adversely impact the development and well-being of children.[3] Professionals across sectors contribute to the recognition of and response to child abuse and neglect.[4] Mandatory reporting facilitates the early detection of child maltreatment, the protection of children and the alignment of services with identified needs.[5] There is evidence suggesting that suspected child maltreatment is under-reported.[4 6–8] The reporting of suspected child abuse and neglect is enshrined in legislation in all provinces and territories of Canada.[9 10] In Ontario, every person is legally obligated to report their suspicion based on reasonable grounds to child welfare authorities.[10 11] Officials and professionals who work directly with children have a particular responsibility , and failure to report a suspicion during the course of duties can result in a fine. Health professionals contribute to a small proportion of reports to child protection authorities.[4] The WHO has noted that health professionals are among the best positioned groups of professionals to gather evidence with respect to child maltreatment.[12]

The healthcare system is an important point of contact for potentially maltreated children.[13] Within a Canadian child welfare context, referrals from hospital-based personnel (ie, doctor, nurse, social worker) comprise a small proportion of all investigations.[9 14] The contribution of healthcare professionals to the recognition and

reporting of child maltreatment is particularly important for younger children who are typically less visible in the community than school-aged children.[13 15 16] Canadian and provincial incidence studies show that hospital-based personnel are the most common referral source of maltreatment-related investigations involving infants.[17 18]

Maltreatment adversely affects child well-being more often than physical safety.[4] Studies exploring the detection of child maltreatment in hospital settings have focused on children presenting with injuries; however, a very small proportion of children who are injured as a result of child maltreatment visit or are admitted to hospital.[13 19] In the 2013 cycle of the Ontario Incidence Study of Reported Child Abuse and Neglect (OIS-2013), physical harm was identified in 5% of cases substantiated for maltreatment; however, medical treatment was required in only 1% of cases.[14]

Barriers are identified in the literature with respect to reporting by healthcare professionals. These include: previous negative experiences with child protection services, concerns with the ramifications of reporting on relationships with families, court-related consequences and a lack of knowledge about child maltreatment (eg, Refs [20] and [21]). Studies that have focused on barriers to reporting experienced by hospital-based personnel indicate that concerns relating to the accurate assessment and identification of child maltreatment[22] and lack of confidence in social service interventions[23] contribute to reporting reluctance. Gilbert and colleagues[4] suggest that in order to understand the reasons for under-reporting, greater understanding is needed around the patterns of recognition and responses of various professionals. McTavish and colleagues'[7] recent meta-synthesis explored mandated reporters' experiences and found that less overt forms of maltreatment were challenging to identify and there was reluctance to report suspicions without physical evidence.[7]

Despite the important role of hospital-based professionals in detecting and reporting suspicions of child maltreatment, there is minimal literature that has examined this reporting source. The OIS provides an unmatched opportunity to understand mandatory reporting patterns within a Canadian provincial child welfare context. The OIS is the only source of aggregated provincial data on reported and investigated child maltreatment. The objective of this study is to explore hospital reporting patterns and the child welfare system's response over the last 20 years in Ontario.[9 14 24–26]

METHODS

The OIS is a cyclical provincial study that occurs every 5 years and measures the incidence of reported and investigated child maltreatment.[27] To date, there have been five cycles of the OIS, and results from the sixth cycle (OIS-2018) will be available in 2020. In each cycle, data are collected directly from investigating workers using a standardised data collection instrument, the Maltreatment Assessment Form. Completed at the conclusion of the investigation, this instrument includes clinical information that is routinely gathered by child welfare workers during the course of conducting investigations, including characteristics relating to the caregiver, child, case and short-term service dispositions (eg, transfers to ongoing child welfare services, placement out-of-home). The instrument has a very high completion rate; completion rates for most items in 2013 were over 99%. This instrument requests information specifically about the source of the allegation or referral. The OIS defines a referral from a hospital as originating from any hospital personnel, including a doctor, nurse or social worker.

Each of the five cycles used a multistage sampling design.[27] In the first stage, a representative sample of child welfare sites is selected from a sampling frame that includes all mandated child welfare organisations in Ontario. The second sampling stage involves selecting cases opened in the study sites from October 1 to December 31 in the year the study takes place. A 3-month duration is considered optimal to ensure high participation rates and good compliance with study procedures.[14] Commencing in the 2008 cycle, investigations were tracked that assessed future risk of maltreatment where there was no specific event of maltreatment alleged or suspected in addition to maltreatment investigations. As cases in Ontario are reported at the family level, the final stage of sampling consists of identifying individual children investigated because of maltreatment-related concerns. In each OIS cycle, the sample is weighted to derive estimates of the provincial annual rates of maltreatment investigations in Ontario.[14] See table 1 for the number of agencies, sample sizes and estimates of investigations in each OIS.

Analytic plan

Annual provincial incidence rates were calculated by first dividing the weighted estimate by the population of children ≤15 years of age and subsequently multiplying by 1000 to produce a rate per 1000 children. The estimates, investigation rates and proportions of investigations by

Table 1 Sites and sample sizes for the Ontario Incidence Study of Reported Child Abuse and Neglect (OIS) from 1993 to 2013

	OIS-1993	OIS-1998	OIS-2003	OIS-2008	OIS-2013
Site selection (sample/total)	15/51	13/53	16/53	23/53	17/46
Case selection	1898	2193	4175	4415	3118
Investigated children	2447	3053	7172	7471	5265
Provincial estimate of child maltreatment-related investigations	46 683	64 658	128 108	128 748	125 281

specific referral sources for maltreatment-related investigations were determined in each of the five OIS. Referral sources were analysed by four categories: any professional referral, hospital referrals as a subtype of professional referrals, non-professional referral sources (eg, parent, child, relative) and other/anonymous referral sources (eg, legal, dental service provider). Analyses were also conducted on hospital referrals and the rates of children referred to the child welfare system were produced by child age (<1 year, 1–3 years, 4–7 years, 8–11 years and 12–15 years) and maltreatment type (physical abuse, sexual abuse, neglect, emotional maltreatment, exposure to intimate partner violence (IPV) and risk) across cycles of the OIS. SPSS Statistics V.24 was used to conduct the analysis. WesVar 5.1 software was used to produce tests of significance. Statistical tests of significance were conducted at 95% level of confidence and used to assess differences in hospital investigations from the previous OIS cycle.

Patient and public involvement

The OIS uses a file review methodology in which workers answer a series of questions about their initial child welfare investigations, including information about investigated children and their families. As such, these children and families are not directly involved in the study design, data collection or reporting processes. However, for each cycle, a major findings report is made available to the public.

RESULTS

Table 2 presents information on referrals to child welfare from hospital personnel in Ontario from 1993 to 2013. The incidence of referrals from hospital personnel increased significantly from 0.77 (95% CI (0.10 to 1.45)) per 1000 children in 1998 to 1.74 (95% CI (1.15 to 2.31)) per 1000 children in 2003. Between 2003 and 2008, there was a smaller, but still significant increase in hospital referrals. Incidence rates remained relatively stable between 2008 and 2013.

Table 3 presents the specific referral sources for investigations involving maltreatment-related concerns from 1993 to 2013. The incidence of professional referrals more than doubled from 16.78 per 1000 children in 1998 to 37.93 per 1000 children in 2003.

Table 4 presents information on the incidence rates of hospital referrals based on child age and maltreatment type. Infants have the highest incidence rate of referral consistently across each of the five cycles. In 1993, children were more likely to be referred from a hospital for a concern of physical abuse. Between 1998 and 2003, the incidence of neglect more than doubled (from 0.38 per 1000 children in 1998 to 0.82 per 1000 children in 2003) and has subsequently dropped with the introduction of the classification 'risk only investigations' in 2008 (to 0.50 and 0.44 per 1000 children in 2008 and 2013, respectively). A large proportion of hospital referrals to

Table 2 Hospital referrals for maltreatment-related concern investigations in Ontario (1993–2013)

	OIS-1993				OIS-1998				OIS-2003				OIS-2008				OIS-2013			
	Estimate	%	Rate per 1000	95% CIs	Estimate	%	Rate per 1000	95% CIs	Estimate	%	Rate per 1000	95% CIs	Estimate	%	Rate per 1000	95% CIs	Estimate	%	Rate per 1000	95% CIs
Hospital referral investigations	2463	5	1.12	0.91 to 1.34	1822	3	0.77*	0.10 to 1.45	4159	3	1.74**	1.15 to 2.31	6506	5	2.73*	1.83 to 3.63	5798	5	2.47	1.24 to 3.69
Total investigations	46 860	100	21.41	18.38 to 24.42	64 658	100	27.43	16.73 to 38.13	128 108	100	53.59	40.04 to 67.14	128 748	100	54.05	41.07 to 67.03	125 281	100	53.32	29.61 to 77.03

*P<0.05, **P<0.01.

Table 3 Specific referral sources for maltreatment-related concern investigations in Ontario (1993–2013)

	OIS-1993			OIS-1998			OIS-2003			OIS-2008			OIS-2013		
	Estimate	Rate per 1000	%	Estimate	Rate per 1000	%	Estimate	Rate per 1000	%	Estimate	Rate per 1000	%	Estimate	Rate per 1000	%
Professional	24986	11.41	53	39563	16.78	61	90685	37.93	71	91517	38.42	71	93802	39.92	75
Hospital	2463	1.12	5	1822	0.77*	3	4159	1.74**	3	6506	2.73*	5	5798	2.47	5
Non-professional	22182	10.13	47	18493	7.85	29	26610	11.13	21	29722	12.50	23	25465	10.84	20
Anonymous/other	4303	1.97	9	7893	3.35	12	7409	3.10	6	10937	4.60	8	9104	3.87	7
Total	46860	21.41	100	64658	27.43	100	128108	53.59	100	128748	54.05	100	125281	53.32	100

*P<0.05, **P<0.01.

child welfare in 2008 and 2013 involved an allegation of suspected risk of future maltreatment. The incidence of exposure to IPV significantly increased between 2003 and 2008 (from 0.13 per 1000 children to 0.15 per 1000 children) and between 2008 and 2013 (from 0.15 per 1000 children to 0.4 per 1000 children).

Table 5 describes the service dispositions made at the conclusion of hospital-reported investigations. Substantiated investigations (investigations in which the evidence suggests abuse or neglect occurred) resulting from hospital referrals nearly tripled between 1998 and 2003 (from 0.22 per 1000 children in 1998 to 0.64 per 1000 children in 2003). The substantiation rate significantly decreased from 2003 to 2008 and then significantly increased again in 2013 (from 0.13 per 1000 children to 0.82 per 1000 children). Incidence rates for cases transferred to ongoing services tripled between 1998 and 2003 (from 0.21 per 1000 children in 1998 to 0.63 per 1000 children in 2003). Incidence rates of formal placements have increased over time, but remain relatively low, with the highest rate in 2008 (0.25 per 1000 children).

DISCUSSION

This is the first study to explore hospital-based referral patterns in a Canadian child welfare context. Hospital reports to Ontario child welfare authorities have consistently accounted for a small proportion of overall reports over the last 20 years. Further research is needed to identify and understand factors that influence hospital personnel reporting behaviour. The ability to link administrative hospital and child welfare data to examine trends would provide valuable insights into services children receive. However, the infrastructure does not exist in Ontario to allow for these linkages to be made.[28] It is also important to understand the experiences of hospital personnel in reporting to child protection authorities in Ontario. The majority of studies included in a meta-synthesis by McTavish and colleagues[7] found that mandatory reporters had negative experiences with the reporting process.

Despite the low proportions of hospital-referred investigations, there are notable patterns that have emerged from analyses by age and maltreatment type. Investigated maltreatment rates for hospital referrals between 1993 and 2013 doubled. This increase is consistent with the increase in investigated maltreatment rates in the same period for all reported maltreatment in Ontario, which is believed to be driven by significant changes to policy and legislation over the last two decades.[14 22] Lowering of thresholds for risk of harm and intervention are among the factors that are believed to have led to an increase in investigated maltreatment rates between 1998 and 2003. Specifically, an increase in investigations of exposure to IPV due to the identification and interpretation of IPV in the province's screening tool is thought to have contributed to this increase as well as clarity around mandatory reporting.

Table 4 Child age and maltreatment type in investigations referred from hospitals for maltreatment-related concerns in Ontario (1993–2013)

	OIS-1993			OIS-1998			OIS-2003			OIS-2008			OIS-2013		
	Estimate	Rate per 1000	%	Estimate	Rate per 1000	%	Estimate	Rate per 1000	%	Estimate	Rate per 1000	%	Estimate	Rate per 1000	%
<1 year	478	3.23	20	537	3.78	29	1433	10.08***	34	2099	15.88	32	1508	11.13	26
1–3 years	712	1.65	29	463	1.05	25	875	1.99*	21	1258	3.12	19	1189	2.79	21
4–7 years	495	0.81	20	267	0.44**	15	658	1.08**	16	1012	1.81	16	1084	1.90	19
8–11 years	189	0.32	8	153	0.26	8	609	1.03**	15	1066	1.71	16	844	1.45	15
12–15 years	569	0.99	23	402	0.70	22	584	1.01	14	1071	1.60	16	1173	1.84	20
Physical abuse	971	0.44	40	648	0.29	36	1054	0.44	25	694	0.29	11	745	0.31	13
Sexual abuse	524	0.24	21	†	†		133	0.06	3	358	0.15**	6	322	0.14	6
Neglect	664	0.30	27	885	0.38	49	1951	0.82*	47	1187	0.50	18	1030	0.44	18
Emotional maltreatment	100	0.05	4	239	0.10*	13	707	0.30**	17	271	0.11	4	290	0.12	5
Exposure to intimate partner violence	–	–		†	†	†	314	0.13	8	353	0.15	5	935	0.40**	16
Risk	–	–		–	–		–	–		3643	1.53	56	2476	1.05	43
Total investigations	2443		100	1822		100	4159		100	6506		100	5798		100

*P<0.05, **P<0.01, ***P<0.001.
†Estimate is too small to report.

Table 5 Service dispositions for child maltreatment-related investigations from hospital referrals in Ontario (1993–2013)

	OIS-1993			OIS-1998			OIS-2003			OIS-2008			OIS-2013		
	Estimate	Rate per 1000	%	Estimate	Rate per 1000	%	Estimate	Rate per 1000	%	Estimate	Rate per 1000	%	Estimate	Rate per 1000	%
Substantiation	852	0.39	35	523	0.22	29	1536	0.64**	37	1107	0.13**	17	1919	0.82**	33
Transfer to ongoing services	604	0.28	25	497	0.21	27	1502	0.63**	36	2350	0.99	36	2456	1.05	42
Placement (formal)	193	0.09	8	†	†	†	300	0.13*	7	594	0.25*	9	509	0.22	9
Total investigations	2443			1822			4159			6506			5798		

*p<0.05, **P<0.01.
† Estimate is too small to report.

The addition of the risk category in 2008 has resulted in a shift in the profiles of hospital-referred investigations. Once the risk category was introduced in the OIS-2008, it became the most commonly identified maltreatment-related concern for the two subsequent cycles for hospital-referral investigations, paralleling the larger provincial trend for all investigations during that same period. Almost 6 of every 10 hospital-referred investigations conducted in 2008 and 2013 involved the assessment of future risk of maltreatment or exposure to IPV. Investigations have shifted from assessing a specific incident of maltreatment towards assessing factors that increase concern of the likelihood of future maltreatment (eg, caregiver mental health). Broader provincial and Canadian investigative trends show that there is an increasing focus on the long-term impact of family challenges on child well-being rather than on immediate child safety.[29 30]

The finding that infants are the most commonly referred group of children from hospitals is consistent with other studies that suggest that younger children are more likely to be identified as at-risk in healthcare settings.[6 15 31] Infants are particularly vulnerable to the deleterious impact of maltreatment on their physical safety and well-being and are more likely to be admitted to hospital for child maltreatment's most dire consequences, injury and death.[13] Maltreatment in the early years has been linked to adverse physical, developmental and mental health outcomes that can reach beyond childhood given the rapidity of brain development.[32] The findings of this paper further underscore the important role that hospital personnel can play with regard to recognising and responding to maltreatment in the early years, particularly in the absence of school and other early education programmes.[13]

Since 1998, there have been increases in the incidence rates and proportions of hospital-referred investigations transferred to ongoing child welfare services. In 2013, child welfare workers deemed that ongoing support from the child welfare system was needed in 4 of every 10 hospital-referred investigations. One quarter of all investigations in 2013 were transferred to ongoing services.[14] Studies have suggested that child welfare systems may respond differentially to allegations of suspected maltreatment based on reporting source (eg, Refs 33–35). An exploration of the child welfare system's responses to allegations from various referral sources is an important avenue for future research in a Canadian context.

Limitations

The OIS is cross-sectional and so does not track longer-term case outcomes. Further, there is no consideration of broader worker, organisational or environmental factors. The data captured in this study only include cases that are reported to and investigated by child welfare agencies. Therefore, cases that are unreported, screened out or only reported to police are not included. Lastly, for investigations of children under 1 year of age, these data

cannot distinguish whether the referral made was for a prenatal or perinatal concern.

CONCLUSION

Ontario legislation outlines that all people are legally obligated to report suspected child maltreatment.[11] Ensuring that professionals working with children, including hospital personnel, understand and are adequately trained on their responsibilities to report is pertinent for the protection of vulnerable children in this province. Understanding the signs of, not only physical or sexual abuse, but of other forms of maltreatment including exposure to IPV and risk of future maltreatment, is of the utmost importance for these professionals to be able to protect children. The ability to refer families to further supports and services within the community will help professionals address problems related to these specific families. Overall, an understanding of the profile of children typically referred to child welfare services by hospitals and the general provincial trends as well as a knowledge of professionals' duty to report will better enable hospital personnel to identify and report children at risk of maltreatment. As the first study to look at hospital referrals to child welfare services in Canada, this study provides an important base for future research efforts to assist in identifying and developing responses across sectors to meet the needs of vulnerable families and work to promote children's safety and well-being.

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REFERENCES

1. O'Donnell M, Scott D, Stanley F. Child abuse and neglect--is it time for a public health approach? *Aust N Z J Public Health* 2008;32:325–30.
2. Gilbert R, Fluke J, O'Donnell M, *et al*. Child maltreatment: variation in trends and policies in six developed countries. *Lancet* 2012;379:758–72.
3. Gilbert R, Widom CS, Browne K, *et al*. Burden and consequences of child maltreatment in high-income countries. *Lancet* 2009;373:68–81.
4. Gilbert R, Kemp A, Thoburn J, *et al*. Recognising and responding to child maltreatment. *Lancet* 2009;373:167–80.
5. Mathews B, Kenny MC. Mandatory reporting legislation in the United States, Canada, and Australia: a cross-jurisdictional review of key features, differences, and issues. *Child Maltreat* 2008;13:50–63.
6. Tonmyr L, Li YA, Williams G, *et al*. Patterns of reporting by health care and nonhealth care professionals to child protection services in Canada. *Paediatr Child Health* 2010;15:e25–32.
7. McTavish JR, Kimber M, Devries K, *et al*. Mandated reporters' experiences with reporting child maltreatment: a meta-synthesis of qualitative studies. *BMJ Open* 2017;7:e013942.
8. Svard V. 'Why don't they Report?' Hospital Personnel Working with Children at Risk: Child Care in Practice: Vol 23, No 4. *Child Care Pract* 2017;23:342–55.
9 Trocmé N, Fallon B, MacLaurin B, *et al*. Canadian Incidence Study of Reported Child Abuse and Neglect - 2008: Major Findings - CIS-2008-rprt-eng.pdf, Public Health Agency of Canada. 2010 http://cwrp.ca/sites/default/files/publications/en/CIS-2008-rprt-eng.pdf
10. Bala N, Zapf MK, Williams RJ, *et al*. Canadian child welfare law : children, families and the state. Second Edition. Toronto, Ontario, Canada: Thompson Educational Publishing, Inc. 2004 https://search.library.utoronto.ca/details?5236879 (Accessed 20 Feb 2018).
11. Child, Youth and Family Services Act, 2017. 2018 https://www.ontario.ca/laws/view (Accessed 4 Jul 2018).
12. McKenzie K, Scott DA. Using routinely collected hospital data for child maltreatment surveillance: issues, methods and patterns. *BMC Public Health* 2011;11:7.
13. Scott D, Fraser J. Mandatory Reporting of Child Abuse and Neglect by Health Professionals. In: Mathews B, Bross DC, eds. *Mandatory Reporting Laws and the Identification of Severe Child Abuse and Neglect*. Dordrecht: Springer Netherlands, 2015:381–93.
14. Fallon B, Van Wert M, Trocmé N, *et al*. Ontario Incidence Study of Reported Child Abuse and Neglect - 2013 (OIS-2013). Toronto: Canadian Child Welfare Research Portal. 2015 http://cwrp.ca/publications/OIS-2013
15. Chen W, Glasser S, Benbenishty R, *et al*. The contribution of a hospital child protection team in determining suspected child abuse and neglect: Analysis of referrals of children aged 0–9. *Child Youth Serv Rev* 2010;32:1664–9.
16. Friedman LS, Sheppard S, Friedman D. A retrospective cohort study of suspected child maltreatment cases resulting in hospitalization. *Injury* 2012;43:1881–7.
17. Fallon B, Ma J, Allan K, *et al*. Opportunities for prevention and intervention with young children: lessons from the Canadian incidence study of reported child abuse and neglect. *Child Adolesc Psychiatry Ment Health* 2013;7:4–13.
18. Fallon B, Ma J, Allan K, *et al*. Child maltreatment-related investigations involving infants: Opportunities for resilience? *Int J Child Youth Resielience* 2013;1:35–47.
19. Rachamim E, Hodes D, Gilbert R, *et al*. Pattern of hospital referrals of children at risk of maltreatment. *Emerg Med J* 2011;28:952–4.
20. Vulliamy AP, Sullivan R. Reporting child abuse: pediatricians' experiences with the child protection system. *Child Abuse Negl* 2000;24:1461–70.
21. Flaherty EG, Sege R. Barriers to physician identification and reporting of child abuse. *Pediatr Ann* 2005;34:349–56.
22. Paavilainen E, Merikanto J, Astedt-Kurki P, *et al*. Identification of child maltreatment while caring for them in a university hospital. *Int J Nurs Stud* 2002;39:287–94.
23. Borres MP, Hägg A. Child abuse study among Swedish physicians and medical students. *Pediatr Int* 2007;49:177–82.
24. Trocmé N, McPhee D, Tam KK, *et al*. *Ontario Incidence Study of Reported Child Abuse or Neglect 1993 (OIS-1993*. Toronto,ON: The Institute for the Prevention of Child Abuse, 1994.
25. Trocmé N, Fallon B, MacLaurin B, *et al*. Ontario Incidence Study of Reported Child Abuse and Neglect 1998 (OIS-1998). Toronto,ON: Centre of Excelence for Child Welfare, Faculty of Social Work, University of Toronto. 2002 http://cwrp.ca/publications/612 (accessed 24 Jul 2017).
26. Trocmé N, Fallon B, MacLaurin B, *et al*. Canadian Incidence Study of Reported Child Abuse and Neglect 2003 (CIS-2003): Major Findings. Minister of Public Works and Government Services Canada. 2005 http://cwrp.ca/node/887 (Accessed 31 Jul 2017).
27. Fallon B, Trocmé N, Sanders JE, *et al*. Examining the impact of policy and legislation on the identification of neglect in Ontario: Trends over-time. *Int J Child Adolesc Resil* 2016;4:77–90.
28. Fallon B, Filippelli J, Black T, *et al*. How can data drive policy and practice in child welfare? making the link in Canada. *Int J Environ Res Public Health* 2017;14:1223.
29. Fallon B, Trocmé N, Filippelli J, *et al*. Responding to safety concerns and chronic needs: trends over time. *Child Adolesc Psychiatry Ment Health* 2017;11.

30. Trocmé N, Kyte A, Sinha V, *et al*. Urgent protection versus chronic need: clarifying the dual mandate of child welfare services across Canada. *Soc Sci* 2014;3:483–98.
31. Benbenishty R, Jedwab M, Chen W, *et al*. Predicting the decisions of hospital based child protection teams to report to child protective services, police and community welfare services. *Child Abuse Negl* 2014;38:11–24.
32. Harden BJ, Buhler A, Parra LJ. Maltreatment in Infancy: A Developmental Perspective on Prevention and Intervention. *Trauma Violence Abuse* 2016;17:366–86.
33. King CB, Scott KL. Why are suspected cases of child maltreatment referred by educators so often unsubstantiated? *Child Abuse Negl* 2014;38:1–10.
34. King B, Lawson J, Putnam-Hornstein E. Examining the evidence: reporter identity, allegation type, and sociodemographic characteristics as predictors of maltreatment substantiation. *Child Maltreat* 2013;18:232–44.
35. Trocmé N, Knoke D, Fallon B, *et al*. Differentiating between substantiated, suspected, and unsubstantiated maltreatment in Canada. *Child Maltreat* 2009;14:4–16.